Teaching Education and the Virtual

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ABSTRACT This text weighs the ethical consequences of a virtual education that posits a learning community based on the free exchange of ideas and the economy of knowledge cultivating the circulation of ideas. It explores the ethical implications of a virtual educational enterprise characterised by exchanges that do not take place face to face but are still grounded within the belief that technology can offer an ethical form of instruction responsive and responsible to individuals, groups and communities.

In this age of technological development, there is admittedly diversified learning available, but does the virtual dispense with the need for the human? Human interaction appears increasingly relegated to 'computer-mediated communication', which leads us to wonder if the relationship of information technology, or IT, to increased dehumanization is a negative consequence rather than being somehow salvific in such areas as teacher education and in the overall culture of teaching. Typically, IT conjures up the image of the human 'interacting' with the screen as a kind of simulacra for personal, real-time interaction. In this case, there is no transversality since it is non-interpersonal. But IT is more than screens, hard drives and memory. It is about the facile acquisition and manipulation of information from around the globe. It is about the power of the Gutenberg at one's fingertips. And it is about new economic quests and social (inter)changes at speeds and by means hitherto unrealized but through imaginary stories.

Unchecked, however, educators run the risk of fostering the cult of individualism. Given Hargreaves's (1995) conclusion about a facet of the culture of teaching, a series of questions become foregrounded in the study of information technology's impact on the culture of teaching in particular.

In *Does Technology Drive History?*, Smith & Marx noted that ' Even those who do not use computers have had to accommodate their ways to some of its

requirements in supermarkets, post offices, banks, libraries, schools, airlines, hospitals, or the military services – few departments of contemporary life remain unaffected by the information technology' (1996, p. ix). In this stage of development of information technology, questions arise of whether the virtual dispenses with traditional formats that western societies have long taken for granted as forming part of schooling. Presently, IT in most schools amounts to the use of computers as mere teaching tools to de-archive information for the sole purpose of reproducing the annals of knowledge. Used in this way IT supplements the inherent depersonalization of subjectivity upon which schooling is predicated. Computers, like most technological devices, are not multi-user friendly, but are geared for the individual (some games are capable of being interactive with more than one user at the same time: e.g. *DOOM*, *Asian Civilizations*). Unlike TVs, telephones and Walkmans, the computer console has gained wide acceptance as a functional tool of educational value. Humanity is reduced or minimized to the level of the zero degree of sameness, excluding heterogeneity and the natural propensity toward difference that we all share.

Negroponte (1995) and Postman (1992) both comment on the influence of IT and how it is conceived (still at an early developmental stage). Both offer suggestions about computer technology and how it could be truly 'user-friendly'. Michael Eraut's edited collection, *Education and the Information Society* (1991), stands as an educational and political challenge to those nations who are more and more conforming to, and informed by, information technology.

> The future now belongs to societies that organize themselves for learning. What we know and can do holds the key to economic progress, just as command of natural resources once did ... The prize will go to those countries that are organized as national learning systems, and where all institutions are organized to learn and act on what they learn. (Marshall & Tucker, 1992, p. xiii)

In light of this statement, along with the findings of Michael Eraut (1991), teacher education, teachers, and pre-service teachers are under increasing pressure to adapt to IT and to adapt IT to their practices. Teaching in the virtual is a growing reality. It is a 'virtual' medium in that it is not necessarily resident in any particular place. It resists being institutional. That ensures a conflict of sorts with the culture of teaching. But how do teachers view IT? Or what is the relationship between IT and teaching culture?

