‘Media Mediators’: Advocating an Alternate Paradigm for Critical Adult Education ICT Policy

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Abstract

This article explores the efficacy of current education program approaches to prepare instructors to achieve critical thinking and active learning from their students by integrating ICTs with traditional adult education practices. An argument is put forward that the increasing presence and influence of ICTs in education necessitates a paradigmatic shift away from the prevailing conception of instructors as 'users'; ICTs as 'instruments'; and, pedagogies as 'proprietary'. Such a shift advocates critical paradigms that conceive of instructors, their students, as well as ICTs, more democratically and inclusively. Using the well-known expression 'from sage on the stage to guide on the side' as a metaphorical framework to shape this argument, an alternate, more critical metaphor--media mediators--along with a brief manifesto of guiding principles, are also proposed. The hope of this article is to further explicate a much needed paradigmatic shift towards critical digital literacy for a future urgently in need of critical adult education ICT policy.

Introduction

A well-known aphorism within the field of adult education is the expression 'from sage on the stage to guide on the side' (King, 1993, 1994). This saying is often applied as a teaching method in adult education practice to bring about critical thinking and active learning from students (Brookfield, 2003). In general, adult education instructors, be they certified teachers, or workshop facilitators, lecturers in higher and tertiary education, or even social movement activists, often heed this saying as a self-assessment criterion as they prepare to deliver their various lesson plans, syllabi, curricula, or dialogue circles.

More recently, this adage is now being used to promote the inclusion of the internet and other information and communication technologies (ICTs) alongside more traditional adult education practices. In fact, the pressure is mounting. The 'guide on the side' is increasingly expected to facilitate active learning and critical thinking from students through the pedagogic inclusion of ICTs, whether students convene in their classrooms; homes; workplaces; or, elsewhere (Gabriel, 2008).

ICTs such as the internet, ipods, blogs, learning management systems, and mobile phones, and their burgeoning, complex, and sometimes contradictory relationship with educational practices (Arnold, 2003), thus present a broad spectrum of challenges to all involved: higher and tertiary education institutions with respect to setting technological, educational, and instructional mandates; instructors with respect to accessing digital resources and acquiring technical skills; as well as, students regarding their diverse social and cultural learning needs. Often, these challenges work at cross-purposes, especially where instructors are concerned (Coopman, 2009).

This article explores the efficacy of current education program approaches to prepare instructors to achieve critical thinking and active learning from their students by integrating the internet and other ICTs with traditional adult education practices. First, this article discusses prevailing education program approaches. Drawing from on-going trends in higher and tertiary education institutions, and heuristically from theoretical and empirical studies of ICTs in education, this article illustrates how current education program approaches propagate a *closed* instructional paradigm that conceives of instructors as 'users' of technology; ICTs as 'instruments'; and,

pedagogies as ‘proprietary’. Second, this article puts forward an argument that the growing presence and influence of ICTs in adult education practices necessitates an alternate, more critical approach. A critical adult education ICT policy becomes essential in a future that is replete with digital mediation, and, where everything from basic daily necessities of life to democratic and human rights is increasingly tied to this digital mediation.

Lastly, this article builds on Vaden and Suranta (2004) and their bold vision for a future of ‘digital literacy’ against the backdrop of increasing neo-liberalization in society:

> digital media has been celebrated as a tool that inevitably leads to democratization and makes possible new forms of grassroots civil society activities. Digital literacy contains the promise of a leap to authorship, of ‘receivers’ of media content becoming active creators, collaborators or authors. However, this promise is counteracted by contemporary large-scale economic trends…..As a result, information societies face an internal tension between technology-driven and profit-driven information society agenda of the international mega-companies and the richly varied agenda of civil society alternatives…. (Vaden & Suoranta, 2004, p. 284)

This bold vision provides a worthy impetus for writing this article. This article’s main argument is thus for an essential and crucial infusion of criticality in adult education policy paradigms when integrating ICTs with traditional adult education practices. By using the expression ‘from sage on the stage to guide on the side’ as a metaphorical framework to shape this argument, an alternate, more critical metaphor--*media mediators*-- along with a brief *manifesto* of guiding principles, are also proposed. Such a paradigm encourages education programs to conceive of instructors and their students more democratically, as *mediators*; ICTs more inclusively, as *media*; and, that together, media and mediators can form an inclusive, participatory learning community. The hope of this article is to further explicate a much needed paradigmatic shift towards critical digital literacy in a future urgently in need of critical adult education ICT policy.

