More and more, the Internet is creating a “paranational culture that combines global connectivity with local specificity, a ‘glocal’ phenomenon that seems to resist national political agendas” (Poster, 1999, p. 236). If true, the online community might operate both as a social homogenizer and at the same time as an agent of social change that transcends strictly local concerns. If we need evidence of how powerful the Internet and social media can be, we need look no further than the Arab Spring. Cell phone images of political protesters accompanied by blogs and tweets were distributed around the world, resulting in “glocal” pressure on autocratic leaders to be transparent, and accountable to local citizens. Online learning has the capacity to span and challenge diverse online communities, organized communities, and exclusionary in-groups because it allows us to explore alternatives to social, cultural, and political boundaries. The design of these online environments helps shape the identities of these virtual communities (Adria & Campbell, 2006). In other words, instructional designers can be agents of glocal social change.

That’s the promise. However, most cyber or online universities are created as cultural institutions that reflect the sociocultural values of their existing
communities, often based on traditional, and sometimes antiquated, university assumptions and practices. These institutions are encouraged to recruit international students with a goal of increasing plurality. But there are issues: a review of learning design and program delivery suggests that many online institutions do not take advantage of multiple sociocultural perspectives and uncritically reflect a (Western) dominant-culture curricula design (Collis & Remmers, 1997; Hongladarom, 2001; Kenny, Zhang, Schwier, & Campbell, 2005; Stewart, Shields & Sen, 2001; Rogers, Graham, & Mayes, 2007; Young, 2007). As a result, most of these environments reflect little understanding of cultural intelligence. As local problems become glocal issues, learning organizations around the world share the challenges and opportunities of professional, mid-career learners. Is it realistic or even possible that uncritical Western ideals of economic and social progress can adequately define life, politics, and education across a diversified world? Programs in which adult learners work collaboratively to confront social issues strongly support the imperative to design the learning experience as “one of facilitated constructivist learning through dialogue, or an open-ended, non-dogmatic, and emancipatory discourse” that respects cultural differences and realities (Harris, 2000, p. 39).

Are instructional designers taught to engage through their practice in an emancipatory discourse? Is change agency addressed in the academic preparation of instructional designers? This is not how instructional design (ID) has been traditionally approached or portrayed in higher education, in North America at least, and North America has long been the locus of development of instructional design research and the source of over 100 related graduate programs (Kenny, Zhang, Schwier, & Campbell, 2005). Although the “objective” scientific paradigm (i.e., cognitive science) has dominated research and preparation of instructional design(ers), not to mention ID discourse, through the decades theory and practice has consistently reflected the sociocultural and political conditions and contexts in which they have occurred. For example, in distance education instructional designers work directly with faculty to help them think more critically about the needs of all learners about, issues of access, the social and cultural implications of the use of information technologies, alternative learning environments, and related policy development. As such they are important participants in shaping interpersonal, institutional, and societal agendas for change.
Instructional design is not simply a technical methodology to be applied to design situations. Instructional design, like all sciences (Kuhn, 1962) has always been a situated practice, although it has not usually been explored or described in this way. Hongladarom (2001) argued that because the Internet bears the stamp of American cultural values (liberalism, egalitarianism, individualism, exceptionalism, and competitiveness) these values are well embedded in both the technology and the nature of the communication enabled by it. In effect, the Internet is the “outcome of an international, cosmopolitan culture where participants share little in common in terms of historical backgrounds” (p. 316); certainly MOOCs can be a manifestation of this phenomenon. In this chapter and elsewhere (Campbell, Schwier, & Kenny, 2009; Schwier, Campbell, & Kenny, 2004) we challenge one of the grand narratives of instructional design theory: instructional design is a scientific domain immune to the sociocultural, geopolitical, and economic contexts in which its temporal research, education, and practice are situated. On the contrary, we show that instructional design has always been informed and shaped by the social movements in which it has been situated.

A BRIEF HISTORICAL OVERVIEW OF ID RESEARCH AND PRACTICE

The roots of instructional design can be traced back to the 1920s, when a behaviourist approach to educational psychology emerged, represented by Edward Thorndike’s (1874–1949) theory of connectionism—the stimulus-response (S-R) model. Two decades later, Hull (1884–1952) developed the concept of drive reduction, a motivational model of behaviour that emphasizes learners’ wants, attention, and activities. Challenges during this time, related to military–industrial productivity, led to the development of applied mechanized technology to increase the efficiency of the learning process. Thus, behavioural models, teaching machines, and the interest in standardized instruction contributed to the instructional media research and training development needs of World War II (Leigh, 1998).

Early attempts to apply general systems theory and systems analysis, and Robert Gagné’s (1965) seminal work on the conditions of learning, occurred soon after World War II (Banathy, 1987). By 1980 over 60 published ID models, conceptualized around the “standard” stages of analysis, design, development, implementation, and evaluation (ADDIE) were available and
became the standard model of instructional design practice (Andrews & Goodsen, 1980/1991; Gustafson & Branch, 2002). The majority of ID models (Dick, Carey, & Carey, 2005) are process-based although some models, such as those of Gagné and Briggs (Gagné, Briggs, & Wager, 1988), were theory-based as well; they were developed on the basis, first, of behavioural learning theory and, later, on cognitive theories of learning that dominated the field for over 40 years (Willis, 1998).

Such models, modified to be less descriptive, continue to thrive in various portrayals (cf. Morrison, Ross, & Kemp, 2004; Seels & Glasgow, 1998) and have been taught to thousands of graduate students. At present, the role of the instructional designer ranges from consultation on educational and instructional video; to development of computer-based instruction, printed media, curriculum, and online courses; to mentor and facilitator of faculty development, and a host of other diverse responsibilities (Ritzhaupt, Martin, & Daniels, 2010; Schwier & Wilson, 2010). While there is evidence that instructional designers have been pivotal to the growth and success of online offerings in higher education (Bates, 2005), critical theorists have described their products and environments as prescriptive, restrictive, and reductionist, due in no small way to the culture they have acquired within their areas of study that include behavioural systems and cognitivist views of learning (e.g., de Castell, Bryson, & Jenson, 2002; Garrison, 1993; Vrasidas, 2001).

