

Networked Learning: an aspiration to perfection worth pursuing

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Introduction

Networked learning (NL) is a “particular niche” within the broad field of technology enhanced learning and “research into the use of technology in an educational context” (Conole, 2010; Jones, 2015). NL was borne in the 1990s in the higher education (HE) context making inroads in the e-learning field (McConnell, Hodgson, & Dirckinck-Holmfeld, 2012). It was borne in realisation of the potential of the Internet and related technologies (especially the Web as an Internet application). It emanated from the efforts of pioneering educational practice researchers who persisted in their exploration for taking forward educational technology practice and research, forging ahead past a history filled with broken promises - radio, television, personal computer (Spector, 2002). Back then, when the Internet and networked technology applications were still in their infancy, these visionaries recognised the potential of connectivity for teaching and learning, the multi-way communication capabilities of the networked technologies permitting connectedness between students, teachers and resources for learning giving rise to online participatory actions for learning.

For many years, NL – and arguably technology mediated learning generally, remained a niche area of educational research and practice. The recent Covid19 pandemic causing disruption of campus-based education drew attention to the possibilities of networked technologies for teaching and learning along with the many opportunities, challenges, barriers, divides and threats it entails. Nominally, NL appeared to have come to age. But although the terminology “networked learning” has gained in popularity, what is understood appears ambivalent. The purpose of this writing is to direct attention to the robust educational understanding of NL that goes beyond connectivity for information exchange and knowledge acquisition. In consideration of the heightened demands in the HE sector for blended and online learning provision past the Covid19 pandemic, this commentary surmised as a timely effort to call attention to critical educational practices as embraced in NL pursuit. It is a personal commentary for fuelling the conversation about teaching and learning using networked technologies in a local educational context which I see struggling to figure out blended and online educational practices that put learning and the relational nature of coming together for learning; a conversation that roots teaching and learning using networked technologies in critical pedagogy, postdigitality and posthumanism. The academic literature includes numerous elucidations of teaching and learning using networked technologies. In this commentary I argue for learning and teaching processes as an aspiration of utopia in the pursuit networked technologies for learning, but a utopia that may well be worth pursuing in a current world infused by digital technologies that is forgetting about itself. I argue that NL is not a recipe that can be simply followed. In its profundity, NL is an ideal, but a worthy ambition to stick with in a world which struggles to survive.

NL understanding learning and teaching using networked technologies

From within the Education discipline, networked learning foregrounds processes for learning. Pioneering field specialists initially used the term 'networked e-learning' (Beaty, Hodgson, Mann, & McConnell, 2002) for distinguishing the emergent field of practice and research they were envisioning distinct from other e-learning pursuits highlighting the relational nature of this vision of learning mediated by digital technologies (Jones, Ferreday, & Hodgson, 2008). However, they quickly switched to the term 'networked learning'.

Defining networked learning

In a Manifesto statement titled 'Towards E-Quality in Networked E-Learning in Higher Education', Beaty et al. (2002) emphasised learning based on model that prompted participation for knowledge development. They emphasised the learning processes and the learning to learn as subject knowledge too. They highlight a changed relationship between teachers and learners, and the support for democratic processes, diversity and inclusion. Based on their research funded by the Economic and Social Research Council (ESRC) in the UK, Beaty et al. (2002) called for a networked e-learning policy envisioning higher education "where access and connection are championed and where lifelong learning is truly and effectively supported". More than 2 decades later, this visionary conceptualisation of learning using networked technologies and the petition this manifesto advances are still critically relevant.

In NL there is recognised and pursued a social understanding of learning concurrent to an understanding of learning as an individual cognitive accomplishment (Goodyear, 2002; Jones & de Laat, 2016; Jones & Steeples, 2002), furthermore ongoing critical scrutiny of values, assumptions and beliefs orienting practices. There is foregrounded the need for ongoing critical reflection and reflexivity in consideration of connecting to others via networked technologies for cooperating and collaborating in learning and teaching.

Along the years, NL field experts continued to expend effort in trying to set out NL in distinction of other technology enhanced learning approaches, even those that come close to it. Jones and de Laat (2016) stress that NL is more than *enhancing* learning and teaching processes as suggested by the term technology enhanced learning. Ryberg, Buus, and Georgsen (2012) stress that NL goes beyond the notion of knowledge existing "in the pipes" which extend the individual capacity in connectivity for learning. And Goodyear, Banks, Hodgson, and McConnell (2004) painstakingly seek to underline NL as going beyond individualised learning attitudes by turning a spotlight on learning theory orientations NL specialists adopt for designing and implementing NL. This need for clear distinction of NL from other learning approaches is reckoned to be partly driven by community demands as the NL field develops and matures. It is deemed to be further propelled by mushrooming online education solutions. A decade ago, it was the upsurge of Massive Open Online courses (MOOCs) and the (failed) predictions of these free self-regulated learning implementations as a sustainable way forward for giving everyone access to learning and development.

