# *Contested disciplinarity in international doctoral supervision*

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## Abstract

Preliminary results of a grounded-theory informed study of fourteen international doctoral supervisors' experiences in dealing with interdisciplinary issues in their supervisory practices are reported in this paper. All participants in this study had supervised or were in the process supervising interdisciplinary doctoral theses with interests in the educational research, technology enhanced learning, and/or networked learning. All had some experience with using technologies to support supervision at a distance. Where the full study examined a series of five questions on supervisory experiences, insights, and uses of technology, this paper reports only a subset of data associated with interdisciplinary experiences, insights, and challenges. Doctoral programmes with foci in the fields of educational research, technology enhanced and networked learning often to include academic staff and doctoral candidates from a fairly wide range of originating disciplines. Expanding technological support for part-time, distance, flexible access to doctoral programmes can bring together international groups of tutors and learners. Increasing enrolment and student diversity are sometimes leading to looser ties between supervisory expertise and thesis topics. The field has been described as inherently multi- (Conole & Oliver, 2002), inter- (Parchoma, 2011), and even trans-disciplinary (Becher & Trowler, 2001), thus raising questions on whether these descriptions are substantively different or whether a closer examination of the terms themselves can clarify discussions. We posit an in-progress conceptual framework for examining perspectives on disciplinarity and report supervisory challenges as linked to supporting supervisees to overcome domain knowledge gaps and to develop methodological expertise in this evolving field. We argue that our findings support a view of the field that extends beyond a multidisciplinary mosaic of research on the same area of interest, but from different mono-disciplinary angles to a more cooperative endeavour that involves interdisciplinary boundary crossings. Early findings from this study suggest that efforts to find a shared theoretical underpinning for the field face a series of challenges. However, the coming together of constituent technological, educational, and knowledge domains in international TEL/NL research and practice necessitate collaborative efforts reciprocal interdependence among contributors. Thus the nature of the TEL/NL field provides fertile transdisciplinary ground for represented disciplines to affect and potentially be reoriented by others.

## Keywords

Inter-, trans-, multi-, cross- and post-disciplinarity, international doctoral supervision.

## Introduction

This paper reports preliminary results of a grounded theory-informed qualitative study (Charmaz, 2000; Thomas & James, 2006) of fourteen international doctoral supervisors' experiences in dealing with disciplinarity in the context of higher education supervision and research. Research in higher education (HE) is operationally defined as areas of inquiry that contribute to literature on teaching, learning, and/or professional development. Participant perspectives include insights relevant to networked learning (NL) and technology enhanced learning (TEL) theory and practice. For the purposes of this paper, networked learning is distinguished from TEL by its constructionist underpinnings, its relational perspective on linkages among tutors, learners, and learning resources, and its "participative and democratic values" (Hodgson & Reynolds, 2005, p.11). The more generalist term, TEL, is defined by its accommodation of a broader range of ontological, epistemological, and pedagogical perspectives (Parchoma, 2011).



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Doctoral programmes with foci in the fields of NL, TEL, and educational research often include academic staff and doctoral candidates from a fairly wide range of originating undergraduate disciplines. Increasing technological support for part-time, distance, flexible access to doctoral programmes can bring together international groups of tutors and learners. Where technologies provide diverse, dispersed members with digital connectivity, theoretical continuity remains a challenge for both new and established contributors to the field.