Today, schooling is more about the pressure of test taking and peer evaluation about test results; the nature of the classroom as a holding pen for adolescents; systemic expectations that each adolescent will be prepared and at a similar point with classmates in the curriculum at given points of time throughout each day of the academic year. The nature of schooling is competitive and individualistic when hierarchies of curricular competence are valued as official knowledge. The function of schools and universities has been a key issue in every major election and political campaign where the future of a

society or nation is perceived to be at stake in relation to the (in)ability of its citizens to take up the call to compete on the economic battlefront of global competition. The right to education is tied up with the debt and duty owed by the individual to be productive and contribute to the economic well-being and sustenance of the state. The full pecuniary power of knowledge – its exchange value in the marketplace of ideas, goods, and services – is necessarily delayed during the process of education at any level because it is *knowledge-in-formation*. Teaching and learning cannot simply reduce knowledge to an instrumental or symbolic value defined in and of itself primarily by economic gain or benefit. That would be unethical; even though, there is always an outside influence that determines the method and purpose of instruction and the deliberate path of *knowledge-in-formation*. At some undisclosed time in the future, however, when the student citizen applies the principles of knowledge in the form of work and labor and begins to take full advantage of public amenities, there is an obligation that must be forfeit to repay the debt and duty owed to the State for draining the availability of the resources supplied. The obligation extends beyond the monetary sphere into the ethical dimension of citizenship as cultural participation. Checks and balances for securing the development of autonomous individuals capable of creative self-actualization and economic self-sufficiency are built into any educational system. But the cultural survival of nations and states depends on more than the ability of their citizens to become employable and productive workers to secure the competitive advantage of a labor force in a global context. Policy does indeed regulate the theoretical and practical ability of educational institutions to achieve precise goals and objectives. Postman (1996) suggested that, '… the idea of a *"public* school" is irrelevant in the absence of a the idea of a public; that Americans are so different from each other, have so many diverse points of view, and such special group grievances that there can be no common vision or unifying principles' (p. 196). And regarding the culture of teaching, Hargreaves (1993) proclaimed: 'The continuing and pervasive presence of isolation, individualism, and privatism within the culture of teaching is not a matter of serious doubt or disagreement among writers on the subject – Although pockets of collaborative and collegial practice among teachers are acknowledged, these are widely understood to be exceptions to the general rule, requiring special conditions for development and persistence – Despite numerous efforts at improvement and reform, individualism stubbornly prevails within the teacher culture' (p. 54).

Heeding Lieberman (1992), there is a problem connected with schoolteachers' lack of self-directed learning, transparency with researchers, and lack of collaboration between schools and universities. She queries, 'What do we do with school's [*sic*] that for complex reasons of history, culture, and context, don't or can't change? Do we tell them what to do? And does that do any good? ... Whose reality do we act upon?' (p. 6). The engagement of research in the culture of teaching, and teacher education, even with the arguable ease of information technology, necessitates the acknowledgement that the culture of teaching, including cooperation within its ranks, is likely

more readily scrutinized than improved. Research, in other words, has little impact in terms of progress (see Cuban's [1984] analysis of educational change in the past century).

Teacher experience, practice and the educational setting, or site, are complexly interrelated. Not only are teacher biography and particular role playing enmeshed in the subject and pertinent to teacher education (see, for example, Britzman et al, 1995), but a number of related issues creep into the discussion, such as Liston & Zeichner's (1991) comment that teaching, in the context of western educational philosophy, is a function of schooling, although the converse is not also true (p. 118). A curriculum – constituted by an evidentiary document and its mode of praxis – inheres both knowledge and non-knowledge in what it includes and excludes. The distinctions are arbitrary but temper the boundaries of free choice by filtering subjective judgments through an archive of recognized disciplinary achievement and authorized research designed to guide *knowledge-in-formation*. There are principles of valuation that actively govern the instauration of knowledge and its institution within a scene of teaching. The educational landscape of the west is played out against the backdrop of a conceptual legacy that has invested the pedagogical imperative with an ideological subtext promoting an ethic of infinite progress bound up in a quest for personal discovery and self-betterment called lifelong learning. The journey toward the intellectual perfectability of the self is thought to be driven by a dauntless epistemological curiosity. There is also the question of reflective practice, especially in the context of teacher education and the thrust of Schön's work (see also Grimmett & Erickson, 1988; McIntyre & O'Hair, 1996). Site also becomes problematic considering the multiple conceptions of teacher education: rational technical, or theory/practice, versus, say, Elliott's 'practical science paradigm of professional learning' (Elliott, 1993, p. 69), or craft apprenticeship, or Griffin's (1995) 'clinical school'. It is likewise problematic as one considers the socio-philosophical dimensions that frame various conceptions – critical theorist, feminist, psychoanalytic, naturalistic, theistic, and as one contemplates recent research in the architecture and environment of schools. Then there is the socio-political sphere of influence, whether governmental or the micro-political in schooling.