Different forms of learning and teaching using networked technologies have been evolving as a natural socio-technological process and the growth of a participatory culture (Jenkins, Ito, & Boyd, 2016). Optimistically, Weller (2007) went as far as asserting that “communities are a natural end point in e-learning” (p.150). For Weller (2007) it is as if connectedness in learning supported by digital technologies will happen in time no matter what. But far from connecting people and material resources for learning and development, the use of networking technologies in educational enterprise and beyond often is observed to disconnect and alienate them (Turkle, 2011, 2015). Networked technologies do not inherently connect people.

For more than two decades, NL was affirmed as

“learning in which information and communications technology (ICT) is used to promote connections: between one learner and other learners, between learners and tutors; between a learning community and its learning resources” (Goodyear, Banks, Hodgson & McConnell, 2004 p.1).

As de Laat & Ryberg (2018) point out, this definition “stresses the importance of both human and digital mediated interactions through the notion of ‘connections’ and underlines that interactions with technologies and resources in isolation are not sufficient to constitute networked learning”. Attending to the incorporation of networking technologies in teaching and learning practices, NL retains its focus on learning and how connectedness and social relationships affect learning (Jones & de Laat, 2015). Coming across many years of fast socio-technological developments, this definition proved to be robust and resilient.

Arguably, its resilience stems from the built-in ambiguity of the term ‘networked’ of NL. This ambiguity permitted focus on learning indivisibly attending to both the social (human) connectivity aspect and the technological connectivity aspect in/for learning (Jones & Steeples, 2002) at a time when networked technologies were mostly being adopted to publish and disseminate information (back in the 1990s). It was some time before the two-way and multi-way communication possibilities of the combined data communications and computing technologies started to be more pervasively exploited technologically and socially, leading to what O'Reilly (2005) termed the “Web 2.0” and the prevalence of the participatory culture observed nowadays on social media platforms and other more explicit commerce and business oriented platforms. Back then, NL was emphasised as a relational learning approach (Jones, 2004) attending to the connections among human participants enabled by digital technologies. The interpersonal and interhuman connectedness persistently featured as crucial among NL pioneers. From its infancy, there was a recognition of the capacity for “distributed collaborative interaction and dialogue” along with the “support access to information rich resources” (Beatty et al., 2002). Granularly, there was discerned, the importance of ‘strong ties’ of close knit of peers to build the self-sustaining learning network, and the significance of the ‘weak ties’ of looser connections among peers serving as bridges between close-knit clusters and means for the cross-fertilisation of knowledge construction and development (Jones, 2004). From the early days, in NL pursuits there is an enduring resolve foregrounding interpersonal and interhuman relationships for learning in learning contexts and the broader surrounding environment in which they are embedded which is permeated by digital technologies and other material resources.

The ongoing critical self-reflection and reflexivity in being part of the NL academic community as much as in pursuing NL practices (consider for example, De Laat and Ryberg (2018); Goodyear et al. (2004); Jones and Steeples (2002); McConnell et al. (2012)), in recent

years the NL community passed through a soul-searching period debating the explicit allusion to digital technologies. This was especially observable during the eleventh edition of the Networked Learning Conference 2018 that eventually was resolved by attending to the intricate permeation of digital technologies visibly and invisibly imbuing all aspects of our lives precipitating us in postdigital lives (Jandrić et al., 2018). The collective effort critically reflecting on what needs to be brought to attention by a revised definition of networked learning led to an elaboration of the earlier delineation rather than any purging of previously incorporated perspectives and issues. The revised definition, describes networked learning as:

“processes of collaborative, co-operative and collective inquiry, knowledge-creation and knowledgeable action, underpinned by trusting relationships, motivated by a sense of shared challenge and enabled by convivial technologies. Networked learning promotes connections: between people, between sites of learning and action, between ideas, resources and solutions, across time, space and media” (Networked Learning Editorial Collective (NLEC), 2020).

There is nowadays increased recognition of learning happening outside the realms of formal learning context and engineered settings such as in professional practices and in special interest community groups. These realisations prompted the questioning of spaces and places of learning (Carvalho & Goodyear, 2014; Carvalho, Goodyear, & de Laat, 2017). The long-time standing definition of NL narrowly considering the formal learning context (characterised by human participants in explicit teacher and student roles) showed up as too narrow in acknowledgement of the equally productive, diverse settings for learning (outside the formal educational institution such as at the workplace and in community actions) which we nowadays are intensely aware of and explicitly recognising them as cogent places of learning. Furthermore, there is now a more deepened recognition of the network as emergent in being an assemblage (recursively assemblages) ongoing constituted of distributed human and non-human agentic actors.