> Learning technology is an inherently multidisciplinary field, and stakeholders include researchers from different fields (educational research, cognitive psychology, instructional design, computer science, etc) as well as teaching subject-experts who engage with it as 'end users' or 'consumers'. This multi-disciplinarity is a common feature of emergent research areas and, in one sense, is a strength. However, if we are to capitalise on this richness of expertise, it is necessary to work towards a clear theoretical underpinning that allows these diverse cultures to engage with and develop the use of learning technology. (Conole & Oliver, 2002, p. 1)

Comparative perspectives on disciplinarity in HE research and practice provide a range of views on both its forms and its desirability. Becher and Trowler (2001) compare "mode 1" theoretical knowledge, where "academic cultures and disciplinary epistemologies are inseparably intertwined" (p. 23) to "mode 2" problem-oriented knowledge "where transdisciplinarity is the norm" (p. 7) and new knowledge is produced in-context for the purpose of application. While Donald (2009) contends that each discipline is made up of distinct knowledge structures and discourses that contribute to shaping HE, she also argues that across disciplines students learn critical and creative thinking skills that allow them to "identify the context" of disciplinary problems, "recognise organising principles," and develop the "ability to change perspectives" (pp. 46-47). Donald further asserts that these disciplinary understandings equip students for interdisciplinary encounters. Meyer and Land (2006) posit the notion of threshold concepts as those concepts that are necessary for developing mastery within a discipline and Wisker et al. (2010) extend the term to include advancement of learning between disciplines. Giroux finds the "ultimate arbitrariness of disciplinary divisions" no more than" forced separations and hierarchies" (1992, p. 242) as problematic in that they "sanction particular forms of authority and exclusion" (Giroux & Searls Giroux, 2004, p. 102). McArthur (2010) critiques Giroux's view on disciplinary hegemony on the basis of Giroux's association of disciplines with "canonical forms of knowledge and a rigid adherence to textual authority" (p. 307) and makes a call for creating new critical discourses and social practices with the capacity to connect HE endeavours more closely to every day life. Davies and Devlin (2007) frame interdisciplinarity as re-conceiving HE for global compatibility. Parker (2002) posits recent moves toward closer ties between academe and 'real world' experience have resulted in configurations of subject areas that distance academics from their disciplinary communities. Parker's suggestion that a new model for disciplinarity can be developed from engagement in communities of knowledge, learning and practice echoes Conole and Oliver's (2002) call for the development of shared discourses on NL/TEL theory and practice.

## The study

Fourteen supervisors from ten universities in five countries were recruited to participate in a grounded theory-informed qualitative study of supporting doctoral candidates from a distance from beginning points in doctoral programmes through completing doctoral theses on topics of interest to educational research, TEL, or NL. Ethical approval for this study was granted by the primary investigator's home institution. Careful adherence to both institutional and the United Kingdom's Economic and Social Research Council (ESRC) ethical guidelines was ensured. Identifying participant information was rendered anonymous. Participants were assigned pseudonyms.

Participants self-identified their originating disciplines across the range of social, computing, and information sciences. Seven participants noted crossing disciplines to acquire additional specialisations and two identified themselves interdisciplinary researchers. All participants acknowledged use of information and communication technologies (ICTs) in supporting doctoral learners; however, levels of usage and types of technologies used, as well as purposes for engaging with learners via ICTs varied considerably. Seven participants identified either NL or TEL as a focus of their research agendas and/or underpinning their supervisory practices. Each participant engaged in a 60-90 minute semi-structured interview. Four interviews were conducted via Skype, three via telephone, one via Elluminate, and the remainder in person at a place of the participant's choice. The full interview protocol included


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five questions on supporting doctoral learners. One question directly addressed use of technological support. Two questions directly asked participants to discuss disciplinarity:

1 Please tell me about your experiences identifying disciplinary or interdisciplinary concepts or areas that your doctoral students commonly struggle with as they work on taught doctoral programmes and/or complete doctoral theses or dissertations from a distance.
2 As a result of these experiences, what have you learned about your discipline?

Each researcher in the study conducted seven interviews and each transcribed their own interview data. Transcripts were returned to the respective participants for review and revision. Revised transcripts were returned for confirmation. Both researchers used a qualitative data analysis software tool, i.e., MAXQDA and ATLAS.ti to independently open code all fourteen transcripts using both in vivo and analytic coding. Field observations, memos, and reflective comments were simultaneously added to the transcripts. While our use of two software coding tools proved far from an ideal arrangement, fiscal restraints precluded other options. To compensate, each researcher exported files from their software application to share full sets of coded transcripts and complete lists of codes. Several Skype-based and two face-to-face meetings provided venues for discussions of differences between units of analysis and comparative identification of preliminary themes. Agreement was reached on the emergence of a general conceptualisation of interdisciplinarity as a prevalent theme across independent approaches to coding.

