

STRUCTURAL CONSTRUCTIVISM AS AN EPISTEMOLOGY FOR PROFESSIONAL e-LEARNING: IMPLICATIONS & RECOMMENDATIONS FOR THE DESIGN OF eCPD PEDAGOGICAL MODELS

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ABSTRACT

This position paper deploys a dialectical worldview and a critical sociological perspective on practice to conceptualize professional e-learning as a reflexive bundle of knowing, doing, thinking and reflecting that produces practical knowledge as the power to change when immersed in the dynamism of practice across social structures. It is therefore a structural constructivist process. Two implications for the design of electronic continuing professional development (eCPD) pedagogical models to address this learning challenge so as to improve the impact of eCPD programmes on professional practice are explored. Firstly, acknowledging the diversity of social actors in any process of eCPD for changing practice highlights that implementing technologies and implementing new evidence to improve practice brings up issues of conflict and confrontation because of the agency of all practitioners. Secondly, in such a context, educators could tackle the challenge of managing the reflexivity of professional networks by creating new informal social structures for social interaction and collaborative learning networked with technologies that disrupt existing structures. Finally, it concludes with recommendations for designing eCPD as a strategy to improve impact on practice.

KEYWORDS

Agency, CPD, epistemology, professional e-learning, online pedagogical models, reflexivity

1. INTRODUCTION

Today, electronic continuing professional development (CPD) is routinely delivered to various professionals across the world through Internet-connected devices such as computers, laptops, smartphones and tablets. Whether for doctors, nurses, teachers, engineers, accountants or filmmakers, eCPD courses largely take the form of self-study modules with videos and podcasts, as well as interactive blogs and discussion forums. eCPD aims to support professionals update knowledge and skills, as well as share and collaborate, so as to improve practice, including the products and services offered to end users such as patients in healthcare. Yet, despite critical reviews showing the low impact of current eCPD pedagogical models from current research in healthcare (author et al., forthcoming), there are few attempts to rethink the underlying epistemological assumptions of designing eCPD pedagogical models. Current research into designing and evaluating innovative eCPD approaches in healthcare to improve impact on practice (author et al, 2012) tackles this problem by reframing the epistemology for professional e-learning. This position paper elucidates a new epistemology of professional e-learning – structural constructivism, critically discusses two key implications, and makes recommendations for designing eCPD to manage and optimize the ‘e-learning-practice change’ relationship and improve impact.

2. REFLEXIVITY: PROBLEMATISING EXISTING eCPD DESIGN

From a critical perspective on education, existing pedagogical models for eCPD based on a set of 'objectivist' and 'socially constructed' assumptions about professional e-learning that are neither 'objectivist' nor 'socially constructed' are a problem. They cast professionals who learn reflexively – that is they learn automatically

from experience – to improve their practice through informal social relationships (Gabbay & LeMay, 2004; Nardi et al., 2002) as a problem to be fixed with inputs of knowledge and skills, and assume a static linear causal relationship between e-learning inputs and practice improvement outputs. While social constructivism promises much in theory, its enactment in online environments to deliver short courses to busy professionals is challenging (Nunes & McPherson, 2007; Sandars et al., 2007). Social constructivist pedagogical models do not change or modify the wider structures that produce unanticipated barriers to professionals' capacity for agency to change practice as a result of learning on an eCPD programme. While acquisition and participation are both important in learning (Sfard, 1999), as are critical reflection and practitioner research (Brookfield 1987; Carr & Kemmis, 1986; Schön, 1983) the impact on improving practice ultimately rests on the ability of pedagogical models to improve the access of professionals to a multiplicity of perspectives and resources in safe spaces such as informal networks to work on and try out new practices that empower them. The danger of current binary debates about 'what works' in curriculum development and implementation for eCPD is that positive and productive strategies necessary to improve practice may be overlooked or discounted in efforts to use technologies to stimulate naïve and unproven ideals of online communities of practice and reflective practice (author et al., forthcoming). Seen from a dialectical worldview therefore, the reflexivity of humans across social structures suggests that professional e-learning that produces changes is better termed *structural constructivism* – a reflexive bundle of knowing, doing, thinking and reflecting that produces practical knowledge as the power to change when immersed in the dynamism of practice across social structures – enabling critical design implications for eCPD pedagogical models.

3. PROFESSIONAL LEARNING AS A STRUCTURAL CONSTRUCTIVIST PROCESS: IMPLICATIONS

3.1 Increase the Capacity for Agency

Approaches for the design of pedagogical models for professional learning to improve impact on practice, drawing on different learning theories, compete actively in e-learning research and practices today (McPherson et al., 2008). To move beyond the socially-thin assumptions of the traditional input-output perspectives on eCPD design toward an understanding of eCPD as a change process, a critical sociological practice perspective allows educators to articulate a post-structural logic for learning and practice change with technologies, where professionals have the energy to reflect on their behavior and modify their actions as they seek to maintain and improve their social position, thus making their reaction to any 'learning' delivered through programmes less mechanical and more emergent.

In essence, acknowledging the diversity of social actors in any process of eCPD for changing practice highlights that implementing technologies and implementing evidence to improve practice brings up issues of conflict and confrontation because of the agency of all practitioners.

Agency is an important factor in the construction of an 'authentic' online teaching-learning context to make eCPD more effective. It means educators can take less for granted in terms of how their programmes affect the empowerment of professional e-learners. It also means managers and leaders need to work with educators urgently and take productive strategies to design for changing practice that focus on new forms of controlling teams and new incentives for digitally mediated e-learning that is not distinct or separate from their self-directed learning in the dynamism of practice.