Aspirational ethos of networked learning

Networked learning continues in its focus describing a learning and teaching approach as a complex of human and non-human relations and relationships. And in consideration of NL as a complex of relations and relationships, it does not shy away from admitting to itself being inherently political. In its aspiration, NL goes beyond connectivity and connectedness in social and material relationships for learning that target mutual learning and collective learning. NL is claimed to espouse democratic values, diversity, inclusion and e-quality (Beaty et al., 2002; Ryberg et al., 2012). E-quality here refers to relational dialogue and critical reflexivity (Beaty, Cousin, & Hodgson, 2010). Relational dialogue alludes to the active engagement constructing and developing knowledge in collaboration with others concurrently identity construction (as learners, as teachers, as participants) in technology enhanced and enabled embedding environments. Collective inquiry and critical reflexivity come in the ongoing examination of these relational dialogue processes. The incorporation

of digital technologies in the teaching learning system is seamless, invisible, postdigital – in the sense that we are “convivially” living with and by (digital and non-digital) technologies in our pursuits for learning (which also need to be ongoingly under critically scrutiny). These characterisations presenting the networked learning ethos echo Freire’s (1996) notion of “humans-in-praxis”. Indeed, McConnell et al. (2012) note that networked learning is emergent from the philosophical likes of John Dewey, Paolo Freire, Margaret Mead. For many years, NL was advanced as a humanist and a radically emancipatory philosophy (McConnell et al., 2012) in its attention to interpersonal activities whilst integrating digital technologies for learning. In recent times, NL is increasingly promoted as aligning to posthumanism wherein human and non-human entities are recognised as agentic actors shaping learning processes. The human is increasingly entangled with the non-human in the evolving postdigital world. Besides, there is developing awareness of an organic and inorganic world wherein the human is decentred in being part of. There is recognition of the Anthropocene (referring to “the most recent period in Earth’s history when human activity started to have a significant impact on the planet’s climate and ecosystems” [National Geographic](#)), and the capacity of NL to survive beyond the anthropocene as some research experts are recently highlighting more forcefully (Bayne, 2024; Goetz, 2024). NL is a malleable critical pedagogical approach adaptable to different learning contexts and situations. In its relational stance NL is no heterotopia but conceptually it seeks to project itself as a theoretical frame for it.

Non-prescriptive orientation of networked learning design

NL does not subscribe to any specific methods for learning and teaching. It does not prescribe any particular theoretical framework in planning for learning. In fact, Goodyear et al. (2004) identified three categorisations orienting NL designs and implementations shared in the networked learning literature:

- based on humanistic and radical pedagogy - learning and development is perceived as taking place through dialogue with peers who help one to go beyond one’s singular idiosyncratic perspective (e.g. McConnell, 2000, 2006);
- based on a combined constructivist-constructionist outlook - learning and development is supported through an integration of collaborative and problem-solving activities such as proposed by Dillenbourg (1999) and Goodyear (2002);
- based on principles of a social theory of learning or activity theory - learning and development is seen as participation and identity development within a community of practice or a web of activity systems such as proposed by Wenger (1999, 2009) and Engström (2009).

Steering clear of any categorisation, more recently (Goodyear & Carvalho, 2014b) proposed the Activity-Centred Analysis and Design (ACAD) framework. Pitched at a sufficiently high level to avoid alignment to any one specific world view and epistemological orientation while at the same time serving as a means to assist in concrete design and analysis of learning environments, the ACAD framework draws attention to the set design, epistemic

design and social design brought together in the creation of emergent learning experience. In short, the ACAD framework emphasises the importance of the planned learning environment (including the spaces, places and artifacts constituting it), the planned tasks (including the details of intended activities and interactivities), and the planned connectedness (including individual, small group and large group connections).

Generally, what continues to resound in networked learning theory and practice is a non-prescriptive orientation, and concurrently the emergent nature of connectedness for learning. Perhaps, this makes for another reason why NL continues to show itself as a resilient approach to teaching and learning. From personal experience as a NL practitioner and researcher, NL surfaced to me as an aspiration to perfection (Cutajar, 2014). From her phenomenological dissection of NL literature understanding NL, Friesen (2024) recently arrived to a similar conclusion. And as an idealistic vision of learning in a contemporary networked world, NL does not come without challenges, and we can only hope to approximate it in practice (Cutajar, 2014a).