However, a discourse is beginning to emerge about the actual practice of instructional designers, characterizing it as situated and embedded in context (Cox & Osguthorpe, 2003; Kenny, Zhang, Schwier, & Campbell, 2004; Visscher-Voerman & Gustafson, 2004). For example, our own research among Canadian instructional designers suggests that clients (i.e., faculty members in higher education) working with instructional designers in development projects are actually engaging, as learners, in a process of professional and personal transformation that has the potential to transform the institution and the broader society. As a situated practice, ID requires us to establish common ground-embracing interests, personal values, and sociopolitical awareness, especially in a global economy with its cross-national development projects.

In the remainder of this chapter, we tell a different story about the history and practice of instructional design in the 20th and 21st centuries. In this story we place research on learning and theory building, applications of instructional design theory and development of models, and implications
for distance education practice, on a temporal and sociopolitical timeline that illustrates how reflective of social, cultural, political, and economic currents ID has always been. We argue that designers of distance education environments should be familiar with the history that has shaped their field and, going forward, should be able to critically design within relevant sociocultural frameworks. The organizing contexts are 1) the war years and the birth of instructional design, 2) multiculturalism and the identity movements, and 3) globalization, neo-liberalism, and lifelong learning.

THE WAR YEARS AND THE BIRTH OF INSTRUCTIONAL DESIGN

In the United States, comprehensive professionalization and standardization of modern military education largely began during the interwar years (1918–1940) in partial response to the challenges faced during World War I. The technological advancements of WWI signalled a need for new strategies and training protocols (Odom, 2000). The Army Industrial College was established in 1924, later becoming the Army–Navy Staff College in World War II, and now the Industrial College of the Armed Forces (Yeager, 2005).

With the advent of the World War II the American military was required to train hundreds of thousands of military personnel rapidly. Behavioural psychologists such as Thorndike, Hull, and, later, Tyler (1902–1994), who was called the father of behavioural objectives, laid the groundwork. With the experience of creating standardized methods of instructional delivery using teaching machines, military researchers developed “a bevy of training films and other mediated materials” (Leigh, 1998, p.1) for instructional purposes. The American military realized that educational technology had significant implications for military training, mostly in the form of instructional media such as films, slides, handbooks, and “realistic” models (Saettler, 1990). Specialized groups that included civilian educators, artists, communications specialists, advertisers, and personnel from theatre and motion pictures combined to develop a “military technology of instruction” (p. 184); the current multidisciplinary design team reflects this approach. According to Hoban (1946), “Behind the developments in Army films was a broad concept of the dynamics of human behaviour, an empirical understanding of the reasons why people behave as they do, and a positive approach to the direction and control of human behaviour” (Saettler, 1990, p. 184).
Foundational Learning Theories: Behaviourism and Cognitivism

Beginning with the overall aim of predicting and controlling (human) behaviour through observable and measurable scientific methods, the behaviourist school holds that all behaviour can be explained as a product of learning. On this basis, appropriate stimuli will condition an individual’s behaviour, thereby producing particular outcomes. Adhering closely to the scientific method, and extrapolating from the work of evolutionary theorists Darwin and Galton, behaviourist methods reflected, as well, the growing social and industrial impetus of scientific management. Derived from the writings of Frederick W. Taylor (1856–1915), the practices of Taylorism emerged from the factory systems of the industrial revolution. Taylor’s approaches separated manual from mental labour and instrumentally divided work processes into discrete parts, for example, the assembly line theories and practices of Henry Ford (aka Fordism). For the behaviourists, behaviour and human emotion, like work, could be understood systematically and through a mechanistic lens.

Midcentury, B. F. Skinner’s work on operant conditioning and positive and negative reinforcement advanced neo-behaviourism even further. Focussed on rewarding particular behaviours in particular environments, Skinner suggested that all we can know are “the external causes of behaviour and the observable results of that behaviour” (Hunt, 2007, p. 305). He outlined an ideal scientifically controlled utopian society in Walden Two (1948), detailing his belief that behavioural engineering would produce good individuals conditioned to behave in a good society. Skinner’s work was highly influential in fields such as education and instructional design (Hunt, 2007). Behaviourist approaches are still in use today as with controlled laboratory practices of experimental psychology and the quantitative methodologies that underpin much scientific and social scientific research.

In the 1960s Robert Gagné demonstrated concern for the different domains of learning. His book Military Training and Principles of Learning differentiated psychomotor skills, verbal information, intellectual skills, cognitive strategies, and attitudes, aligning with Bloom’s six cognitive domains of learning. This thinking later extended to Gagné’s nine instructional events, or activities necessary for learning. These events continue today to be used for the basis for the design of instruction and are treated as global constructs that can be applied to many different instructional media. Cognitive theories still inform much of what we think of as newer learning
technologies, for example, in the design of learning management systems that assign different locations for various learning activities, and that feature well-crafted and scaffold-learning modules.

**The Rise of Individualism**

The rationalization of society, of science, seen in the application of cognitive science to learning, followed from the Enlightenment’s premise of absolute knowledge or *truth*. Truths could be determined through the use of objective methodological procedures and the separation of the subject from the object of study (e.g., Descartes, 1596–1650). This methodological empiricism assumes that the investigator, or *knower*, can separate him- or herself from objects of study, can divest him- or herself of prior knowledge, and thus can be a detached observer of the social and natural worlds. These principles underpin the modern scientific method: the separation of human from nature enabled the articulation of concepts such as empiricism and objectivity. With this went the notion of the model human as rational, independent, and free of interference, which we have seen articulated above in the search for a way to program learning that is based on value-free science. However, the political theories of the Enlightenment largely failed to address questions of difference. That is, as a product of dominant European societies, these theories replicated gender-, race- and class-based essentialism (Mill, 2008).