### Data analysis

Six hour-long Skype-based meetings were dedicated to comparing codes related to a general conceptualisation of interdisciplinarity. All agreed codes were entered into our data set via creation of a new ATLAS.ti code family. Directional arrows in ATLAS.ti nodes represented in Figure 1 indicate iterative levels of code agreement. Level 1 represents initial agreement on transcript excerpts generally related to interdisciplinarity. Level 2 represents negotiated code agreements. Re-examination of Level 2 codes led to problematisation and further investigation of participants' use of cross-, multi-, inter-, trans-, and post-disciplinary terms. In the process of agreeing on codes for a generalised definition of interdisciplinarity, we found ourselves struggling with reconciling competing definitions. At this point, we each undertook a literature review of the term and followed up reviewing our independent findings with a further discussion. Level 3 illustrates reaching a shared interpretation of participants' perspectives in relation to agreed Table 1 definitions of multi-(subsuming cross-), inter-, trans-, and post-disciplinarity. Level 4 represents mutually identified connections to international TEL/NL theory and practice.

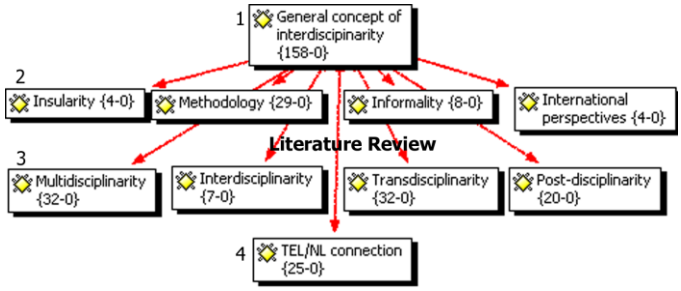


**Figure 1: Collaborative data analysis process**

## Contested disciplinarities

Conole and Oliver's (2002) vision for an emergent shared theoretical underpinning for NL/TEL community of knowledge, learning, and practice—arising from the richness of varied contributing academic cultures—invites closer examination of the terms: multi-, inter-, trans-, and post-disciplinary. In this effort, eight relevant literature reviews were found and review reference lists were interrogated for deeper insights. Selected texts on the nature of disciplinarity were drawn from sociology, human geography, bioscience, and /health care, as well as higher education, leadership, management, policy, theatre, and interdisciplinary studies.


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Disciplinarity is associated with "a defence of academic autonomy" (Barry, 2008, p.22). Larsen and Widerberg argue that multidisciplinary and interdisciplinary are difficult to distinguish from each other because they often "occur together as a pair" (2006, p.13). Carmichael (2011) defines cross- and inter-disciplinarity synonymously, as we do in this paper. McArthur (2010) contends that interdisicplinarity is often used as a generic term to describe all forms of collaborations among disciplines. However, interdisciplinarity also sometimes signifies an "intermix of different theoretical perspectives or methodologies" within a collaborative project (McArthur, p. 6). Similarly, Larsen and Widerberg posit the notion that the multidisciplinarity may be somewhat differentiated from interdisciplinarity on the basis of less "intermingling of disciplines" (p. 13). Graybill and her collaborators (2006) and Lotrecchiano (2010) argue for a clear distinction between multi- and inter-disciplinarity, defining multidisciplinary research as the simplest form of knowledge interchange, where researchers from two or more disciplines work independently within their existing disciplinary epistemologies. Wisker and her collaborators also delineate between multidisciplinary projects as those that "combine across disciplines" and "truly interdisciplinary ones" where disciplinary concepts are integrated (2010, p.17). McArthur posits that multidisciplinary outcomes are mosaics of research findings on the same area of interest, but from different "mono-disciplinary angles" (p. 7). For the purposes of this paper, multidisciplinarity research is characterised by discrete disciplinary contributions—marked by methodological and epistemological insularity—to a mosaic on a research topic of shared interest.