Current Education Programs

Philosophical underpinnings.

The philosophical questions of *situatedness* and *knowledge-creation* are being more frequently encountered at the widening intersection of rapidly evolving ICTs and traditional adult education

practices. In this regard, education programs directly affect the capabilities and imaginations of instructors to effectively introduce ICTs into pedagogic practices (Marra, 2004). Society's growing anticipation of the inclusion of ICTs in pedagogy inevitably brings about an expansion of higher and tertiary education programs in terms of skills (interacting with ICTs as necessary for pedagogic delivery) and mandate (designing pedagogy that requires ICTs) in readying a capable cohort of instructors.

As such, current education program approaches to this challenge may be arguably characterized in one of two ways, as either 'phenomenological' or 'epistemological'. To prepare instructors to accomplish active learning and critical thinking by integrating ICTs with traditional adult education practices, current education programs focus on either: (a) *phenomenology* and *situatedness* (interacting with ICTs as fundamental for pedagogic delivery); or, (b) *epistemology* and *knowledge-creation* (designing pedagogy that requires ICTs). Though these two approaches may seem to infer the same approach, they are not.

The 'phenomenological' education programs are characterized by a significant number of online courses within their curricula. Such programmatic policies may be deemed phenomenological because they aim to provide student cohorts with ample opportunities to *be situated in* online educational interventions. These policies envision interacting with ICTs as primary. Participants are granted as many chances as possible to 'live' through a variety of online courses, observe such courses' 'look and feel', and discover for themselves how these courses materialize and 'exist' to deliver education. All of this may, it is surmised, enable participants to deliver better online courses for their students. To this end, many higher and tertiary education institutions provide accredited degrees entirely online. The phenomenological realities of 'instructorship' are now irrevocably suffused with possessing the skills to interact with ICTs as fundamental for pedagogic delivery.

The 'epistemological' education programs offer more 'applied ICTs' courses. Such programmatic policies are seen as epistemological because they espouse constructivist-based technology-training approaches allowing participants to *experience* ICTs through problem-based exercises for meaningful *knowledge-creation*. These policies hold designing of pedagogy as

paramount. Constructivist-based methodologies, be they delivered as workshops or as part of more formal degree courses, require that ICTs be readily transferred into the hands of the participants, with minimal scaffolding or supervision, to bring about *meaningful* learning experiences (Gueldenzoph, 2003). Many educational policy-makers, administrators, researchers and teachers, advocate the use of constructivist learning theory in ICT training for adult learners (Huang, 2002; Kaptizke, 2000). Whereas previously the epistemologies within for example, the classroom or dialogue circle, originated organically within students, or from instructor-student, or student-student interactions and relationships, now such knowledges are inescapably mediated (by design) through ICTs: (a) student-ICTs; (b) instructor-ICTs-student; or, (c) student-ICTs-student.

Closed instructional paradigms.

The characterization of education programs as phenomenological or epistemological is also revelatory in terms of how programmatic policy decisions ultimately influence instructors as they proceed to integrate ICTs with traditional adult education practices in their own classrooms and workshops. Although the phrase 'from sage on the stage to guide on the side' serves as a popular motivation for instructors to promote active learning and critical thinking among their students, the approaches that undergird current education programs, be they phenomenological or epistemological in foci, may not be so active or critical when ICTs are taken into account.

Education programs that are overly phenomenological in focus of approach propagate two sets of basic assumptions that result in a very passive, rote learning: instructors as 'users' of ICTs; and, ICTs as 'instruments' (Vaden & Suoranta, 2004). This first set of assumptions comes about from a steady and constant exposure to online courses. As instructors undergo a prolonged exposure to online courses, they are also de facto expected and presumed to be more comfortable in navigating and developing online educational settings. Under such a *technocentric* approach, however, something entirely different may be the outcome. Many instructors become predisposed to a continuous *state of being* as the hapless 'user' precisely because they are shuffled from one online course to the next. In fact, the very term 'user' signifies nuances of non-self-sufficiency; non-committal temporality; self-centered motivation, entitlement and individualism; and, of exploiting resources and then discarding them when they are no longer

considered 'useful'. None of these traits are thought of as ideal for 'the guide on the side', nor are they indicative of an active and engaged learner. As Baggaley (2008) observes:

> Web-based practices can create equally serious accessibility barriers in violation of the open learning principle. When asked, DE [distance education] students commonly provide evidence of the difficulties they face in accessing and using Web materials…. Otherwise, the DE situation resembles inviting the students to a state-of-the-art classroom and failing to check if the door is locked against them. A possible response to the problem is to suggest that DE has moved away from its original purist principle of access for all, and is now best regarded as an *ideal to be aspired to* rather than actually observed. Such attitudes form the basis for an elitist philosophy described with startling frankness…. (Baggaley, 2008, p. 44)

The corollary to this first set of assumptions is a second set of assumptions which now subtly rise to the forefront: ICTs as 'instruments', to be appropriated, wielded, and then discarded (Remtulla, 2010). In this scenario, instructors soon become fully adept at 'using' ICTs as 'instruments' to complete online courses. As they rotate from one online course to the next, the goal for many instructors is no longer just about their learning needs and goals, but now *also* learning about completing courses as successfully and efficiently as possible. Furthermore, what also becomes ingrained is the attitude amongst many instructors that all 'users' and all 'instruments' are created equal and that all pedagogic practices, where 'users' and 'instruments' pedagogically come together, are equally resolvable through the ubiquitous and normative application of ICTs (Gabriel, 2008; Remtulla, 2010; Salter, 2008; Vaden & Suoranta, 2004).

Gibson and Oberg (2004) conducted a three-year study examining both the visions and realities of the Internet in everyday use in Canadian schools. When asked about motivation for Internet use, 79.7 per cent of in-service teachers were motivated by 'personal interest and/or curiosity'. However, from the 79.7 per cent, many were *further* motivated by a 'desire to learn new teaching tools' that were *required* by the 'nature of curriculum requirements' (p. 579). Fewer than 25 per cent of these teachers were using the Internet for professional development. Fewer than 10% reported engaging in discussions with colleagues through a listserv or online discussions (p. 575). Ultimately, as shown here, the effects of these overly phenomenological education programs follow instructors back into their classrooms and workshops.

By perceiving instructors as ‘users’ of ICTs and ICTs as ‘instruments’, instructors may continue to reflect this discouraging point of view long after leaving their education programs. None of which necessarily translates into active learning or an enhanced capability to combine ICTs with more traditional adult education practices. Parrish (2004) advises:

> educators need to consider both the risks and promises of new instructional technologies and adopt them only with a healthy scepticism [*sic*]. It is easy to get caught up in the promise of technological solutions to the sticky problems of education and training. But the problems of education are always more complex than technology alone can solve. (p. 51)

The epistemological approaches in some ways strive to alleviate the passive, rote learning that is a potential hazard of the phenomenological approaches. Here, the goal is to overcome the basic assumptions of instructors as ‘users’ of ICTs and ICTs as ‘instruments’. Koehler, Mishra, Hershey, and Peruski (2004) demonstrate constructivism through their ‘design team approach’ utilized at Michigan State University. Tenured faculty members enrol in a Masters level educational technology course and join teams of graduate students to design and build online courses. Each faculty then conducts their particular course in the following academic year. In describing their ‘design team approach’, Koehler et al. (2004) stress that of particular importance from the experience is articulating to the participants that, “ Quality teaching requires developing a nuanced understanding of the complex relationships between technology, content, and pedagogy and using this understanding to develop appropriate, context specific strategies and representations” (p. 31).

Still, an overly epistemological focus of approach propagates an equally constrained set of basic assumptions that may actually diminish critical thinking. These education programs contain basic assumptions of pedagogies as ‘proprietary’ (Coopman, 2009; Parrish, 2004). Whether such constructivist-based technology-training classes deploy ICTs that are proprietary to the higher and tertiary education institution, or commercially purchased off-the-shelf, they aim to condition participants with a pre-specified technological solution as pedagogic. These courses and interventions are very often coordinated towards pre-defined outcomes. They work towards institutionally-driven objectives and/or accreditation/licensure-standards as their top priorities

(Kupiainen, Suoranta, & Vaden, 2007). In more unscrupulous scenarios, intellectual property generated or stored on propriety ICTs, actually reverts to the vendor (Coopman, 2009; Vaden & Suoranta, 2004).