Enlightenment dualisms such as nurture/nature, male/female, public/private, white/black, which underpinned the scientific method and articulated through cultures of science and gender, reflected absolute divisions in the natural and social order and are core to objectivism (Merchant, 2001). Jordanova (1999) and others argue that dualisms must be understood within a cultural matrix of meaning but, historically, the metaphorical linkages between them follow certain patterns and can come to shape reality. In other words, they reflect cultural statements about an idealized (moralistic), perspective on the social and natural world. These statements come to serve a normative role intended to shape social relations and thinking. For example, in the history of instructional design, *praxis* (“evidence-based practice”) has derived from the scientific method in the form of experimental or quasi-experimental research design that seek to control human variables and learning conditions. Qualitative methods, that we argue explore the
social/cultural world of ID research and practice, have only recently been accepted as legitimate research in the field.

*The Open and Distance Learning Organization*

As we have seen, Fordism, while not a learning theory, is closely aligned with systems thinking and has influenced the structure of many distance organizations. Achieving economies of scale in most open and distance learning institutions (ODLs) are necessary to ensure cost-effective access for students experiencing time, place, and/or situational barriers to formal and credentialed education (Bates, 2005; Moore & Kearsley, 2005). Many ODLs have effectively achieved economies of scale by adopting an industrialized model of distance education (Peters, 1967, 1998). In fact, in *Distance Education at Universities and Higher Education Institutions: Didactical Structure and Comparative Analysis—A Contribution to the Theory of Distance Education* (1967) Peters conceives of distance education as the *most* industrialized form of teaching and learning. This model requires a separation of the preparation of materials and resources for teaching and learning from the interaction of students with those materials and with their instructor. In the industrialized model, in which the large-scale production and delivery of learning resources may resemble an assembly line approach, the focus is on the construction of the learning and teaching materials, i.e., instructional design. In this model, instructional designers gained influence and authority, as their specialized expertise was valued on much the same level as the subject matter expertise of faculty. Lockwood (in Peters, 2004) is persuasive that “our aim should not be for teacher dominated, goal directed behaviour [that perpetuates] previous teaching and learning practices in the new environment but to consider a whole array of possibilities that are open to us” (p. 9).

*The Optimal Blueprint*

Advocating a mastery approach to learning, Bloom (1956) endorsed instructional techniques that reflected learner requirements, providing instructional developers a means by which to match subject matter and instructional methods. However, Bloom’s taxonomy was not in and of itself “capable of satisfying the desire of large organizations to relate resources and processes to the performances of individuals” (Leigh, 1998). Systems thinking began to emerge when Bloom’s taxonomy was combined with Ludwig von Bertalanffy’s general systems theory, which was based on the
integrative nature of biological interactions (Leigh, 1998). This work encouraged matching the content and delivery of instruction in the context of a whole organization, as well as groups and individuals within the organization. The advances of Skinner, Bloom, and von Bertalanffy (1901–1972) were usually employed to develop instruction in what was only assumed to be an effective and efficient manner. The formalization of a standardized design process still had yet to be devised.

In the turbulent decade of the Vietnam War, Grant Venn (1970) argued that the current educational system was only serving the advantaged minority of schoolchildren, while those not attending college were conscripted to a war in Asia. Critical theorists such as Paulo Friere and Michael Apple were taking up related concerns; the hidden curriculum became a metaphor for the socialization of students through the experience of being in school; it was “an approach to living and an attitude to learning” (Meighan, p. 314, 1986). Concerned with a low achievement rate in public schools, Robert Morgan proposed an experiment with an organic curriculum, which would incorporate into the educational system the best instructional practices identified through research. One of the researchers involved in the large-scale project was Leslie Briggs, who had demonstrated that an instructionally designed course could double achievement, reduce variance, and reduce time-to-completion; the effect size of the treatment was four times that of the control group, who received no training (Silber & Foshay, 2010). The search for the optimal blueprint for learning became a Holy Grail for instructional designers.

As we have seen, the systems view is based on the assumption that using an instructional systems design model that is based on learning theories closely tied to behaviourism and systems theory (Banathy, 1987; Merrill, 1983) is necessary for effective learning transactions. Specifically, the use of an instructional systems design model will identify what is to be taught, determine how it will be taught, and evaluate the instruction to determine what is necessary. It is a linear and cyclic, systematic and prescriptive approach to instructional design. These elements are essential if learning is to be effective under all conditions. Hence, when instruction is designed based on a systems instructional design model, the end result is effective instruction—regardless of who is teaching. Or, stated more directly: education that is teacher-proof.
Implications for Instructional Design

Educational technology came of age during World War II (Saettler, 1990), although ironically the training push did not include systematic evaluation of learning or performance. However, during this time visual instruction converged with educational technology; educators generally grew more sensitive to the consideration of scientific theory to the practical problems of instruction (Saettler, 1990; Reiser, 2001).

Instructional Technology and the Structure of ODL

Duncan (2005) outlines the close historical relationship between military training and distance education, while acknowledging the contentiousness of distance learning practices in military circles. Beginning with correspondence education offered to both soldiers and civilians, distance learning expanded in part due to economic concerns but simultaneously raised concerns over the loss of traditional (classroom) learning programs and lack of adequate instructional strategies. However, the US Department of Defense, today considered one of the “most prominent leaders for modern day technology-based distance education” (p. 397), is credited with the development of ARPSNET (a forerunner to the Internet) and is identified as a key developer of cutting-edge instructional technologies. American investment in military training and R&D was, and remains, foundational to the research in learning, cognition, instruction, and performance. Reiser (2001) defined two practices emerging from the war years as core to the field of ID: the use of media for instructional purposes and the use of systematic instructional design procedures.