Where Larsen and Widerberg (2006) suggest that interdisciplinarity may specifically connote a new perspective arising from a shared methodology, Graybill et al. (2006) assert that interdisciplinarity is a way of approaching a research problem requiring innovative conceptual frameworks that merge and synthesise disciplinary traditions. Case posits a firmer stance in defining interdisciplinarity "as a term that signals a sense of a unified field, produced through the historical convergence of subcultures, social structures, and training practices" (2002, p. 150). Drawing on work from Kuhn (1970), Lawrence and Lorsch (1967), Klein (2006), Lotrecchiano (2010) concurs with Larsen and Widerberg (2006), McArthur (2010), and Graybill et al. (2006) in defining interdisciplinary research as a cross-pollinating among disciplines that involves ontological, epistemological, and methodological "boundary-crossings" that result in researcher identity shifts allowing for "novel perspectives" (p. 36). The disputed nature of interdisciplinarity, as sometimes denoting any sort of collaboration across disciplines and at other times signifying a synthesis of disciplinary epistemic and methodological traditions that allows for the emergence of novel perspectives, opens space for further debate and clarification. However, in the context of this study, interdisciplinarity is defined by periodic disciplinary and methodological boundary crossings, rather than an ontological shift requiring full integration of contrasting perspectives.

Larsen and Widerberg's (2006) observation that transdisciplinarity and postdisciplinarity have not yet become well established in academic discourse goes some distance toward explaining continued conceptual contentions surrounding the terms. Lotrecchiano's (2010) epistemological and methodological hybridisation perspective on interdisciplinarity makes it quite difficult to distinguish from Boatcă, Costa and Rodriguez's (2010) definition of transdisciplinarity as opening up spaces for a "multiplicity of critical projects," where contributors may label their disciplines in different ways, but "pursue common goals" (p. 9). Graybill et al. (2006) extend trandisciplinary criteria to include approaches that involve "non-academic practitioners working with academics to identify, research, and develop solutions to real-world problems" (2006, p. 757). Similarly, McArthur (2010) builds on Giroux's (2004) definition of transdisciplinarity as existing on the "frontiers of knowledge", where it "prompts teachers and students to raise new questions and develop models of analysis outside the officially sanctioned boundaries of knowledge and the established disciplines that control them" (p. 102) to signify the blending of critiqued disciplinary knowledge and emergent ideas. Case's (2001) definition of post-disciplinarity as a site for "contradictory and competing discourses" on a topic of interest within and beyond academe (p. 150) has little to distinguish it from Giroux's version of transdisciplinarity. However, Lotrecchiano (2010) argues that transdisciplinarity is marked by the development of a "reciprocal interdependence" among disciplinary contributors to a collaborative effort to understand a complex in situ problem that results in each represented discipline affecting and being reoriented by others (p. 41). Carew and Wickson corroborate Lotrecchiano's distinction in their depiction of transdisciplinary research as "transcending and integrating" disciplinary traditions, "evolving methodology," and a focus on "practical problems" (2010, p. 1147). For the purposes of this paper, transdisciplinarity is distinguished on the bases of its inclusion of methodological plurality, recognition of interactions between research and practice, and disciplinary, as well as ontological reorientation. Post-disciplinary is noted for encompassing ontological stances


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where organising structures of disciplines and their methodologies do not hold, symmetry across intellectual and social practices is acknowledged, and multiple independent voices are equally valued. As debates on the conceptual nature of alternative definitions for a range of disciplinarities and their resultant implications for research and practice continue to be de- and re-constructed, Table 1 illustrates no more than an in-progress conceptual framework for examining perspectives on disciplinarity that invites discussion and critique.