Technological, learning, and social Perspectives of networked learning design

Research evidence led me as a researcher to purport NL as shaped by (i) a technology perspective – what use is made of technologies for learning, (ii) a learning perspective – what epistemic activity and related learning goals for learning are pursued; and (iii) a social perspective – what self-positioning in relation to others for learning is assumed (Cutajar, 2017). It can never be stressed enough that notwithstanding the obligatory incidence of digital technologies enabling, enhancing and mediating learning processes, the focus in NL is on relations and relationships for learning. Research continues to show that digital and non-digital technologies are emergent in their integration and appropriation for learning in connectedness with human and non-human others. Both integration and appropriation of digital technologies for designing, implementing and experiencing learning are shaped by our capacity to adopt and adapt digital (and non-digital) technologies (and materials generally) to that which we mean to achieve in taking activity and interactivity forward towards intended outcomes. All said, our perceptions of the affordances for learning (and teaching) are situational, as well as spatially and temporally determined.

In NL, it is recognised that learning can only be designed for (Goodyear, 2002; Goodyear & Carvalho, 2014b). Jones and de Laat (2016) maintain that “Instead designs become one of a number of resources for action that need to be mobilised in context” (p.46). The actual learning is what the learners as individuals and as collective actually make out, appropriate and pursue in learning activity and learning outcomes for learning that concretise the learning design expressed by specific learning environments in specific situations, with specific groups of experienced and inexperienced fellow participants, spatially and temporally. In the introduction to *The Architecture of Productive Learning Networks* (Carvalho & Goodyear, 2014, p. 6) note that “Close empirical examination of human accomplishments reveals a breathtaking harmonization of capabilities that involve perception, memory, action, discourse; the automatic and the reflective; the fast and slow

thoughts, and so on". The attempt is to illuminate the complexity and struggle in the mobilisation of designs for knowledge development and value creation.

Connectedness and interaction with non-human resources in isolation from others is repeatedly emphasised as not sufficient for claiming NL pursuit (Beaty et al., 2002; De Laat & Ryberg 2018; Goodyear, 2002; Goodyear et al., 2004). NL brings to the fore the human relations and relationships that facilitate and sustain learning as an individual cognitive accomplishment (Jones, 2015; Jones & Steeples, 2002). Hodgson, McConnell, and Dirckinck-Holmfeld (2012) stress that learning "is achieved through participation in communities of learners where meaning is both negotiated and created through collaborative dialogue" and "knowledge is not a property but a social construction/way of knowing from our experience of the world" (p.293). Dialogic activity and interactivity with human others moreover to interactivity for learning with the non-human needs to be explicitly planned for.

This section briefly recognising NL design and implementation structured by what in my research (Cutajar, 2014b) was termed as 'technology proficiency', a 'learning proficiency' and a 'social proficiency', follows on the trail of the previous section portraying NL as emergent. On the emergent nature of NL experience, and the fact that there is no guarantee that a planned NL episode will play out as intended, (Goodyear & Carvalho, 2014a) note that there is a chasm between plans for learning (and teaching) and the actual learning. The learning experience is the bridge between the two. And in being a lived experience, NL practice is best sought to be understood in its complexity rather than any attempt to understand aspects of the complex of processes which constitute it separate from the whole ecological system of which they form part.

Challenges, risks and threats in networked learning practices

NL does not come without challenges, risks, and threats. The fact that NL can only be designed for highlights the fact that best laid plans still do not give any guarantee that learning will go as planned and all learning participants will achieve the intended learning outcomes. The emergent nature of NL in being a complex assemblage of human and non-human entanglements makes it difficult to predict the learning outcomes. The best that can be done is a meticulous design for learning and painstaking facilitation on the part of all involved in implementation.

Reflecting on the emergent students' experiences of planned NL episodes several years ago, (Cutajar, 2014a) draws attention to networked individualism (Castells, 2002; Kozinets, 2015; Wellman, 2001) as a potential risk. Elaborating on Wellman's (2001) notion of "networked individualism", Kozinets (2015) maintains that social networks and the Internet led to a shift in social lives away from the "densely knit family, neighbourhood, and group relationships toward more far-flung, less-tight, more diverse and personal networks" (p.11). NL aims for engaging participant learning arrangements transcending loose connectedness focused on mere personal learning gain. Specifically on peer learning in the formal learning context, Jones and de Laat (2016) describe these divergent forms of interpersonal and interhuman

connectedness for learning as “a dynamic tension between integration and fragmentation” (p.50) which are continuously being negotiated.