In today's digitally mediated and technology-saturated organizations, the dynamism of practice is also driven by the impact of learning and other Web 2.0 technologies being implemented into the 'learning-practice change' process during eCPD. Research into the use of blogs, wikis, podcasts, and asynchronous discussion forums shows that the different levels of agency afforded by particular social networking technologies will affect the usefulness and usability of these technologies for professional learning networks to adopt for interaction and collaborative learning (Boulous et al., 2006; Sandars et al., 2007).

3.2 Restructure the Structures of Practice

If the capacity for agency to change practice where professionals work is curtailed by the existing social structures, these realities make a difference to what can be achieved educationally with eCPD programmes.

eCPD designers have often used metaphors of ‘learning communities’, ‘networks of practice’ or ‘small groups’ to describe social structures through which programmes and technologies are embedded to support professionals to learn and improve their practices. However, an absent question is: Do these structures increase the capacity for agency to make changes? From a practice perspective, professional e-learners are not passive subjects into which learning can be inputted, they are active social agents who reproduce and are produced by social structures as they go about their daily working lives (Bourdieu 1977). Since their capacity for agency is structurally and digitally mediated, a second implication is that eCPD pedagogical models need to deliver programmes and design processes to support healthcare professionals learn about and modify the structures of their practice so as to increase their capacity for agency. This requires that eCPD pedagogical models construct new informal social structures that are safe and enabling, with the intention to channel the agency of practitioners that already exist, and to allow their ‘social energy’ (Bourdieu, 1980) to connect and flow, with technologies and artefacts that are designed with the involvement and input of the networks of professionals they are intended for.

4. CONCLUSION, RECOMMENDATIONS & FUTURE WORK

To take one major professional group, the medical and healthcare sector, the evidence on the low impact of eCPD in a recent critical literature review on improving impact on practice (author et al., forthcoming) showed that existing studies consists largely of self-reported behaviour change from healthcare professionals who access stand-alone one-off modules, and based on experimental study designs. Similar stories of low impact are heard in other professions such as teacher eCPD. Self-reported claims of change are characteristic of the positivist epistemology and the technical-rational industrial logic of ‘evidence-based’ professional education and research that dominates today, based on linear causal assumptions of change that treat e-learning as a treatment to be injected into professionals to magically make them improve. These assumptions, based on a teleological worldview, have resulted in the dominance of behaviouralist approaches in the current eCPD field.

The intention of rethinking e-learning philosophically here is not to disprove the need for evidence of change, but rather to note the way in which the rhetoric of the current normative evidence-base practice approach positions linear causality as the way to produce impact and solve the problems of improving practice. In this account, pedagogies are causal solutions to the problems of changing behaviour. Because evaluators’ criteria are behaviouralist alone such as reaction and satisfaction, they make no critical analysis and produce no evidence of the complexity of the process of changing practice or the social relationships involved. Nor do they require or support professionals to make sense of complexity and become smarter about knowing what they are getting out of eCPD with effective self-evaluation tools customized for measuring e-learning process impact. Neither have they rethought their epistemological and ontological assumptions to advance theory building and practice in e-learning.

Reacting to this lack of prior research and the reification of eCPD, this paper offers a socially critical practice-based perspective for knowing and handling professional e-learning to change practice. This epistemology reflects the situated, emergent, and recurrent aspects that make learning reflexive, and enables it to be understood and generalized as a structural constructivist longitudinal process.

A structural constructivist epistemology of professional e-learning improves upon existing dominant cognitive psychological and social constructivist perspectives. By positioning eCPD and change at the structural level of society, it raises to the fore the two important implications discussed above for the construction of dynamic teaching-learning contexts that designers need to be mindful of. Moving forward, these features are necessary to design e-learning that can achieve a critical grasp on understanding change processes at multiple levels and with the various components of eCPD programmes, in particular the affordance of particular technologies and pedagogies. Overall, this epistemology bring eCPD closer to the reality of the dynamism and contingency of contemporary professional practice, which is characterized less by traditional tightly knit communities than by weak and loose ties, competing objectives and intensional networks, in a 21st century world of global digitally-mediated work (author et al., 2012).

Given the issues of conflict and confrontation during curriculum development and programme delivery, as well as technology implementation in organizations, can educators working online to deliver eCPD programmes continue to take for granted the resources available to them and their students to produce change? Even if they may have the intention to change, professionals’ ability to change practice can be

curtailed by the existing social structures. These realities make a difference to what can be achieved educationally with eCPD programmes that a structural constructivist lens grasps conceptually to transcend socially thin dualistic thinking that separates learning, change and practice.

By turning away from social constructivist perspectives, this position paper recommends from a structural constructivist lens on professional e-learning that an eCPD strategy should be viewed as an emergent process of formal and informal practices designed to achieve an understanding among management, educators and users regarding the effectiveness of a particular programme and approach with learning technologies on improving impact. Because the use of technologies modifies the level and importance of agency, it also recommends that explanations for the impact of eCPD on how and why practice changes now develop tools for measuring the agency of professionals in relation to what resources eCPD programmes offer. Making professionals conscious of their agency to change by not only having a recourse to subjective reflection on their behaviours individually or collectively, such tools will need to capture objectively how their social interactions and collaboration with their teams/networks shapes their agency. This becomes vital to manage team reflexivity and improve performance in a financially challenging environment, where e-learning is often touted as a cost-effective alternative for CPD. Yet little research exists on evaluating the value of time spent in and on online process, and is necessary for making e-learning productive and empowering.

Drawing on a structural constructivist epistemology, future work will sketch out a theoretical scaffolding and conceptual model for designing eCPD as a strategy to improve impact. This position paper is offered to stimulate debate among funders, policymakers, researchers, designers and practitioners of professional e-learning, whichever industry we might work in.

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