**Table 1: A preliminary conceptual framework for examining disciplinarities**

| | *Multi/Cross-disciplinarity* | *Inter-disciplinarity* | *Trans-disciplinarity* | *Post-disciplinarity* |
|---|---|---|---|---|
| *Disciplinary Role* | Disciplines represented | Disciplines contributing | Disciplines affecting | Organising structures of disciplines do not hold |
| Knowledge construction | Mode 1 Knowledge: Multiple independent disciplinary discourses that sustain ontological security in the process of contributing alternative theoretical perspectives | Primarily multiple hegemonic discourses contributing discrete pieces to an overarching initiative - may involve temporal epistemological boundary-crossings | Mode 2 Knowledge: Potential disciplinary reorientation through dialogue and debate within an overarching initiative, that may result in ontological shifts | Independent participatory explorations of a research interest through social and academic practices |
| Methodology | Methodological insularity | May involve methodological boundary crossings | Methodological pluralism developed in response to the research context | Methodological boundaries do not hold |
| Goal | Mosaic of research on the same area of interest, but from different mono-disciplinary angles | Cooperative research effort toward a shared goal | Collaborative research effort to resolve a complex real world problem: interaction between theory and application | Fusion of social practices and intellectual pursuits |

The potential inadequacy of multidisciplinarity to support the development of a shared theoretical lens, along with the contested natures of inter-, trans- and post- disciplinary approaches beg the question of the extent to which diversity can be accommodated before any sense of a shared underpinning for TEL/NL theory and practice becomes impossibly vague and any hope for a common epistemic fluency (Zenios, 2010) or axiological continuity (Denzin & Lincoln, 2000) is lost. An examination of doctoral supervisors' views on issues involving educational research, TEL, NL and disciplinarity is presented in the following description of findings.

## Findings

All participants reported supervising and/or examining doctoral students from disciplines, fields, or domains outside their own discipline or domain. Ten of fourteen participants reported students as being service oriented, seeking integration of their social practices into their intellectual pursuits. Common supervisory challenges were linked to supporting supervisees to overcome domain knowledge gaps and to develop methodological expertise. In addition to frequently loose ties between supervisor-supervisee theoretical, methodological, and domain interests, participants reported challenges related to part-time students with competing professional responsibilities finding time to overcome orientations to solution-focused professional perspectives, to devote time to exploring new fields in literature, and to develop researcher identities that encompass broader world views.


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Trent, David, and Donna each reported more than 20 years of doctoral supervision experience and successfully supporting approximately 30, 80, and 100 candidates respectively. Trent said that he held a chair "for convenience sake" in a "faculty of education," but described his work as "interdisciplinary" and many of his students as international. Donna described herself as an "interdisciplinary" researcher having "a comfort level" in range of disciplines. David expressed long-term awareness of "cross-disciplinary concerns," illustrating those concerns in reference to a series five educational research doctoral theses defences, for which he had been an examiner in four months just prior to this study, as containing "little bodies of literature that were kind of analogous, but not central" to his research interests, yet theoretically and methodologically within his "domain." David discussed his approaches to alleviating doctoral students' "worries and concerns" around becoming part of a research community, coming to understand "the role of theory," developing "frameworks for understanding theory," learning the "ways of reading, ways of analysing, and ways of talking" as both "cross-disciplinary" and "interdisciplinary" concerns. He argued that the definitions of "truth in inverted commas" and "original work" is constructed differently in different "disciplinary domains," but also noted that "policy" and "impact studies" tend to involve "crossovers between science and social science." David reported supporting students' use of mixed methods, along with confidence that can be done with "epistemic continuity." Trent noted that often novice researchers across disciplines are often "only able to see research in terms of what they would call qualitative or quantitative," and that his role as a supervisor is to help them get beyond that by supporting their efforts to "clarify why they have chosen their research topic and how they are going to investigate it." Donna recounted co-supervision efforts, examining "a wide range of methods" from "social" and "natural science traditions," asserting that "these are all aspects of interdisciplinarity." She viewed her supervisory role as focused on supporting novice interdisciplinary researchers through "understanding what they were going to investigate," "thinking about potential sources of data," "how they are going to make sense of [data] to answer the question… potentially in multiple research traditions" if there are "disparate types of data."