Simulations and Gaming

Simulation training, precursors to today’s virtual worlds and gaming, went beyond pure battlefield applications in the post-war period. For example, the 1960s and 1970s saw the development of intercultural simulation exercises—often based on what was called the university model—designed to modify soldiers’ attitudes, communications skills, and cross-cultural sensitivity, and often as part of military briefings and overseas postings (Fowler & Pusch, 2010). At the same time, intercultural simulations were being developed in other branches of government and the corporate sector. The US Peace Corps, for example, developed similar training modules in the 1960s that combined academic and experiential learning with physical fitness training (Fowler & Pusch, 2010); the American Foreign Service, medical institutes, and
universities, among others, adopted similar diversity training programs in the following decades.

**MULTICULTURALISM AND SOCIAL IDENTITY MOVEMENTS**

The years after World War II saw the rise of counterculture movements, reflected in the American civil rights movement of the 1950s and 1960s. The new radical politics also spawned the antiwar movement/peace movement, the human rights movement (Canada), the gay rights movement, the re-emergence of feminism in the mid-20th century (alongside the sexual revolution), and the rise of the New Left. Following our thesis that instructional design research and practice is socially and culturally situated, we have organized this section to reflect the identity movements of the 1970s through the 1990s that followed from these paradigmatic shifts in social and cultural values. In other words, how did instructional design research, education, and professional practice change to reflect the sociocultural values of diversity, democratization, inclusion, the American melting pot versus Canadian pluralism, the politics of difference, integration, citizenship, and community cohesion?

Theories and policies of multiculturalism emerged from the cultural paradigms shifts of the 1960s and, in particular, in relation to the cultural needs of non-Europeans who were immigrating to North America in response to the social and political challenges resulting from civil wars (e.g., Vietnam), religious conflicts (e.g., Irish Protestants and Catholics) economic pressures and opportunities (e.g., repatriation of Hong Kong to the PRC), the rise of extremism (e.g., terrorism), and shifting of geopolitical boundaries (e.g., the dismantling of the Berlin Wall). The term **multiculturalism** now generally refers to accommodations made by state and/or dominant cultural groups of a diverse range of marginalized (or minority) cultures. These marginalized groups are defined in relation to race or ethnicity, nationality, indigeneity, and religion. While equal opportunity legislation and improved human rights protections formalized these views in most Anglophone and/or industrialized countries, a backlash against concepts of diversity and multiculturalism have arisen in the past decade, particularly since the events of 9/11.

Multicultural policies sought to balance the push for assimilation into dominant cultural values (for example, the American melting pot) with
the more pluralistic notions associated with diversity. Pluralism—cultural, political, and social—closely associated with postmodern social theory of the 1970s, 1980s and 1990s, recognizes the multiplicity of identity while also accounting for the power-laden practices that enable identity. Strategies of inclusion included various methods of egalitarianism, such as revaluing forgotten or excluded histories and experiences (for example, the recovery of oral histories, the rewriting of curricula to include diverse examples, the inclusion of personal narratives in research). Strategies also included specificity and contextualization in an effort to challenge the universalist/essentialist, gendered, and raced dualisms of the Enlightenment (McLaren, 1997).

In the education world during this time the women’s liberation movement, in particular, initiated women’s increasing participation in post-secondary education and the workforce. While the egalitarian principles of the New Left opened up new opportunities for marginalized groups, such opportunities were greatly advanced by emancipatory pedagogical theories (Freire, 1970; Giroux, 1983; Collins, 1986; hooks, 1994; West, 1997). Gender and technology research informed the deficit myth and generated interest in the social contexts in which technology was used (e.g., “the chilly climate”). Curriculum and instructional design researchers began to examine issues of authority, challenging the origins of truth and knowledge and the agency of the learner to participate in their construction. The social and cultural origins of curriculum and theories of learning came under scrutiny through a nuanced lens that permitted multiple and sometimes conflicting perspectives; constructivism began to frame discussions of pedagogy and design. More complex and contextualized understandings of identity, in which aspects of identity are seen to be socially- and culturally-specific and constructed, are outcomes of this period.

These perspectives suggest that concepts such as citizenship or equality, as well as government policies and practices, for instance, cannot be objective or colour-blind, and that no such policies or belief systems are politically neutral, even instructional design theory and models such as the instructional systems design (ISD), or ADDIE. For example, we have shown that ISD emerged from a period of time during which large groups had to be quickly trained in procedures that relied on repeated and accurate actions (e.g., soldiers): behaviourist notions of learning prevailed in such contexts.

Also during this time computer-based learning and the rise of the Internet extended the reach of designers and distance educators to populations in
different geopolitical areas and to learners from different sociocultural backgrounds learning in North American or Western settings. The androcentric, Western design of computer-based learning was challenged (Chegwidden, 2000). The term digital divide was coined to describe geographical inequalities in access to computer technologies, but it was soon expanded to include questions about gender, socioeconomic circumstances, accessibility, and cultures of learning (Bowers, 1988). Distance educators began to consider the design requirements for online learning communities that included participants from different cultures and in different time zones, with a wide range of reliability in technology connections; a spectrum of dominant languages while the language of instruction was predominantly English; and expectations for instructor and peer interaction, learning assessment, individual versus group activities, and appropriateness of content. Cultural theories such as Hofstadter’s cultural dimensions (1997) and Nielsen and colleagues’ work on internationalization and localization of interface design (Nielson, 1990; del Galdo & Nielson, 1996) were adapted to learning design in attempts to respect the diverse life experiences and memberships in multiple cultures of (i.e., identities) learners. Entire issues of learned journals were devoted to considerations of culture and design (British Journal of Educational Technology, July 1999).