Under such regimes of instruction, critical thinking inevitably suffers. Though these courses and interventions may be 'problem-based', there exists some serious tension as to *who* really gets to decide *what* 'the problem' is and *why* it is 'a problem' in the first place. Coopman (2009) studies power and structure in e-learning management systems. Findings based on a close study of Blackboard, arguably the dominant vendor of learning management systems to higher and tertiary education institutions, suggest:

> the intensely hierarchical nature of Blackboard persists producing a textualized approach to teaching and learning. This hierarchy reflects the power structure embedded in e–learning management systems: Blackboard Inc. designers and marketers who determine the learning environment's structure; university administrators who determine which features should and should not be included as well as instructor access to managing features; instructors who determine which features should be available to students and how the class website should be structured within the platform's parameters; and, students, who determine how they will use the interface within the structure designed by Blackboard Inc., university administrators, and instructors. (Conclusions section, para. 1)

The relatively *deterministic* structure of such ideological experiences serves only to curb critical thinking to the bureaucratic, technological, and institutional delimitations at hand. When they later return to their classrooms and workshops, many instructors inadvertently condition *their* students to emulate the same self-governing, non-reflexive behaviour. What is often lost is the drive to inspire students to imagine, contest, or grapple with their surroundings in configurations different then that which is dictated to them (Giroux as cited in Vaden & Suoranta, 2004). The long term outcome of these ideological experiences is that although many instructors gain ideographic insight into particular ICTs as they relate to specific pedagogic needs, this too does not necessarily make instructors more proficient at integrating ICTs with traditional adult education practices. Once again, Gibson and Oberg (2004) show:

> Students were most often using the Web to search for information (64.8%) or to explore for a topic (58.4%). Less than 15 per cent of the teachers reported that their students were

> making use of the Internet in any way that might be considered as innovative, such as using the virtual field trips, simulations and demonstrations which are available on the Internet and which have the potential to extend students' experiences in ways that would be difficult to do through live experiences or through other available media. (p. 574)

Although the aforementioned phenomenological and epistemological approaches to education programs are examined separately in this article, the reality is that most current education programs contain a number of online courses *as well as* constructivist-based technology-training workshops. These education programs hope to inform instructors on both designing pedagogy that requires ICTs as well as interacting with ICTs as fundamental for pedagogic delivery. Thus, to fully grasp the consequences of these phenomenological and epistemological approaches on instructors, students, and active learning and critical thinking, these underlying, basic assumptions must be studied in terms of their holistic implications. When looked at in their entirety, all these basic assumptions--of instructors as 'users' of ICTs, ICTs as 'instruments' and pedagogies as 'proprietary'--coalesce into a highly constrictive, delimited, *'closed' instructional paradigm*.

Towards Critical Adult Education ICT Policy

A closer look at technocentricism and determinism.

As described earlier, technocentricism emerges from education program approaches that are overly phenomenological in emphasis. Their concentration remains on interacting with ICTs as fundamental for pedagogic delivery; basic assumptions of instructors as 'users' of ICTs and ICTs as 'instruments'; a passive, rote learning that all pedagogic challenges have a technical solution; and, that generic technical solutions can be unilaterally applied to meet a variety of students' social and cultural learning needs (Remtulla, 2010). As such, any alternate paradigm must be able to answer the threat of technocentricism against *subjectivity* and *situatedness* in adult education practices and have the potential to reintroduce instructors and their students as voiced subjects into closed instructional paradigms.

As also broached earlier, determinism becomes apparent from education program approaches that are overly epistemological in emphasis. Their attention is trained on designing pedagogies that require ICTs; basic assumptions of pedagogies as 'proprietary'; and a non-critical, non-

reflexive attitude which accepts that bureaucratic, technological, and institutional mandates trump all other social and cultural learning needs. In this case, any alternate paradigm must provide the capacity to resist and destabilize governmental, deterministic tendencies that marginalize the *communicative and collaborative* in *knowledge-creation* and reassert communicative and collaborative learning into closed instructional paradigms.

To holistically engage the consequences that emerge from instantiations of sages, guides, ICTs, and pedagogic practices, two questions need to be asked of education programs about their closed instructional paradigms with respect to notions of *situatedness* and *knowledge-creation*. Firstly, from a phenomenological standpoint, are ICTs accepted as normative and ubiquitous in the delivery of education; and, secondly, from an epistemological point of view, through the design of ICTs, is learning via ICTs accepted as a uniform and universal process of learning for all learners?