Jill, Frank, Ruth, Cameron, Patrick, and Stewart are also long-term doctoral supervisors. Jill found herself being "hard-put to know what [her] discipline is," but described herself as most closely belonging to "educational research" and "social psychology." Frank described himself as belonging to two schools: "one which focuses on educational research issues and one which focuses on computer science issues." Ruth described her "original discipline" as sociology, her specialisation as "sociology in education," and her field as TEL/NL. While Cameron asserted that "in so far as [he has] a discipline, it is social science, and his "topic area is education and educational technology." Patrick described his field as education and technology. Stewart referred to his areas as "AIED [Artificial Intelligence in Education] and user modelling." Frank described TEL as a "multidisciplinary field" where "the problem is…there isn't any one single field we neatly fit into. Similarly, Cameron noted that TEL/NL is "a strange" field because "most people in it don't come from it." There isn't a coherent discipline. There are a lot of disciplinary boundaries." He went on to say that where disciplines have a canon, he wasn't sure whether TEL does. Patrick noted students struggling most with "the interdisciplinary concepts." Stewart argued that in order to understand TEL, students need to read "a bunch of stuff from social science and areas related to social science and technology, such as HCI (human-computer interaction) and [they] have to not just read the papers and say what the system did that was built or something, memorize or understand the data about the system use, but [they] have got to take on the world view of the social scientists." Ruth suggested that NL/TEL "colleagues come in from multidisciplinary backgrounds and the way they handle social science is sometimes through mimicry." She described her research students' struggles in undertaking a PhD outside their undergraduate or masters' disciplines," as having "to mug up a whole new discipline." Cameron found that the way that "paradigms are currently described and taught" in current doctoral programmes tend to result in students developing a "quantitative-qualitative divide" and then stretching to associate "that divide with a sort of philosophical or ontological position." He expressed the need to undertake what colleagues had referred to as "post-disciplinary research" into revising methodological paradigms to resolve this problem. Jill related a story of an interdisciplinary student struggling with "data analysis," as becoming "a feather for every wind that blows," getting caught up "a lot of excitement about what she just read" and "that was going to be the theory she would adopt." With this student there was "an enormous amount of to-ing and fro-ing and back-tracking and mind-changing." Similarly Frank discussed the challenges of interdisciplinary TEL students' knowledge gaps in dealing with "simulation techniques…For someone who does AI, no problem. For someone who has done experimental psychology or educational psychology it is a problem." Frank, Cameron, and Stewart argue that adopting interdisciplinary world views requires both formal and informal learning opportunities—engaging in "interdisciplinary culture."


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Simon, Janice, Kari, John, and Rachel are relatively new to doctoral supervision. Simon's areas of interest are in education, specialising in educational technology and evaluation. Janice and Kari note education as their discipline. Kari adds a specialty in educational leadership. John and Rachel identify their discipline as distance education and their programmes as being "applied" and international. John reports some interdisciplinary students in his programme as struggling with methodology, especially statistics. Rachel, Simon, and Kari report students coming from a variety of different disciplines, international contexts, and struggling to overcome orientations to professional concerns and solution-focused approaches to research. Rachel noted that as her students "have very diverse backgrounds, some lack "subject matter" in relation to "teaching and learning." Janice also noted that although all students in her programme are doing PhDs in education, "only one or two of them" have "an educational background. Kari reports her students as struggling with "the concept of models or a way of structuring their work."

