

Connected Learning for New Futures

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The Connected Learning approach advocates for a world in which all learners have access to participatory, interest-driven learning that connects to educational, civic and career opportunities. In turn, this approach builds on the progressive tradition of Freire and Dewey in prioritizing learning that advances social justice by attending to the needs of the individual within her economic and social contexts (Freire 1993; Dewey 2011). The significant opportunities offered by new digital technologies follow from these imperatives rather than being seen as determinants (Ito et al 2014). Archer's critical realism complements Connected Learning in its focus on the subject's reflexivity; the "inner voices" that we all have and with which we shape our relationship with the objective world and our sense, or absence, of projects that may, or may not, bring about our "ultimate concerns" (Archer 2007).

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Session Overview

Digital 2020: Building Innovative Learning and Cultural Communities

The emergence of innovative learning design approaches is expanding the educational landscape for online and digital teaching and learning. Moreover, depending upon your particular vantage point, the learning design continuum can be very diverse and creative. This session will bring together four interrelated perspectives of how digital learning communities are bringing together people from widely separate locations and divergent cultural and political backgrounds in a common, mediated and synchronous virtual space. A distinguished global panel will discuss a variety of approaches to this new learning design continuum including the role of OERS, advanced digital technologies, connected learning communities, and what 'open' means for the future.

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In this presentation, I make the case for "Connected Learning", a set of principles and practices best articulated by the Connected Learning Alliance (www.clalliance.org). I also turn to Margaret Archer's compelling critical realism, which enables our considerations of new digital technologies to be extended to the inner dialogues that, for all of us, relate our senses of ourselves to the worlds that we encounter.

The Connected Learning approach advocates for a world in which all learners have access to participatory, interest-driven learning that connects to educational, civic and career opportunities. In turn, this approach builds on the progressive tradition of Freire and Dewey in prioritizing learning that advances social justice by attending to the needs of the individual within her economic and social contexts (Freire 1993; Dewey 2011). The significant opportunities offered by new digital technologies follow from these imperatives rather than being seen as determinants (Ito et al 2014). Archer's critical realism complements Connected Learning in its focus on the subject's reflexivity; the "inner voices" that we all have and with which we shape our relationship with the objective

world and our sense, or absence, of projects that may, or may not, bring about our “ultimate concerns” (Archer 2007).

Together, these approaches suggest a concept of Connected Learning that has three dimensions (Hall in press).

The first dimension (here termed C1) is the awareness of the sense of self that is shaped by reflexivity. Here, it is important not to conflate differing modes of reflexivity with personality types; subjects can, and do, change their mode of reflexivity in response to the context provided by their external world, including their access to education and the forms that their educational opportunities take.

The second dimension (C2) is the web of relationships that bind people to one another. While this includes a wide range of forms of association, the interest here is in the social capital that accumulates within a cohort of learners who share an intense educational experience together and may, or may not, continue their association after the completion of their course of study. Here, understanding the differences between tacit and codified forms of knowledge will be particularly important.

The third dimension (C3) is the public good that is created within the university. This is the collective value of education in all aspects of civic life as well as, more specifically, to the economy and to social justice. Aligning with social needs in this way defines the university as an engaged, anchor institution.

Each of these dimensions is already enabled, or potentially strengthened, by the rapid application of new, and often disruptive, digital technologies. In particular, the convergence of ubiquitous bandwidth, cheap and distributed data storage and increasingly affordable, location-intelligent mobile devices is creating new opportunities that can break down entrenched barriers:

“Today’s open networks provide a democratizing function where marginalized and non-dominant forms of knowledge, culture, and values gain visibility, and where communities can build capacity in a bottom-up way ... These dynamics are key to the equity agenda of connected learning. While today’s technology-leveraged connected learning environments are dominated by privileged groups, we see the opportunity to radically expand and diversify the kinds of interests, identities, and communities that are tapped into the connected learning approach” (Ito et al 2013).

C1: the inner conversations of reflexivity

The first dimension of connected learning – C1, the inner conversations of reflexivity – is based on the recognition that everyone, from early in life, has an internal conversation as a normal mental activity. These internal conversations interpret and mediate the interrelationship between the self and social context and form the basis on which we determine our future courses of action, or inaction (Archer 2007).