At the same time that in NL aspirations we talk of connectedness, democratic values, equality, equity in diversity and inclusivity, it needs to be also recognised that there is also the real risk of networked individualism. The inherent consensus in democratic processes is problematic. While the NL ideal is characterised by sharing, co-operation and collaboration within a learning group to problem-solve and create knowledge simultaneously individually and collectively, in real-life practice one cannot exclude that the possibilities of conformity, division, exclusion (Reynolds & Trehan, 2003) oppression and suppression (Ferreday & Hodgson, 2008, 2010). These are significant issues and possible realities of lived experience which is politically charged in being constituted of human relations and relationships laced with digital and non-digital materialities (that arguably, visibly and invisible, have human imprint built into them). In trying to locate a more positive viewpoint, Ozturk and Simsek (2012) argue that conflict as different from confrontation potentially facilitating knowledge construction through arguments and counterarguments in the knowledge negotiation process. There appears projection here to Frank A. Clark’s renowned saying that, “We find comfort among those who agree with us -- growth among those who don’t”. Moreover, as I point out in a collaborative document responding to the Redefinition of NL (Gourlay et al., 2021), sitting at the margin potentially affords one a more nuanced view of product and process in learning.

Another dark perspective which has long been identified but is coming more to the fore in recent years in consideration of big data, immersive technologies and artificial intelligence (AI) developments, are concerns that have to do with privacy and surveillance (Beaty et al., 2002). Among others, Ben Williamson (Williamson, 2015, 2018, 2020; Williamson, Bayne, & Shay, 2020) has been calling attention to the serious implications of big data in educational contexts for several years. Recently Gourlay (2022) draws attention to how students and academics are being reduced to documents in being objectified and datafied. To this can be added the further concerns which are recently becoming more discernible relating to invisible human labour and potential for human manipulation in consideration of concerns for the objectification and datafication of the human. As we plunge deeper into a postdigital age, the exploitation of internetworked participants, including the special cases of internetworked participants in NL practice, for reinforcing power and those in powerful positions is increasingly a hot issue instigating dissent and many calls for serious open discussions to reimagine a predicted bleak future of oppression rising to new heights by our entanglement with digital technologies. A “cold critical eye” (Jones, 2015) such as a profound NL orientation principally seeks to assume for learning (and teaching) mediated by digital (and non-digital) technologies and materialities is more than ever important and necessary.

NL practices incorporating human and non-human multiway relations and relationships embodies the bad and the ugly along with the good. At the same time that NL practices potentially are means to value creation and positive accomplishments and realisations rising above what may be achieved by any individual effort capacity, they are rife with challenges,

threats and risks. The key lies in the charge of all to help build trustful relationship as explicitly highlighted in the definition. And to this I would add the need of trustful relationships extended to hold to account all stakeholders involved in the organisational structures and platforms upholding NL designs and practices. Nurturing NL and seeking to pursue learning as in trustful human relations and relationships realised as in entangled with digital and nondigital technologies potentially is a way forward not only to attain target knowledge and skills tied to the specific enterprise, but also as a means for learning in being part of a learning group, in being part of humanity, and in being part of the world.

Concluding remarks

NL is a learning approach which seeks to take advantage of the possibilities of multiway communication possibilities. Distinctively, as a learning approach which exposes the human connections and as well as human and material connections for learning, NL advances the mutual shared charge of learning. In NL there are no specific prescriptive methods governing practice except for the directed effort to nurture trustful relationships in the cooperative, collaborative and collective inquiry to knowledge construction and development. Besides there is explicit awareness that NL is emergent and can only be designed for. The complex ecology of the learning and teaching episode precipitates the conclusion that NL is an ideal which in practice is riddled with potentially problematic issues ranging from disappointing annoyances, exasperations and dissatisfactions to grievous surveillance, exploitation and manipulation. Paradoxically, NL pursuit is potentially a key to helping ourselves trace out better future forecasts for learning, and for tracing out more positively constructive futures (in its insistence on the cultivation of positive, trustful and constructive relations and relationships for learning sustained through ongoing critical reflexivity and reflection). As sought to be pointed out through the above paragraphs, the pursuit of cooperative, collaborative and collective inquiry in trustful relationships is an aspiration to a socially just world of learning, teaching and educational enterprise generally. NL may be a too lofty ambition to be realistically achieved. But at the same time, NL looks like a most worthy pursuit to invest efforts considering the contemporary challenging times we are facing in being part in and of the world. Looking forward to more hopeful futures pushing back on disheartening apocalyptic predictions of human material entanglements charging humanity and the world to obliteration, the aspiration and pursuit of NL in its profundity may well be key to help the positive growth in knowledge and development, in respect of all individuals and collectives, humanity, and the world at large.

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