This first question deals with issues of democracy and participation in the classroom as they are affected by the availability and accessibility of ICTs in the *delivery of education*. If ICTs are ubiquitous in the delivery of education for everyone, then none should be excluded from being able to participate due to whether or not they can gain access to or have availability of ICTs. Seeing the delivery of education from a participatory, democratic lens, means that the issue of ICTs in education cannot be accepted as normative or ubiquitous. The reasons for this are further substantiated by the realities of the digital divide (Suoranta, 2003). Lindsay and Poindexter (2003) state "one generic feature includes differential access to various forms of technology - particularly the Internet - among various demographic groups" (p. 113). Access to the internet is not readily available in the Caribbean, Latin America, Asia, and Africa, as it might be in North America and Europe (Dahlberg, 2005; Lindsay & Poindexter, 2003; Mojab, 2000). Norris (2001) explains that "the *democratic divide* signifies the difference between those who do and do not, use the panoply of digital resources to engage, mobilize and participate in public life" (p. 4).

Even the manners in which ICT technical standards are set at a global level propagate this two tiered, divided reality. As laid out by Heires (2008), the International Organization for Standardization (ISO) sets international technical standards for products and processes with

respect to how they operate on their own as well as issues of interoperability with other products and processes. ISO purportedly works towards harmonization among divergent standards to promote common practices and promote global trade and innovation. However, the standards that are ultimately chosen to be *the* international standard are dominated and controlled by mostly industrialized countries or global corporations that are also located in the Western and Industrialized countries. Consequently, as pointed out by Heires (2008):

> there is also a structural dimension to the politics and conflicts in international standardisation, because the capabilities to participate in and influence ISO's work are unevenly distributed. Not every standard developed at ISO is equally relevant for all members, but most standards do have a broad impact and alter the course of future technological development. Many countries therefore have a stake in international standards, but developing countries, especially, do not have much say in their development. Without their input, standards, which can also be a means of knowledge and technology transfer, might prove unsuitable to their particular needs. The centralisation of decision making on strategic issues in ISO's leadership and the unequal representation of interests in the technical work of the standardisation committees can therefore be problematic. (p. 360)

When contemplating education through a democracy lens, if pedagogy is accomplished by 'doing' good for society, and, if social institutions, education and action are all interconnected, then where do ICTs come in? More precisely, do all learners have equal access to similar ICTs and therefore similar capabilities to act inclusively and to participate within the classroom, and later in life, to do 'in the way of social service'? With differential access to and availability of ICTs and institutions of education, government and social development, not all are able to participate, nor benefit, nor 'do good', equally.

As such, when education program approaches based on closed phenomenological paradigms prepare instructors to interact with ICTs as fundamental for pedagogic delivery and traditional adult education practices, they are also providing these instructors a democratic lens. This lens shapes instructors' conceptions about the availability and access of ICTs in the delivery of education, such that: teachers are 'users' of ICTs; and, ICTs are 'instruments'. Unfortunately, this becomes a form of passive, rote pedagogy that is the antithesis of what educational philosophers who see the role of pedagogy as democratic, participatory, and libratory would

accept. Those who do not or cannot have access are roundly excluded and marginalized. The educational instructor is the only one that is *permitted* to truly participate by virtue of their institutionalized standing. ICTs become the institutionalized instrument of the educational instructor's power. Democracy and participation have been subsumed by 'the sage on the stage' through (a dearth of) accessibility and availability of ICTs (Coopman, 2009).

The second question concerns the communicative and collaborative role of ICTs in the *process of learning*. A social epistemological learning that happens through interaction and dialogue places great emphasis on 'experience' as pedagogy (Fenwick, 2001). Constructivism aptly reflects the multidimensionality inherent in the encounter of ICTs, education, learning, doing, action, and the learner. When it comes to adult learning and ICTs, constructivist-based learning theories are receiving increasing attention (Anderson, 2004; Barab & Duffy, 2000; Gulati, 2004; Remtulla, 2010). In fact, De Castell and Jenson (2004) directly confront any doubts about the centrality of constructivist learning pedagogies by explaining that, "Pervasive cultural shifts toward progressive, 'learner-centered' and, more recently, constructivist orientations to education have invited parents and students to challenge school-based norms and the legitimating principles that once regulated a stable universe of authoritative texts and authoritative teachers are losing their hold on public sentiment about education" (p. 382).

On the surface, such adaptability and flexibility would seem to be an advantage when addressing issues like ICTs, traditional adult education practices, and a socially diverse cohort of teachers and instructors. Nevertheless, constructivist learning too presents a predicament for its application alongside ICTs in pedagogic practice. Constructivism and ICTs are both heavily privileged terrains, and given their shared, Westernized, European origins, are already ideologically laden (Baumgartner, 2003; Remtulla, 2010). In this case, there is a propensity that favours Western and European views on interaction, dialogue, cognition, communication, collaboration, and learning. Those who do not, or cannot conform, are again roundly silenced and made invisible (Johansen & McLean, 2006; McLean, 2006).