And teacher education is complex; it is comprised of foundations, theoretical models of application, supervision and on-site practice, subject-matter methods courses, communication skills development, reflection, socialization in the profession; it is influenced by various theories about learning – cognitive, behavioral, humanistic – as well as by economics; and student teachers, far from being *tabulae rasae*, are already possessors of knowledge about and attitudes towards teaching, schooling, education, work, and practice. As John (1996) reported, student teachers 'have imprinted upon their minds numerous images of teachers, teaching styles and learning processes which have been shaped by what they have witnessed as pupils' (p. 91; see also Cuban, 1984; Louden, 1991). Furthermore, teacher education is as much a function of the school site (hereafter referred to as the site) as it is of

the university. That is, teacher education is influenced in its implementation and execution by schooling, by the nature of schooling.

Hargreaves (1995), in his discussion of teacher education in Canada and the decentralized governance of education, noted that 'theoretical disciplines are being threatened, and teacher education is becoming more practice oriented and field centered ... [with] the integration of theory and practice increasingly being lost' (p. xx). According to Hargreaves, the traditional model of teacher education is 'technocratic', which emphasizes, among other concepts, transmission of knowledge and pre-service teacher supervision in selected sites. It seems that teacher education cannot escape the transmission of knowledge and supervision at selected sites regardless of the model adopted given the nature of teacher education, and the necessity of both ensuring that a body of knowledge is shared and that the student teacher is accomplishing what is expected of her or him. Whether it is knowledge via the university setting with coursework or via a mentor teacher in the site, the difference, it seems to me, is in the kind of knowledge being shared and the manner in which it is engaged.

Hargreaves (1995) spoke metaphorically of teacher education as a 'rite of passage' where the student teacher embarks on a journey that both confirms what s/he already knows about teaching and, presumably, engages him/her in areas of discovery. A difficulty in the passage process is the dual nature of the curriculum of teacher education. By this I mean that the student teacher must function in two diverse cultures: the university and the site. The student teacher must interact in these distinct cultures and the 'passage' brings its own tension as s/he learns to deal with a number of demands. There is the demand placed by the university with its structured curriculum of coursework and practicum experience; a culture of its own that, at the same time, finds its roots in the site. The student teacher is provided with methods courses, principles of teaching, communications, subject specialties, additional elective coursework, projects, and practice, all of which are deemed essential by the institution but questioned by the novice in the course of this 'rite of passage'.

The common complaint about the dichotomy between theory (coursework) and practice (the site), or between what is taught and what is experienced, continues (Rodriguez, 1994). Neither is it surprising. Student teachers are interested in *what to …*, *how to …*, and *when to …*, whether referring to teaching or testing. These are the key elements of their experience from being schooled and what continues to be fostered in the site (see Welker, 1992). Schools, it would seem, are not sites where one goes to embark on a quest of *why* except by researchers. That has a number of implications in terms of reflection on teaching practice as well as for (teacher) education.

Corrigan & Haberman (1990), taking a different tack concerning teacher knowledge, noted that, 'Craft knowledge is generally regarded by classroom teachers as the most relevant aspect of the knowledge base of their practice' (p. 199). Whether craft or cognitive information or particular skills, the site is a geographic space where the production and dissemination of knowledge are