Implications for Instructional Design

Why does distance education need instructional designers who are socially, culturally, and politically aware? Rogers, Graham, and Mayes (2007) argued that, while the interest in cross-cultural learning markets has been increasing, “the initial high hopes for international e-learning have not been fully met” (p. 198) and have resulted in disillusionment, perhaps evidenced by the relatively few e-learning initiatives that have reached across geographic, political, and cultural borders. The authors wonder whether this may be partly attributable to the influence of “their own cultural blinders” to which instructional designers are not “immune” (p. 198). Burnham (2005) also questioned whether the expression of instructional design, grounded as it is in Western cultural presuppositions, was of inherently less value to non-Western learners using those designs. Their concern reinforced the call for adding cultural considerations to models of instructional design as an attempt to more fully contextualize the practice of instructional
design (McLaughlin & Oliver, 2000). The specific expression of culture in instructional design is elusive but important. It ranges from consideration of culturally appropriate visual design elements such as layout and colour (Misanchuk, Schwier, & Boling, 2000), to attention to epistemological and pedagogical emphases in cultures (Young, 2007), to consideration of cross-cultural design and exposure to pluralistic learning environments (Collis & Remmers, 1997).

The need to design for plural cultures is at odds with the need to design for a specific culture. User-centred principles of instructional design suggest that a precise and narrow articulation of an audience can lead to optimal learning designs, a proposition that seems axiomatic. At the same time, learning products are easily shared, often without regard to the audience for which they were originally designed. Designers need to be sensitive to the global implications of their work. In many cases, the products of ID are exposed to a wide array of disparate cultures, and in fewer cases they are intentionally designed for cross-cultural settings. Supporting a community of online lifelong learners raises questions of identity. Each participant brings membership in multiple and interdependent communities and, so, possesses a fluid identity. Specific learning communities could then become part of a distinctive culture of learners and extend notions and assumptions of what national culture and identity can be. This is an opportunity for the cyber-university to host and contribute to the development of more active and critical global citizens who participate in and help shape the tolerant, diverse, and inclusive communities that “stimulate creativity and innovation” (Piper, 2002, p. 5), and contribute to regional and global knowledge economies.

**Learning theories: Constructivism**

The work of Dewey (1859–1952), Montessori (1870–1952), Piaget (1896–1980), Bruner (1915–), and Vygotsky (1896–1934), among others, is generally credited with the historical precedents for constructivist learning theory.

Constructivism describes learning theory and epistemology. Constructivists design based on their beliefs that each learner individually constructs meaning during a learning process that is socially contextualized: No knowledge is independent of the meaning attributed to experience, or constructed by the learner, or community of learners. In other words,
learning consists both of constructing meaning and constructing systems of meaning that are tested against past and current social experience. When designing from a constructivist perspective, the focus is on the learner rather than on the content. This is in contrast to behaviourism, which focusses on intelligence, domains of objectives, levels of knowledge, and reinforcement. Fosnot (1996) presents four epistemological assumptions at the heart of what we refer to as constructivist learning, that is, knowledge: 1) is physically constructed by learners who are involved in active learning; 2) is symbolically constructed by learners who are making their own representations of action; 3) is socially constructed by learners who convey their meaning making to others; and 4) is theoretically constructed by learners who try to explain things they don’t completely understand (Gagnon & Collay, n.d.).

Instructional designs representative of constructivism place the instructor in a different role and relationship with learners. The responsibility for learning rests with the learner, rather than with the teacher. The teacher’s role is to aid the learner in coming to his or her own understanding. As a facilitator or coach, the instructor is continually in conversation with the learner, asking questions that encourage the learner to elaborate, challenging him or her to use personal experience as a starting point for making sense of the world (Teachnology, 2012).

Research in the past decade emphasized the role of well-designed online discussions in the forms described above in the development of social capital in a learning community, while some research is challenging the cognitive benefits of these activities in terms of increased levels of critical thinking (Cleveland-Innes & Garrison, 2005; Kanuka & Garrison, 2004; Kanuka, Rourke & Picard, 2005). A number of emerging learning design heuristics to increase the value of these activities include an enhanced and highly structured role for the facilitator, structured response guidelines such as those developed by Scardamalia and Bereiter (1994) in their work with computer-supported collaborative learning, and meaningful, relevant conversation in which members have a personal stake in contributing to cultural identity and either virtual or regionalized community action.

The notion, then, that knowledge is a dialectic process shifts attention from the mastery of content to the sociocultural setting and the activities of the people in a learning environment. That is, if knowledge emerges from lived social practices it can only be fully understood and assessed in relation to those activities (Luppicini, 2002). As illustration, Luppicini cites...
the example of an online course involving participants in Mexico and the United States (described by Gunawardena, et al., 2001) in which the two cultural groups differed significantly in “perceptions of language, power distance, gender differences, collectivist vs. individualist tendencies, conflict, social presence, time frame, and technical skills” (p. 90).

With increasing internationalization in higher education, and as more institutions consider shared credentials, we will encounter an increasing diversity of learners from different experiential, educational, social, cultural, economic, and language backgrounds in online classrooms. This places an impressive set of demands on instructional designers who are engaged in the process of designing online learning environments that can satisfy, or at least not disenfranchise, an increasingly diverse population of learners. As the boundaries between physical, geographical, and sociocultural environments become more permeable, assessment must be responsive to diversity and reflect critical and inclusive practices. While culture, age, gender, and life situation influence all aspects of the teaching/learning context, nowhere are the stakes and student interest more focussed than on assessment.

Assessment

The right-answer environments of behaviourism and, to an extent, cognitivism foster a culture of competitiveness rather than collaboration, in which the instructors assume the power to distribute success and failure. We argue that this approach reflects a set of values about the sources of knowledge: who holds it, who shapes it, and who has the right to it. This dialogue emanates from critical theory and is central in terms of a global curriculum. Proponents of this approach argue that the assessment of learning reflects fairness, however constructivists argue that “fairness does not exist when assessment is uniform, standardized, impersonal and absolute; rather it exists when it is appropriate. . . .” (Funderstanding.com, para. 3).

In constructivist environments learners play a more active role in the assessment of their own learning through the use of tools and activities such as reflective exercises, self-evaluations in tandem with peer assessments, collaborative projects, semantic mapping, and e-portfolios. Through reflection they can identify gaps in their learning and strategize how to improve (Wiggins, 1990). The instructional designer, encourages and guides the instructor to design a situation or problem, make resources available, use
simple assessments as a bridge to prior knowledge and experience, develop guiding questions or probes, group learners to maximize sharing multiple perspectives in a social milieu, and create opportunities for critical reflection of learning and the learning process.