As such, when education program approaches based on closed epistemological paradigms prepare instructors to design pedagogies that require ICTs, they are also providing a

communicative and collaborative lens through which to envision the role of ICTs in the process of learning, such that: pedagogy becomes ‘proprietary’. Such a neo-liberal, uncritical and non-reflexive attitude is the antithesis of the communicative, dialogic, and interactive learning experiences that social constructionists and constructivists would accept. The institutions determine what counts as learning and what ‘learning’ must look like through the affordances of ICTs. The instructors decide how learning is to occur and then enforce this through the use of ICTs. No longer is ‘the guide on the side’, as the ICTs become the centralized instrument of power again by being used as tools for one-way dictum that travels from institution to instructor to student (Coopman, 2009; Kupiainen et al., 2007).

Programmatic and policy implications.

An in depth, philosophical exegesis on the role of phenomenology and epistemology in education is clearly beyond the scope of this article. However, the philosophical implications inherent in this phrase ‘from sage on the stage to guide on the side’, especially when mixed with ICTs and closed instructional paradigms, are far-reaching. These implications, especially, deserve some discussion with respect to how they may or may not validate the efficacy and appropriateness of any proposed, alternate critical paradigm.

Closed instructional paradigms result in a philosophical conundrum for education programs striving to train teachers and instructors to go from ‘sage on the stage to guide on the side’; integrate ICTs with more traditional adult education practices; and, promote critical thinking and active learning. Has ‘the sage left the stage’ when current education program approaches promote a passive, rote learning that presumes teachers and instructors as ‘users’ of ICTs and ICTs as ‘instruments’? Similarly, is ‘the guide still on the side’ when current education program approaches promote an uncritical, non-reflexive, hegemonic attitude towards the role of ICTs in the process of learning where pedagogies are ‘proprietary’? How are instructors expected to promote active learning and critical thinking in their students when the very education programs that many of these individuals undertake, instruct them in a technocentric and deterministic context that values passive learning and non-reflexive attitudes when integrating ICTs with traditional adult education practices?

The implications for any alternate paradigm to answer the threat of technocentricism now arguably become more about issues of democracy and participation through the pedagogic inclusion of ICTs in traditional adult education practices. The notion that pedagogic practices must be politically, ethically, and spatially designed to be socially just and inclusive and accommodate critical thinking and active learning has deep roots within educational philosophies that see the role of pedagogy more in a libratory, emancipatory, and democratic light; as more than the memorization of facts and figures (Brookfield, 2003).

The implications for an alternate paradigm to resist and destabilize determinism arguably converge on issues of communication, collaboration, and learning through the pedagogic inclusion of ICTs in traditional adult education practices. The notion that learning is organic, spontaneous, and meaningful to instructors and learners and that learning comprises interaction and dialogue has long been a focal point for thinking on social cognition and social psychology and is widely captured under the more social constructionist, humanistic rubric of constructivist learning (Kupiainen et al., 2007).

Gabriel (2008) effectively uses the example of integrating PowerPoint with more traditional adult education practices to illustrate the technocentricism, determinism, as well as closed instructional paradigms prevalent in current education program approaches. Gabriel (2008) emphasizes "that many of the shortcomings of PowerPoint result from poor usage rather than the technology itself, and…that one cannot blame PowerPoint for every problem of our educational systems" (p. 259). Nevertheless, the impact of PowerPoint on instructors, students, critical thinking and active learning are noteworthy:

> PowerPoint in the classroom can reduce the students' critical awareness, naturalize knowledge into seemingly indisputable bullet points and bolster the authority of the lecturer whom it surreptitiously transforms into a salesperson…At the same time, PowerPoint can substantially limit a lecturer's ability to deviate from a preconceived lecture plan, improvise or develop a new line of thinking in the course of a lecture. Like a set of rails fixed on the ground, PowerPoint slides lock the thinking process along a single linear path, blocking impromptu variations and digressions; in short, improvisation and exploration. (p. 258)

The ways instructors are informed to include ICTs within their pedagogic practices also shapes how they conceive of ICTs in their classrooms and workshops, and with their students. Given the dubious impacts as demonstrated by Coopman (2009), Gibson and Oberg (2004), and Gabriel (2008), these closed instructional paradigms may drastically undermine the prospects of any active and reflexive integration of ICTs with traditional adult education practices. More so, despite the best of intentions of instructors, whether they subscribe to phenomenological or epistemological approaches, their instructional efforts may still not align with their students' expectations and experiences which may further hamper active learning and critical thinking (Caywood & Duckett, 2003).