functions of practice, because the site is primarily an institution of concrete practice. The challenge to practice – to include *why* for example – is greater than merely altering an aspect of present practice. That is, changing the emphasis on where the student teacher passes the majority of his or her practice sessions or takes coursework is only a practical shift. A larger-scale, paradigmatic shift would necessitate systemic alterations that, consequently, would produce altercations between rival theoretical factions. The significance of site in any consideration of changes is its inflexibility to change, despite the theoretical stance of practitioners or researchers. Site is, as Cuban (1984) has adequately indicated in his research, resistant to alterations of magnitude. Site-based teacher education, then, can only be at most a marginal difference in emphasis. That is not to say that nothing new is being learned or attempted. Essentially, the problem of curriculum for any teacher or students is the case of envisioning the completion of the subject, *what it is* and *what it could be*, in its self and in its relation with others. Traditionally, this has meant not only conceptualizing an intellectual and corporeal end to teaching but an endpoint to education as a formal course of pedagogical action and its academic responsibility to questions of truth and knowledge. The difficulty with projecting the completion of the subject is that curriculum forecloses the identity of the empirical subject and replaces it with an ideal one, a *what* instead of a *who*. Educational structures depersonalize curriculum for the sake of the efficient delivery of knowledge in the name of common results articulated as objectives, goals, and aims. The collective mediation of a student body thus supersedes the process of subjective self-actualization that pedagogy seeks to engender, thus resulting in a fixation of the teaching body on method for its own sake. Any curriculum cannot but fail to effectuate any disclosure of the self that is uniquely personal enactment. Curriculum guides teaching by posing the question '*What* is the subject I want to develop?' If the subject is produced through directed action, the subject is singular, not collective. Not a 'what', but a 'who'. The subject is particular in its relation to the other and the ground of intersubjectivity is determined via praxis. Subjectivity discloses itself in accordance with its determination by an other who engages the self within the communicative sphere of discourse and action toward the imperative of understanding the absent ground of otherness that radicalizes difference. Curriculum is the methodological value of experience translated as pedagogical guidance. Its application toward the formation of an ideal subjectivity reiterates the nostalgia of the desire to confirm the empirical and theoretical grounds of knowledge that allows us to understand each other as subjects in a culture when we engage the difference of other subjectivities. Curriculum foreshadows reciprocity. But it posits a closed system of exchanges that go back and forth in a circular fashion of a perfect communication. In actuality, we learn more about ourselves when we engage the other; we learn more about the other when we engage ourselves. A radicalization of curriculum ensues: if subjectivity is discovered in action and intersubjectivity is born in the coming to presence of the subject through the engagement of an other, then the

contextual application of a generalizable curriculum to facilitate the actualization of subjectivity is misguided and unethical. The practice of education works itself out in relation to the larger context of a community of difference that is always already absent, yet to be realized, and on the horizons of an impossible trajectory for where the knowledge of the self and selfhood encounters multiple sites of understanding.

A difficulty is found in the comparison between the ideal of what site-based teacher education could be and actual practices in place. For example, Corrigan & Haberman (1990) also indicated that, 'practice teaching in the preparation of teachers could well be overrated, because the most extensive study yet conducted indicates that little change occurs in student teachers' performance as a result of their direct experiences' (p. 199). The student teacher enters the teacher education program with experiential knowledge concerning teaching, having been a school student for some 12 years.

Liston & Zeichner (1991) observed that 'prospective and practicing teachers bring to the classroom implicit and unarticulated assumptions, beliefs, and values about the social context of schooling' (p. 61). A number of other researchers have articulated as much (see Sarason, 1982; Wright, 1987; Goodson, 1992; Atkinson, 1996; John, 1996), including about teachers themselves (see Giroux, 1995; Zehm & Kottler, 1995). If student teachers are entering the teaching profession (to use the term *profession* lightly) and merely replicating what they 'know' – that is, what they have been schooled to adopt – then reflection in practice, for example, such as Schön (1983), Grimmett & Erickson (1988), Elliott (1993) and Griffin (1995) discussed, deserves further investigation. The more profound theoretical issues, including those that pertain to foundations – curricular, pedagogical, ethical – are neither fostered nor encouraged in the site where practice dominates.