Most distance learners live and learn in the world of work. Relevant and productive assessment is authentic; it as closely as possible replicates the task or process being assessed, or illustrates the learning in daily practice. An instructor who assesses for authenticity either creates natural or real-life settings and activities or contextualizes learning in the settings that already exist in order to understand and document how learners think and behave over an extended period of time. In other words, the instructor uses multiple sources for gathering information that would reveal a more accurate picture of learning progress as well as emphasizing the process of learning, not just the final product. In fact, “situating assessment and evaluation as essentially social activities, influenced by unique affordances and constraints of a particular educational context, is a critical pedagogical component when designing and teaching online courses” (Matuga, 2006, p. 317).

GLOBALIZATION, NEO-LIBERALISM, AND LIFELONG LEARNING

In contrast to the pluralistic and inclusive politics of multiculturalism, the current neo-liberal emphasis on market demand is shaping the academic planning and curriculum design strategies of higher and distance education and disproportionately impacting marginalized individuals. Many nations link lifelong learning with skills enhancement and employability; funding models tend to follow. In both the UK and Canada the industry sectors considered most promising for global competitiveness (for example management education, or specialized technology education) are often targeted for envelope funding for research and education (SSHRC’s Leadership, Innovation and Prosperity competition, http://www.sshrc-crsh.gc.ca/funding). This model includes bursaries and scholarships, tax credits, industry partnerships, and social policy such as relaxed immigration requirements for foreign workers. However, these policies have the tendency to exclude particular communities of learners, including single parents, early school-leavers, the retired and semi-retired, residents of economically-stressed rural communities, immigrants who need to re-credentialize in their new
culture, and women. A global examination reveals that males tend to dominate in the vocational, technical and work-based realms, which tend to receive more political attention and resources, while females are found more in community education and the caring disciplines (Leathwood & Francis, 2006). As Kamler (2006) protests, a focus on the economic or developmental approach to lifelong learning is “at odds with more inclusive goals, such as widening participation to . . . [those] previously excluded from taking up learning opportunities due to social, economic or geographical constraints” (p. 154).

Neo-liberal political and fiscal policy emerged with the decline of the welfare state in the 1960s–1970s, marked by Margaret Thatcher’s conservative policy reform in the UK, emulated by Ronald Reagan in the US, and taken up globally by industrialized nations. Economic and social policy shifts quickly followed in many European and North American countries. Expanding on early liberal principles, the neo-liberalism emphasis on individual responsibility largely eroded the 1960s and 1970s advances of the New Left.

Brodie (2005) identifies principles of decentralization, privatization, individualization, and the elevation of the market over the public sector as central components neo-liberalism. Brodie argues that,

the emergence of the neoliberal state in Canada and elsewhere has been marked by a growing income polarization between the rich and the poor . . . and acceleration and intensification of the feminization of poverty, and the marginalization of already marginalized groups, especially, mothers, persons with disabilities, and visible minority women, to the fringes of the labour market and society. (pp. 87–88)

Neo-liberal policies have greatly affected the structure of labour forces in industrialized countries as well as the social experience of working. A shift to part-time, cyclical, and poorly paid work, in part explains the changing career trajectory of numerous Gen-Xers and their younger counterparts: With more individuals unemployed, under-employed, or reliant on unstable employment, more are returning to formal education to retrain or upgrade their skills. Often occurring during midlife and alongside other adult responsibilities of family and work, lifelong learners alter what the “standard” student looks like.

Lifelong learning has economic, political, and sociocultural dimensions. World organizations such as UNESCO, the World Bank, the Organization
for Economic Co-operation and Development (OECD) have made lifelong learning a high priority agenda item. For example, the OECD (1996) described the value of lifelong learning to create a society of individuals motivated to continue learning throughout their lives, both formally and informally. Broadly defined, this landscape includes adult and community education, vocational education and training, and work-based and distance learning at public, private, and corporate institutions.

Canadian political rhetoric reflects the neo-liberal perspective, casting lifelong learning as increasingly important in a knowledge-based society and contributing directly to Canada’s economic competitiveness. The Education and Lifelong Learning Group within the Conference Board of Canada commissioned a report (2001) on workplace learning that linked lifelong learning directly with productivity, and emphasized e-learning as the transformative agent, “by improving Canada’s skills, innovation and knowledge base and by leveraging our capacity in information and communications technologies, e-learning will be a key to productivity, competitiveness and prosperity” (p. i). Since employer-funded training often takes place in the work context, professional men are likely have wider access to formal and credentialed lifelong learning by virtue of their socioeconomic circumstances, while women and other marginalized populations continue to be excluded from these tools of socioeconomic mobility (Kamler, 2006).

Lifelong learning can be more profoundly associated with global well-being on sociocultural dimensions. Global and pluralistic communities of lifelong learners may be best positioned to take on the wicked and ill-defined problems of sustainability, including human health, peace and conflict, food security, climate change, and other shared challenges. For example, ScenarioThinking.org (2006) from Korea identifies e-democracy as one of the most promising fields in lifetime learning; others (Im & Bautista, 2009) propose a key global role for cyber-universities in educating for sustainable development.

Distance education offers the higher education community an opportunity to rethink the role of education at many levels and to leverage this opportunity in positive social ways (Zemsky & Massy, 2004). Morgan and O’Reilly (2006) compellingly describe the potency of the online learning community as being “about the drama of the multiple meaning, the contrary viewpoint, the search for credible sources, and the elusive nature of ‘truth’ in a postmodern world” (p. 87). The transition from face-to-face teaching to e-learning has
the potential to appeal to those learners and their instructors who are interested in the capacity of this community to contribute to social change. At its best, the virtual learning environment has the potential to be socially transformative in its power to be inclusive, which is, to support diverse cultures, languages, work contexts, learning needs and styles, prior experiences, generations, economic circumstances, social contexts, and geographic locations. The learner in this emerging context is a member of an international community of learners, and it is by addressing this potential that instructors and administrators can in part enable the transition from face-to-face learning to e-learning. “In other words, the formation of a learning community through which knowledge is imparted and meaning is co-created sets the stage for successful learning outcomes” (Palloff & Pratt, 1999, p. 5).