The closed instructional paradigms shaping current education program approaches with respect to ICTs and pedagogic practices continue to remain under-examined. When considering integrating ICTs and traditional adult education practices, the impacts on instructors and their students must allow for some recognition of the subjective and the social in the delivery of education and the process of learning. Unfortunately, as laid out above, what becomes noticeable is an inclination towards technocentricism and determinism *to the exclusion* of the social and the subjective.

'Media Mediators': Towards Critical Digital Literacy

A paradigmatic shift now becomes plausible for education programs in terms of how they go about preparing instructors to promote critical thinking and active learning from their students by integrating ICTs with traditional adult education practices. Such a paradigm shift now becomes essential and crucial if education programs are going to be able to satisfactorily support their instructors to meet the demands placed on their shoulders by the needs, hopes, and aspirations of their students, and society, in an increasingly digitally mediated future.

The limitations in the proverb 'from sage on the stage to guide on the side' make it an incomplete metaphor to overcome a digitally mediated future replete with closed instructional paradigms; undemocratic issues surrounding access and availability of ICTs in the delivery of education; and, the non-communicative challenges regarding role and use of ICTs in the process

of learning. Yet, as elaborated earlier, these are the very philosophical issues that current education program approaches seemingly ignore.

An alternate metaphor is now required that may philosophically present a more critical paradigm to redress these closed instructional paradigms as well as resolve the communicative and democratic issues that emanate from them. No longer satisfied to be the 'sage on the stage' nor willing to be 'the guide on the side', teachers and instructors now seek to stir active learning and critical thinking from their students by integrating ICTs with traditional adult education practices. The metaphor put forward here, as shaped throughout this article by the phrase 'from sage on the stage to guide on the side', is: 'media mediators'. Like the expression 'from the sage on the stage to the guide on the side' this metaphor also carries within itself a paradigm for education program approaches and programmatic policies with respect to ICTs and pedagogic practices. However, a more critical paradigm is vital.

What is meant by 'critical'? As illustrated throughout this article, the criticality needed when integrating ICTs with traditional adult education pedagogies challenges instructors to interrogate unquestioned standards and assumptions ingrained in ICTs presented as technological solutions for pedagogic problems. A sensitive eye observes subtle issues of dominant versus submerged voices that may not even become apparent by mere virtue of inaccessibility and stilted standardization practices. This remains especially relevant for adult education practices that involve discourses dedicated to giving voice to the voiceless; addressing social injustice; community development; citizenship, democracy, and participation; and, overt and covert socio-cultural oppression.

A normative and uncritical integration of ICTs with traditional adult education practices may inadvertently exacerbate the social and cultural ills and undermine pedagogic aims. As Coopman (2009) advises, "Interrogating the structure of learning management systems such as Blackboard brings to light the unnoticed ways in which the software frames online classroom interaction" (Students, Teachers, and Critical Pedagogy section, para. 1). In designing pedagogies that (deterministically) require ICTs, and interacting with ICTs as fundamental to (technocentric)

pedagogic delivery, the leading question in a critical paradigm often begins with ‘In whose interests is this being promoted?’

As the previous generation of teachers and instructors made a similar paradigmatic shift from ‘the sage on the stage to guide on the side’ this article now advocates for another paradigmatic shift for current and future generations of teachers, instructors, and students. Here, the paradigmatic shift is to ‘media mediators’. As a paradigm, ‘media mediators’ also has the inherent capacity to critically confront closed instructional paradigms of current education program approaches with respect to ICTs and pedagogic practices; counter the threat of technocentricism and to reintroduce the *subjective* and *situatedness*; and, resist and destabilize the encroachment of determinism and reassert the *communicative* and *collaborative* in *knowledge-creation*.

A brief manifesto of guiding principles now follows:

Guiding principle #1: Instructors are mediators.
Through this critical metaphor, teachers and instructors are afforded a new paradigm where they are no longer ‘users’ of technology. They negotiate and mediate between curricular, technological, institutional, parental, societal, and personal mandates, affordances, and expectations. The needs and expectations of their students are also acknowledged and enacted to achieve active learning and critical thinking by integrating ICTs with traditional adult education practices.