Corrigan & Haberman (1990) commented on the state of traditional teacher education programs, noting that traditionally these programs 'reflect the university culture and are unrelated to the needs of elementary and secondary schools' (p. 201). In a more recent commentary on teacher education, Imig & Switzer (1996) urged '[t]hose who want to promote change in schools of education' to include the 'socioeconomic status of the teacher candidates' as well as a list of other socio-political concerns (p. 215). Imig & Switzer reported on efforts in some teacher education programs to alter the superstructure and support framework of those programs. Although Grimmett (1988), discussing Schön, made note of different teacher education programs attempting changes in approach, Imig & Switzer, almost a decade later, challenged educators to completely overhaul teacher education, 'including the basic philosophy that undergirds it' (1996, p. 219; see also Soder & Sirotnik, 1990, pp. 400ff.), implying that either there has been little, if any, change, or that more research needs to be conducted into the nature of teacher education programs. Elliott (1993) has, in fact, offered a rational and radical overhaul of teacher education – his 'practical educational science', but as such is not mentioned by Imig & Switzer. Goodson (1995) has also entered into the

discussion of reforming teacher education. But while Imig & Switzer indicated the need for changes to take place at the university level, there seems to be an underlying assumption of it being only a higher education problem. The question of the role of the site is not discussed nor of how the site could play a vital role in the structure of teacher education.

Is the problem, then, that teacher knowledge making, or teacher *vocabulary* as an introduction to the culture of teaching, is the assumed prerogative of higher education institutions? And if so, do teacher education programs suffer or benefit? Tom & Valli (1990) tried to isolate teacher knowledge into four preferred states, dependent on the predilections of the practitioner: positivistic, interpretivistic, 'critically oriented', and craft, admitting that this latter category 'is outside recognized epistemological traditions yet is generally acknowledged to be the dominant orientation among both classroom teachers and teacher educators' (p. 377). If knowledge as a construct of the university is the privilege of the same – controlled, determined, or managed by the university – what, then, is the function of the site and of teacher experience, particularly in light of Tom & Valli's foregoing information? It would appear that the site and experience are merely secondary elements. But what would be the primary elements? These would appear to be the mandates of the university, which would include initial teacher knowledge, or a kind of *initiation vocabulary*, and technical training as pertains to lesson planning and subject mastery.

Teacher education appears to be the practice of merely acquiring technical skills (Elliott, 1993, p. 3). At the same time, student teachers who, from lack of experience and vocabulary, focus primarily on such acquisition as if teaching were no more than the effective performance of particular habits at appropriate times, or the *what, how,* and *when* of which I have already spoken, find themselves in a dilemma: relying on the known of their experience from being in school and not attending to developing effective skills to deal with the unknowns. Case studies arguably afford the student teacher with the opportunities to develop analytical skills to deal specifically with teaching-related problems. Combined with the practicum experience of the site-based teacher education approach, the student teacher presumably learns to be a 'reflective practitioner', an able teacher capable of tackling the demands of the job. To that end, however, Elliott cautioned that the:

> quality of an individual's performance depends on what he/she brings as a person from their own biographical history and is able to develop further through the professional role. In other words, the quality of a system's performance is more likely to be enhanced by fostering the personal development and growth of the individuals who perform in it, than by pushing them through training programmes which largely focus on the acquisition of technical skills. (1993, p. 3)

Elliott continued that 'an alternative form of quality assurance and accountability' has as its core premise 'the idea that the quality of teaching and

schooling resides not so much in its instrumentality in effecting certain measurable outputs, but in its ethical consistency with educational values' (p. 3).

Capitalizing on the foregoing as foundational, Elliott (1993) prescribed that the curriculum of teacher education 'be based on field-research and only allow for a gradual and controlled immersion into direct experience' (p. 4). That is due, according to Elliott's reporting of research findings, 'to the power of the occupational culture in schools to limit, circumscribe and restrict the development of personal capacities for in-depth reflection about practice' (p. 5). It is to that end of protecting, fostering and developing 'the reflective capacities of teachers' (p. 5) that teacher education ought to focus. The question of whether the site fosters such reflective engagement and development is doubted in those settings where teacher development and preparation, or training, delivers the more technical considerations of what it is to practice teaching.