Implications of Globalization, Neo-Liberalism, and Lifelong Learning for Instructional Design

As local problems become global issues, learning organizations around the world share the challenges and opportunities of the lifelong or life-wide learner—longer life spans, longer workdays, work intensification, increasing urbanization, national and transnational mobility, diversity in communities, restructured work worlds that require multiple sequential career changes, accelerating technological innovation, and global networks.

All institutions of higher education must respond to these learners by widening access and increasing flexibility, becoming more publicly accountable, building necessary partnerships with public and private organizations, acknowledging funding pressures and diversifying portfolios, and supporting formal and informal communities of learning. Instructional designers, through their expression of social agency, are uniquely positioned to help cyber-universities, in particular, re-engage their communities. Peters and Boer (2000) suggest that the engaged institution facilitate lifelong, rather than selective, learning; require faculty to refocus their commitment to the improvement of teaching as a primary activity with as much academic currency as research; increase access of the majority to affordable education through diversity, heterogeneity, and social equity; lead initiatives based on social intervention; and accept and encourage a paradigm shift from what is taught to what is learned. Online universities are uniquely positioned to develop environments and supports that embed learning
in social contexts and engage diverse communities in authentic problem solving, as long as they respond to the inequality of access of marginalized learning communities.

**Virtual Learning Communities and MOOCs**

Learning design and learning outcomes within the framework of learner engagement are dependent on conversation. Conversations between and among instructional designers, experts, instructors, learners, the community, and the institution invoke multidirectional collaborations that extend learning for all who are involved in the process. The notion of conversation, and its fundamental importance to learning and the design of learning spaces, is central to the notion of virtual learning communities—those online learning spaces where participants engage each other to learn socially.

Distributed communities of practice and virtual learning communities are two structures that have importance to instructional designers who are building online learning environments that emphasize conversation. A *virtual learning community* (VLC) is a group of people who gather online with the intention of pursuing learning goals, while a *distributed community of practice* (DCoP) refers to a group of geographically distributed individuals who are informally bound together by shared expertise and shared interests or work (Daniel, O’Brien, & Sarkar, 2003). So, simply speaking, VLC environments are focused on pursuing shared learning that also has individual importance; DCoP environments emphasize shared work and shared expertise. In both cases individuals depend on information and communication technologies to connect to each other, and conversation is at the core of learning.

An important feature for instructional designers to consider if they are trying to build an online learning community is the community’s level of formality. Although most manifestations of community have an element of learning in them, not every community can be referred to as a *formal learning community*. A formal learning community implies that members have explicit and shared goals for their learning, and they are typically defined externally and delivered as a course. This manifestation of VLC dominates the higher education landscape, as institutions have devoted considerable resources to moving traditional curricula into online settings.
But learning in an informal virtual learning community typically includes knowledgeable or experienced individuals who voluntarily join those who are less knowledgeable, contributing to the growth of others and, by extension, to the community itself.

Some of the important affordances of virtual learning communities, whether formal or informal include:

- sharing data, information, and knowledge
- connecting people-to-people, people-to-systems, and systems-to-systems to help people do their work more efficiently and effectively regardless of time and space
- creating individual and organizational awareness of members’ identities, members’ knowledge, and members’ awareness of which members possess valuable knowledge
- facilitating the creation of a community knowledge repository and tools for engagement, knowledge deliberations, and negotiation, and stimulating the generation of new ideas and locating information
- helping individuals build useful social networks with others in their fields of interest
- linking isolated geographic, political, organizational, professional, and linguistic cultures
- ensuring that knowledge is accessible to those who need it and can act on it to benefit learning

Of course, the ubiquity of social media and the range of communication applications available to users are contributing to the dynamic social and informal learning we see cropping up everywhere online, and it is challenging instructional designers to build learning environments that take advantage of a wide range of new affordances. Instructional designers need to recognize that they are designing social spaces, and that bounded learning models, analogous to classrooms with walls and closed doors, are not sufficient to address the needs of learners. Opening online learning environments to incorporate informal and diverse social learning spaces offers fresh opportunities to instructional designers, and also challenges the dominant discourse of what is considered “legitimate” learning, based on institutional control of accreditation and certification.
Foundational Learning Theories: Connectivism

This challenge is illustrated by *connectivism*, an emerging learning theory that is important to how instructional designers think about the learning spaces they design (Bell, 2011). Connectivism emphasizes the importance of social and networked learning, suggesting that much of what we consider learning is actually embedded in the nodes of a learning network (Siemens, 2005; 2010). The theory suggests that learning is a process that occurs within imprecisely defined and shifting environments that are not entirely under the control of the individual. It suggests that learning can reside outside of individuals and within an organization or a database, and takes the position that the connections that enable us to learn are more important than any static knowledge a learner might have.

Recently, there have been a number of open learning initiatives that exhibit features of both bounded and unbounded VLCs. For example, Couros (2009) developed a course that offers layers of participation to “thin” the walls of the traditional university classroom. Students can register and participate in comparatively conventional ways using videoconferencing technologies, collaboration with online mentors, and completing assignments. But an informal audience can observe and participate in the course without restriction, and engage with each other and with the registered participants and instructor. This creates a dynamic learning environment, and one that contravenes the typical higher education definition of a *course*.