In her work, Archer has been primarily concerned with people who live within sufficiently stable contexts to permit expectations of continuity in their external world, allowing them to formulate “projects” that are directed by different types of “ultimate concerns”. However, she also recognizes the significance of what she terms “fractured” reflexivity; circumstances in which the subject’s external world lacks sufficient predictability or continuity, whatever the reason for such traumas. Here, the reflexive internal conversation is immediate and expressive, intensifying affect rather than leading to purposeful courses of action (Archer 2012).

Given the emphasis in the Connected Learning approach on social justice and marginalized individuals and communities, there is a significant interest in further explicating Archer’s outline of fractured reflexivity. Just as the inner conversations and ultimate concerns of those benefitting from the stability and continuity of their circumstances can, and do, mediate the structural properties of the societies in which they live, so can fractured reflexivity be superseded by the successful inner articulation of projects that are meaningful in the inner awareness of self.

This relationship between the inner sense of purpose by the subject and the objective outcomes of their projects provides a key link in the development of social relationships with others (C2). As Archer puts it:

“for a young subject confronted with new decisions (such as school leaving) and seeking to clarify her concerns in life (such as the choice of her first job), her ‘contextual continuity’ represents a major resource. As she internally fumbles through the infinite variations upon those ineluctable questions (‘What matters?’ and ‘What to do about it?’), she receives two gifts if she shares her incomplete reflections with her ‘similar and familiars’. These gifts are external ‘confirmation’ and ‘completion’ of her internal conversation” (Archer 2007).

This communication with the subject’s “similar and familiars” validates internal, private, dialogue while building various forms of relationships with other individuals, and is central to any educative process.

C2: webs of relationships

Building connections with others – C2 in the Connected Learning schema set out here – is at the heart of the educational enterprise and there has been consistent focus on how to build meaningful webs of relationships between learners such that they interact with one another to build a shared understanding and improved competences.

What has not been so common here, however, has been consistent consideration of the differences between tacit and codified forms of knowledge and the ways that these differences can be deployed against differing educational requirements. As will become clear later, the relative balance of tacit and codified knowledge may be particularly useful in using new digital technologies to best advantage, particularly in difficult circumstances where conventional approaches to learning cease to be effective.

Most considerations of the work of universities privilege the transmission of codified forms of knowledge. This is information and interpretation that is presented and communicated in standardized formats that can be reproduced and distributed many times over: books, scientific journals, mathematical formulae, code (Foray 2004). Digital technologies have massively amplified the volume and possibilities of codified knowledge, allowing infinite reproduction, almost instantaneous transmission irrespective of distance and ever-increasing accumulation.

In practice though, a significant amount of university-level learning depends on less formal practices. Whether in medicine and the health professions, science and engineering or in the laboratories of the natural sciences, the transmission of knowledge is from watching, demonstrating, copying and practicing. Such transmission is often non-verbal, using sight, sound, touch and smell. This is tacit knowledge:

“tacit knowledge drives language, science, education, management, sport, bicycle riding, art, and our relationship to machines. That is to say, tacit knowledge makes speakers fluent, lets scientists understand each other, is the crucial part of what teachers teach, makes bureaucratic life seem ordered, comprises the skill in most sports and other physical activities, puts the smile on the face of the Mona Lisa, and, because we users bring the tacit knowledge to the interaction, turns computers from idiots savants into useful assistants” (Collins 2010).

Current digital technologies attenuate this distinction between codified and tacit knowledge. This is because the virtual world has overcome what can be called the “tyranny of space”. It is now reasonable to expect that a group of learners, distributed between New York, Cape Town, Beijing and Sydney, can come together in real time via a video link. It is also a reasonable possibility that students can come together in a virtual classroom that transcends war zones or no-go areas that are too difficult to cross. But despite the considerable advances made in haptic technologies and virtual reality, these forms of communication still tend to be “cold”; formal, structured and heavily codified. This is why there is often a compelling need to augment virtual networks with the meetings in the natural world, placing a premium on the “hot” qualities of tacit interaction.

One way of conceptualizing the distinction between codified and tacit knowledge is to explore their spatial implications further. Space is, in itself, a social construct that actively mediates relationships. Indeed, there is no better example of this than the Jeffersonian model for the ideal university campus, emulated across the world, with a central, neo-classical edifice and the authority of the disciplines mapped out in symmetrically- aligned buildings. In this, architecture and spatial form “speak” for themselves and there is little need for words to specify who is privileged to enter – and who should keep away.

An appreciation of the fuller implications of the ways in which new digital technologies have overcome such traditional spatial constructs, coupled with an understanding of the significance of tacit forms of understanding as the

doppelganger of codified knowledge, provides significant opportunities for designing and implementing educational models in this second domain of Connected Learning.