All this is not to say that the site could not change, or be altered through the experience of having the same group of student teachers collaborating with a core of sponsor teachers and be involved in an online interaction. Also, that is not to say that in a predominantly technical-rational model of teacher education there is 'non-reflective' activity. Reflection admittedly still occurs but in this case it is argued to be severely handicapped. Without the structure in place that fosters and enables the depth of reflective practice that is expected in Schön or even Dewey, student teachers have little hope of altering either behavior or the depth of pedagogical thinking.

The process and product of teacher education are functions of a theory of learning and politics. The product of teacher education – ideally, pre-service teachers prepared for the task of teaching – is a participant in learning and at the same time a systemic pawn. Teachers are determined such by the legislations of political others. Hence, one does not become a teacher by right of experience, such as years of home schooling, for example, or other public educational programs. As with the professions and certain trades, one must first attain a level of acceptable knowledge – acceptable being a pragmatic as well as politically motivated attitude predetermined by the initiated.

Site is also manipulated according to the political and economic vehicle. Teacher education programs, having developed as a result of the previous development of schools, progressed to the university setting as the desire for knowledge – to improve and to understand – increased. There is nothing inherently or qualitatively superior in the university that renders it a preferred place of inquiry and knowledge production. Although slowly changing, the school, as a site of stimulating knowledge production, is rather ironically the nadir of the university, where *why* is not only expected but fostered. That raises a number of questions for teacher education, as was determined earlier.

Richard Riley (1996) of the US Department of Education, in an address to the National Congress on Teacher Education, challenged participants that, 'Teacher education programs must help cushion the shock. They must have a

healthy dose of "real-world relevancy"' (p. 181). The means by which teacher education programs might accomplish dealing effectively with this 'shock' is not examined by Riley. However, teaching in the virtual has greater potential as an acceptable avenue to successful attainment. It is a real means of initiation. Doing that right, though, is another matter.

Within the school site, there is always a tendency towards anti-academic practice and being a setting where one acts, performs, and *does* the curriculum, the student teacher quickly learns to adapt to the practical demands of the site. Thus, the student teacher readily assumes a role of site apprentice more than knowledge builder, where the apprentice learns techniques – the *what to, how to,* and *when to* – because these are what are demonstrated as being *the* critical features of working in the particular, or even hostile, environment.

The student teacher, as a necessary part of the rite of passage, learns to perform and at the same time to play the game, so to speak. Prawat's (1996) argument for the 'learning community ... where students engage in animated conversation about important intellectual matters' (p. 92) is arguably a noble cause. Unfortunately, until it is seriously acknowledged that the school site in teacher education still tends toward maintenance of the status quo of the culture of teaching, whether epistemic or functional. Levin (1990) noted, for example, that:

> professional education curriculum lacks focus beyond the mechanics of the classroom, failing to address normative issues about how schools function in a larger societal context and failing to socialize students ... on such issues as ... critiquing predominant and alternative practices in age groupings, grading, and other policies. (p. 50)

Thus the dichotomous relationship between theory and practice will itself be maintained, and the student teacher none the wiser. Issuing the challenge to teachers, Atkinson (1996) argued that mentor teachers must deal with student teachers who hold 'beliefs about teaching and learning ... [that are] likely to be implicit, not articulated or formally stated and frequently contradictory' and who 'bring their share of implicit theories about life as a whole and these are entangled with their beliefs about learning' (p. 230). Atkinson stated, 'The ability to see the student teacher holistically may be a key element in constructing the relationship between mentor and student teacher, a relationship which can be seen as the key to the success or otherwise of school-based teacher training' (p. 232).