Stephen Downes credits Dave Cormier with coining the acronym MOOC, for massive open online course, to describe the structure and intention of this kind of course (Downes, 2009). As an application of the MOOC framework, George Siemens and Stephen Downes offered an online course on connectivism theory as a credit course for a small number of students, but as a non-formal learning platform it has attracted more than 2,000 students worldwide each time it has been offered. The course has featured daily updates, networks of bloggers discussing topics in the course, videoconferencing sessions, a course wiki, and discussion groups using a variety of technologies such as Second Life to participate in the course, but a fundamental design consideration is that students are expected to build their own experiences from a rather chaotic array of opportunities that are provided and from those they construct.
These courses, and others that will inevitably follow, signal important shifts in the design of learning spaces, and it appears that open approaches to designing learning experiences are scalable. They also point to a philosophical shift from closed and bounded learning systems to open, transparent, and egalitarian beliefs about learning. Learners are not only responding to their own personal epistemologies to make their own learning, they are responding to environmental opportunities to make their own learning environments. In this way, they are not just making meaning, they are fashioning the environments in which their learnings/meanings will continue to be recreated. And this begs the question of how instructional designers can shape the environments in ways that support this level of freedom to explore and learn. There is no model for designing MOOCs, nor should there be. At a professional level, these kinds of environments require instructional designers to move far beyond the prescriptive and utilitarian approaches that marked earlier historical trends.

Design

The introduction of virtual learning communities, MOOCs, and other connectivist learning environments afford exciting opportunities to instructional designers, as they challenge some of the fundamental pedagogies and beliefs about learning that seem to dominate higher education. Connected and social learning challenges faculty to think about learners as self-directed and capable of building and controlling their own personal learning environments. They ask faculty to shed layers of identity based on content expertise in favour of becoming wise advisors who can guide and connect learners to the resources and social networks they need. There are strong headwinds in institutions of higher education that oppose this kind of movement. Forces such as tradition, authority, competition, and accountability, among other things, reinforce the inertia in higher education, and this presents unique challenges to instructional designers. In order to capitalize on the affordances offered by connected self-directed learning, instructional designers need to see themselves as change agents who are capable of influencing their institutions and higher education at a fundamental level.

Another important implication for instructional designers is that they need to become connected learners themselves. They need to experience
first-hand what it means to be a self-directed learner and to build a rich personal learning network. Becoming familiar with the tools of social networking will be helpful, but more importantly, learning to leverage social networks for learning will allow instructional designers to advise faculty intelligently on how to integrate emerging environments.

CONCLUSION: CHALLENGES, OPPORTUNITIES, RESPONSIBILITIES

The development of engaged, online, lifelong learners occurs in a relational process of conversation that challenges instructors, learners, instructional designers, the institution, and the community to address—and contribute to the deconstruction of—real social problems. Personal knowledge based on prior experiences and belief systems is available and evolves through the social interaction inherent in sharing stories of practice in which colleagues attempt to make their perspectives clear and meaningful to others, and to understand the perspectives they offer in return. This process of social construction and deconstruction, leading to social action, challenges those of us in these socially evolving cyber-institutions to evaluate the taken-for-granted and traditional infrastructure on which they have likely been (virtually) built.

We also argue that the goals of identity development have historical roots in social, cultural, and political systems, artifacts, language, and behaviour, and that these can be used to manage the transition, critically and reflectively, from face-to-face learning to an e-learning community that is paranational, creative, socially active, and designed for inclusion.

Technologies critically influence the work of instructional designers in distance learning. In particular, social media and distance learning technologies have fundamentally changed the models of instructional delivery available to instructional designers in distributed environments. They have afforded learning that is learner-centred, individualized, and interactive, but of course, designers have not always taken advantage of these affordances. We still seem to encounter (and create) distance learning programs that seem to be little more than a direct translation of correspondence courses to Web-based environments. We still find instructors and designers who invest only modest amounts of energy in distributed learning environments. We still know of institutions that promote distance learning as a method of
attracting a fresh revenue stream, where the provision of online resources (with an absence of community) is considered innovative and sufficient for learners.

Instructional designers and other influential contributors involved in the design and development of distributed learning programs must challenge and push boundaries of traditional practices if higher education is to maintain its relevance to students and society. Instructional designers in particular will need to engage practice at several levels to bring the kinds of societal and institutional transformation necessary for higher education adapt to its environment. Among other things, this means moving beyond the design of courses and academic programs into the design and development of policies.

At the institutional level, instructional designers can analyze market behaviours, forecast economic success and make recommendations, link financial needs to learning and performance programs, develop appropriate intervention approaches, interact with and determine various interests of stakeholders, and implement desirable change strategy within an institution.

At the societal level, instructional designers can work together with stakeholders in government and corporate organizations and with individuals to identify and influence emergent socio-political policies outside their institutions and develop appropriate responses. Further, IDs can analyze and understand institutional capacities to respond to emerging needs and opportunities and to promote cultural sensitivity. They can work with institutions to articulate needs for professional development and help organizations to build the capacity to respond to needs and opportunities. The agency roles played by instructional designers are capable of transforming society and institutions, and an agency perspective invites fresh research challenges and questions.

But in the end, it is important for instructional designers, particularly those involved in distance learning, to realize that no set of roles or questions can fully embrace the issues of identity and change agency. In order to be effective, instructional designers need to develop a connoisseur’s appreciation for the broad cultural forces in play when instructional design is done, the ways in which instructional design work interacts with sweeping societal change, and the social ramifications of new communication technologies and the affordances they offer. At the same time, the connoisseur
instructional designer must attend to the nuances of the work, continuing the longstanding focus of creating effective learning resources and environments, but appreciating that being effective is a very elusive, very context-based, and very value-laden goal.
APPENDIX 13.1 REPRESENTATIVE PUBLICATIONS IN INSTRUCTIONAL DESIGN, 1920–2011

The War Years and The Birth of Instructional Design

Representative Publications 1920–1965


Multiculturalism and Social Identity Movements

Representative Publications 1970–2011


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**Globalization, Neo-liberalism, and Lifelong Learning**

**Representative Publications 1990–2011**


Role of distance learning in the right to education. (2008). *International Review of Research on Open and Distance Learning, 9*(1) [Special Issue].

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