Guiding principle #2: Students are mediators.
Similarly, pedagogies are no longer ‘proprietary’. Students too are also conceived of as ‘mediators’ in this pedagogic practice. Being ‘media mediators’ recognizes both teachers and their students as co-participants, as ‘mediators’, *situated* in constant process of negotiation. Pedagogy is re-appropriated back to instructors and students to jointly determine the optimal integration of ICTs with traditional adult education practices and bring about active learning and critical thinking for meaningful *knowledge-creation*.

Guiding principle #3: All ICTs are common, communicative, dialogic spaces.
Rather than being regarded as 'instruments', ICTs now become spaces for communicative and collaborative *knowledge-creation* as they enable the development of interactive, participatory learning communities. Whereas implements like chalk, crayons, markers, and flip charts could fit the definition of 'tool', to perceive ICTs as mere 'instruments' is to preclude prematurely their nascent capacity as discursive pedagogic processes. Kapitzke (2000) explains that "the social effects and outcomes of new media and communications technologies are not direct…social consequences of particular technologies are not fixed or determined by that tool or technology…they are mediated by the social contexts and uses made of them" (p. 212).

Guiding principle #4: All pedagogic practices are open for mediation.
As a new paradigm, 'media mediators' enacts the democratic and participatory as it confronts and resolves the technocentric and deterministic. 'Media mediators' answers the threat of technocentricism against *subjectivity* and *situatedness* and reintroduces the instructors and their students as voiced subjects into the closed instructional paradigms of current education programs with respect to ICTs and pedagogic practices. The notion that pedagogic practices must be politically, ethically, and spatially designed to be socially just and inclusive and accommodate critical thinking and active learning is also accommodated by this paradigm.

As a paradigm, 'media mediators' also provides the capacity to resist and destabilize structured, deterministic tendencies that marginalize the *communicative and collaborative* in *knowledge-creation.* This paradigm further reasserts communicative and collaborative learning into closed instructional paradigms of current education program approaches with respect to ICTs and pedagogic practices. The notions that learning is organic, spontaneous, and meaningful, to both instructor and learner, and that learning comprises interaction and dialogue, are also accommodated by this paradigm.

Conclusion
This article explores the efficacy of current education policy approaches to prepare instructors to achieve critical thinking and active learning from their students by integrating ICTs with traditional adult education practices. The success of future education programs depends on a

paradigmatic shift away from the prevailing, closed instructional paradigms of teachers as 'users' of technology; ICTs as 'instruments'; and, pedagogies as 'instructor-centric'. The paradigmatic shift suggested here, captured by an alternate, more critical metaphor--*media mediators*--raises the focus of attention away from the technical and deterministic and turns it towards the social and subjective: the instructor and their students--as 'mediators' coming together communicatively and collaboratively as co-participants --and forming an interactive, participatory learning community through 'media' spaces and communities.

The hope of this article is to build on the bold vision of 'digital literacy' presented by Vaden and Suoranta (2004). The guiding principles and call for critical adult education ICT policy based around a critical paradigm strives for a similar struggle for democratic and inclusive learning spaces-public common spaces-that affirm participatory societies.

Today, the contested terrain of digital participation now oscillates between participation as pure consumption and that of democratic authorship of knowledge and resources. Such a terrain is also incredulously devoid of a majority of the world's population, to whom such debates remain academic, arbitrary, and foreign, and yet whose livelihood is impacted on a daily basis by this digital mediation. The call for critical digital literacy in the integration of ICTs with traditional adult education practices hopefully lays the groundwork for a socially and culturally inclusive education in a future of digitized social action.

Notes

i) This study draws attention to in-service teachers, though not necessarily student-teachers or instructors in general. Most of the in-service teachers surveyed had been exposed, to some extent, to phenomenological focused education programs (Gibson & Oberg, 2004, p. 579). The results, however, reflect significantly on any discussion of education programs that prepare and train teachers and instructors in general.

ii) Though participation is voluntary, ISO has strong ties to national governments and global corporations that require their partners and subcontractors to follow ISO standards. As at 2007, ISO maintains an inventory of approximately 18,000 standards; includes 157 members (one per country); and, comprises some 3,100 committees in over 200 technical fields. Of the 157 members, only 104 have voting rights, whereas 53 members are non-voting and represent countries mostly from Eastern Europe and the developing world.

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