C3: contributing to the public good

The third dimension of Connected Learning – C3 – is the accumulation of the outcomes of education as a public good. Here, Connected Learning is clearly aligned with the mission of the public university, contributing by expanding participation and the nature and quality of knowledge and of new ways of understanding.

A key issue here is who is included, or excluded, from networks of learning in the face of growing and entrenched forms of inequality. Equality of opportunity is a key tenet of social justice and a necessary condition of democracy. But inclusion is also central to the value and relevance of the collective outputs of the university, bringing together the insights, competences and passions of people from all aspects of life in an increasingly complex and cosmopolitan world. In this sense, this third dimension of Connected Learning is dependent on the success of webs of interactions between learners (C2) and on the realization of the projects and ultimate concerns of individuals (C1).

Inclusion has, in itself, several interrelated aspects. These rest on a contradiction, best articulated by Pierre Bourdieu in his study of the role of elite education institutions in France in maintaining the power and interests of the ruling establishment. Universities constantly generate new ideas that challenge the status quo and promote radical social and economic change. But they also serve as gatekeepers to high status careers and elite networks across all forms of activity (Bourdieu 1996).

This duality is as evident across the new virtual networks as in the design and operation of the traditional campus. While new on-line consortia such as Coursera and FutureLearn are providing access to curricula without charge or evidence of prior educational attainment, their member universities are not giving away the qualifications that they are licenced to offer by their national educational jurisdictions. Indeed, student tuition fees across the world continue to rise in tandem with expanding enrollments for open, no-charge, on-line courses, maintaining a clear and growing distinction between those who can afford a university qualification and those who cannot.

In this respect, this third dimension of connected learning is aligned with advocacy for public policy reform. The Connected Learning Alliance originated in advocacy for reforms in schooling that would counter the continuing exclusion of economically and socially marginalized communities. The extension of this approach into post-compulsory education needs to make a direct and informed connection between the application of new digital technologies and continuing and expanding forms of unfair discrimination in access to, and success in gaining, university level qualifications.

Combining the distinctive attributes of the natural and virtual worlds

How could the concept of Connected Learning set out here be used to bring together people from widely separate locations and divergent cultural and political backgrounds in a common, mediated and synchronous virtual space – the focus of this symposium?

The inner voice of reflexive imperative – C1 – is by definition inaccessible to anyone other than the subjective self. Once the subject's sense of projects and ultimate concerns is translated into an account for someone else, the inner voice has been translated into a different form. However, Archer's work with Higher Education students has shown how interviews and observations can be used to map the interplay between subjective reflexivity and the opportunities and challenges of university life (Archer 2012).

Archer has shown that fractured reflexivity inhibits or prevents the development of a person's subjective projects and the ultimate concerns that give them direction. But it does not follow that political or economic marginalization, cultural difference or, indeed, violent and disruptive civil and military conflicts make fractured reflexivity inevitable. For example, Syrian students in exile, often living under very difficult personal circumstances, come together informally to share their concerns and objectives establishing, in Archer's terms, contextual continuity (Watenpaugh, Fricke and King 2014). When traces of internal conversations are translated into external communication in ways such as these, a basis for establishing meaningful connections between learners is established; in the framework set up here, C1 segues into C2.

In situations where divergent cultural and political backgrounds inhibit or prevent traditional educational processes, appreciating the role of space and the differentiation between tacit and codified knowledge provides particular opportunities. Polarization based on stereotypes will often have implications for how space is understood and utilized. In South Africa, for example, landscapes are still typed with the racial hierarchies of apartheid as "white", "coloured", "indian" or "black" (Jansen 2009). Despite the formal principles of non-racialism and redress places, including university campuses, are racialized in everyday discourse. In situations such as these, space is saturated with implications, assumptions and memories. Appreciating the valency of these meanings is important in setting up conditions for learning that will break down the barriers of polarization.

The circumstances of the Syrian students in exile in Turkey are different. Here, the urban environments of Istanbul, Ankara and Gaziantep have provided rich opportunities for people to meet, talk, argue and maintain a mutually supportive web of connections with one another. In some cases, these interactions are a continuation of the associations that had existed on campuses inside Syria, before the level of violence had made it impossible to remain. The shared experience of this history of violence, along with the affinity of language,

provides the motivation for coming together. In contrast with the internal-facing caution and distrust where students are confronting entrenched polarization, Syrian exiles were concerned about dropping out of sight: “the majority of the students and their families expressed the feeling that the international community had forgotten and abandoned them. This sense of abandonment, even more than the disconnection from higher education opportunities, was a source of anger and resentment for these university-age youth and their parents” (Watenpaugh, Fricke and King 2014).