From the foregoing we can summarize the key points as the following:

1. Teacher education is about performance in a particular setting within a particular framework. Performance is technically dominated with behavior seemingly left to be determined by the individual in response to a code of ethics.
2. Dilemmas in teacher knowledge are domain-specific or general: – specific in that they are systemically situated (e.g. wages, union issues, evaluation, in-depth use of IT, learning, teaching methods,

textbooks, curriculum development and implementation); – general in that similar problems exist in institutional settings (e.g. management, dealing with adolescents, workers, age groupings, resources, facilities and working conditions).

3. The nature of schooling, hence the site, precludes the proper functioning of some ideas, ideals, and orientations (e.g. open timetables, travel and other experiential learning, extended discussions).
4. Catalogued case studies and documented discourses of teaching experiences – real and contrived – for the purpose of structured learning are restricted temporally and geographically, and to technical understandings – hence practice – of teaching.

A frustration in trying to situate site, teacher experience and practice in the curriculum of teacher education is that it is not unlike trying to incorporate jello with Zen (what is the sound of blue jello?): just when I think I've got a solid understanding, one or another facet becomes problematic. Site is significant, yet somehow irrelevant, because teacher education that is 'site based' may be only so as a result of a varied emphasis and without a penetrating reflection on the dynamics of learning, philosophical options and their influences, or radical systemic changes. Teacher experience and practice, inasmuch as numerous researchers have argued for a greater place for voice and Other, remain structurally and hermeneutically dependent on site and schooling. Systemic or elemental reform, then, will not succeed to alter practice, and consequently experience, either in the site or in the university, without a radical departure away from the concept of schooling as an industrial heritage. As Kramer (1991) concluded, 'alternative certification programs are no panacea for the ills that affect our schools' (p. 213; see also Tyson, 1994, who commented extensively about the 'ills' and offered some useful thoughts about teacher education). But above all, it would appear that knowledge abounds about better or improved models, and this means that what is necessary is implementation and creative, collaborative efforts to that end.

We are now moving into the domain of the virtual teacher. What then of ethics? How does ethics enter the picture? With teaching as an ethical enterprise, teaching in the virtual gives no grounds for identification that is based in an ethical framework, because it is that artificial environment that eliminates the corporeal. Is it a question of whether ethics merely 'morphs' into another range of dimensional relations between individualist ethics or whether ethics becomes relegated to mere cyberworld – a global code of cyber conduct that just occupies screens, or layers? Or is this a millennial opportunity to reconsider the human? We suggest that the ethical challenge of teaching in the virtual is the opportunity for moving beyond the boundaries: the boundaries of the systemics of schooling, of time, and of what one already knows and takes for granted to be true by questioning the grounds of one's own knowledge. This requires new contexts of praxis and the poetic, *poiesis*.

In post-Socratic learning, the face-to-face becomes the indicator or the mark of the quest for the ethical relation between individuals based on the

human dimension. In postmodern, post-industrial learning, the face-to-face becomes subsumed in the quest for the placement of subjectivity in the economy of a global context of institutions of learning and their interpretive values which are often determined on ideo-political agendas. Another way of stating this is to conceptualize the technological as *technodolatry*, or the propensity of humans to idealize and idolatrize the desires of their hearts. Hence, technology, viewed as a deterministic agent (see Smith & Marx, 1996), is a force toward which one renders homage, as in touting its grand benefits, efficiency, and accessibility, and in holding it in a place of reverence, even if suspiciously. But technology viewed as a means to greater ends is wrenched from its position as a social tool and relocated in desire: faster equipment, more capability, ease of accessibility, and emotional satisfaction.

IT and teaching in the virtual are not a panacea although the medium of technology can be used as an effective mode of instruction, or not. Teaching in the virtual surpasses or challenges the basic economy of the transmissive model of teacher education, because it works on the excesses of the remainder of what is left over after we take stock of the balance sheet of communication, input and output now notwithstanding. Not driven by the tool, but driving the tool and shaping the inter-spaces where meaning takes place through negotiation and reflection upon the sources of knowledge production. Teaching in the virtual is not simply some notion of a nomadic cyber-tutor sitting with a laptop in some remote location downloading student work and/or uploading data. It also includes alternative approaches to exchanges of information and the interactive production of knowledge.

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