Here the interest is in the ways that Connected Learning, and particularly the use of new digital technologies, can address these kinds of situation. The key point is the interdependency of the projects and ultimate concerns of the individual, the value in the networks that link these individuals as learners and the collective benefits that their combined competencies, expertise and commitment will bring to any society.

In this interdependency, the web of relationships between learners – C2 – is pivotal. When this interpersonal network is threatened or broken, as it is by racial polarization, sectarianism or the imminence of conflict, then both the contextual continuity of the individual subject (C1) and the potential for public good (C3) must be in doubt.

In turn again, the dynamic of the interpersonal learning environment can be understood in the saturation of space with history, associations, implications and practicalities, whether these spatial factors silently inhibit meaningful connections or whether the settings in which learners come together provide the reassurance often found in the diversity of contemporary cityscapes.

In conventional learning and teaching practices, tacit and codified knowledge transmission is intertwined, usually without an explicit awareness of the distinction. But in blended learning course designs the distinction is invariably more distinct because the on-line component of the course will lack the same facilities for tacit communication than face-to-face learning irrespective, at present, of the technical sophistication of the underlying communication technologies.

South Africa again provides an apposite example. Here, the burden of racial polarization often complicates face-to-face learning environments and restricts the formation of communities of practice in which significant progress can be made in breaking down these barriers. Our earlier work has shown how the careful use of spatial architecture can be used to break down stereotypes, balancing “hot” and “tacit-rich” associations with “cold” and analytical opportunities (Hall, Aiken and Mohamed 2009). New digital technologies provide the opportunity of developing this insight further by using on-line engagement to establish a more analytical environment, heavy in codified knowledge, that reduces the valency of prior stereotyping, and by balancing this appropriately with richer face-to-face engagements that reach through stereotypes to non-racialized networks of learners.

In contrast, the circumstances of Syrian students in Turkey suggests a different design. Here, there are ready-made forms of face-to-face interaction founded in language and the shared experience of violent displacement, exile and the urgent need to reconnect with learning opportunities. Rather than being a potential barrier, “hot”, tacit-rich learning environments will build and strengthen these networks of learners. Using new digital technologies can counter the fear – and real possibility – of being cut off and abandoned by the world at large by bringing together groups meeting in the urban niches of Istanbul with students elsewhere in the world.

Complementary attributes of the virtual and natural worlds

Seen through the lens of Connected Learning, new digital technologies allow considerable flexibility in designing learning environments that are adapted to specific sets of circumstances, including situations where conventional approaches cannot work.

Evidently, the ways in which the individual learner relates to digital media is inseparable from both the ways in which a person uses social media to connect with a group of fellow learners and their access to, and use of, open resources and data at the institutional level.

Many recent assessments of contemporary uses of social media have been negative, focusing on the effects of on-line pathologies such as cyber-bullying, compulsive and obsessive behaviours and superficial exchanges. But it is also apparent that social media have been used in a wide variety of ways for self expression and the realization of personal goals, using words, images, video to shape and advance interests and competences and to find a fit between these and external opportunities.

The point is that, as always, the technology is neutral; it is the ways in which it is deployed that are significant. The work of the Connected Learning Alliance has been particularly important in showing how digital technologies, when used within appropriate and progressive educational designs, can provide fulfilling learning pathways by enabling learners to articulate and realize their personal objectives. Similarly, Archer sees the digital world as key to understanding contemporary generations of young adult learners.

The ways in which the individual subject can use new and emerging digital technologies to explore and connect their sense of self with the external opportunities of both networks of other learners and the immense and expanding resources of the public digital domain are a key aspect of the model for Connected Learning set out here. When conceptualized as three, interlocked, domains, Connected Learning can contribute to designs that convene learners from widely separate locations and divergent cultural and political backgrounds in ways that combine the particular and complementary attributes of the virtual and natural worlds.

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An expanded version of these ideas, applied to situations where universities are confronting apparently intractable conflicts, will be published in a collection titled *Higher Education and Democratic Innovation* and edited by Sjur Bergan, Tony Gallagher and Ira Harkavy (Council of Europe Higher Education Series, in partnership with the International Consortium for Higher Education, Civic Responsibility and Democracy and Queen's University).

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