## Discussion, implications, and future directions

Indications of participants' comfort levels with identifying their current disciplines varied from hesitation to reframing the question, so as to describe fields, areas, domains, schools, or specialities. Participants' dictions in relation their 'disciplines' varied from terms as broad as social sciences (Cameron and Trent) to more specific terms, such as education (Jen, Jill, and David), computer science (Frank, Stewart, and Donna), and library science (Donna), to sociology of education and educational development (Ruth), educational leadership (Kari), distance education (John and Rachel), instructional technology (Simon), education and technology (Patrick), artificial intelligence in education (Stewart), and "things of an educational nature and things of a social psychological nature" (Jill). Although all participants reported some level of involvement with TEL/NL, none referred to it as an emerging discipline. The range of contributing disciplinary expertise combined with the diverse disciplinary backgrounds of students undertaking doctoral study the field suggests the development of "a clear theoretical underpinning" (Conole & Oliver, 2002, p. 1), or reaching agreement on a canon (Cameron) could be daunting tasks.

As the field of TEL/NL is focused more strongly on the creation of 'mode 2', problem-oriented, context-specific knowledge creation (Becher & Trowler, 2001), a more plausible goal may be seeking transdisciplinary reorientation (Lotrecchiano, 2010), but even this task poses challenges in the field that to-date has sustained disciplinary boundaries (Cameron). Yet the field extends beyond a multidisciplinary mosaic of research on the same area of interest to a more cooperative endeavour that involves at least periodic disciplinary boundary crossings. As the TEL/NL field remains primarily interdisciplinary, marked by multiple hegemonic discourses contributing discrete pieces to overarching initiatives (Klein, 2006; Lotrecchiano, 2010), epistemological and methodological boundary-crossings may be challenged by different "disciplinary domains," definitions of "truth" claims, and "original work" (David). Thus, it is less than surprising that all participants reported doctoral students encountering difficulties related to finding common ground for interpreting the roles of theory, methodology, and community practices. As the range of researchers and doctoral candidates from diverse disciplinary and geographical backgrounds engaged in TEL/NL continues to expand, finding shared ways of reading, analysing, talking, and writing may become even more challenging. Increasing diversity raises questions on whether interdisciplinary convergence or integration of subcultures, social structures, and training practices (Case, 2002) is plausible or even desirable. As TEL/NL doctoral candidates are often simultaneously professional practitioners, it not surprising that ten of fourteen participants reported students as being service oriented, seeking trans-/post-disciplinary fusion of social practices and intellectual pursuits (Carew & Wickson, 2010; Case, 2002; Giroux, 2004). Salient questions on the resilience of NL principles in light of calls for synthesis and integration (Conole & Oliver, 2002), and on the extent to which ongoing introduction of novel perspectives can be accommodated without diminishing epistemological continuity (David) and fluency (Zenios, 2011) or losing sight of axiological continuity (Denzin & Lincoln, 2000) are in need of further investigation. However, the coming together of constituent technological, educational, and knowledge domains in TEL/NL research and practice necessitate collaborative efforts and development of a reciprocal interdependence among contributors. The nature of the international TEL/NL field provides fertile transdisciplinary ground for represented disciplines to affect and potentially be reoriented by others.

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DOCTORAL SUPERVISION. Processes toward the PhD. Admission.Â  Participate in International network. Ã˜ Short stays in foreign research centres. Ã˜ Conferences Ã˜ Internet and social.Â  What are the disadvantages? Quality assurance in doctoral supervision. Teresa Bajo University of Granada. UZDOC 2.0 meetings Tashkent Chemical-Technological Institute, date. â€˜What is excellent supervision and how can it be supported and developedâ€™. Aspects of Doctoral Supervision. A. Possesses a thorough knowledge of University policy, procedures and regulations. B. Is aware of funding opportunities and can advise on funding applications. 4.6.2 Where allowed/required, the investigator/institution may/should assign some or all of the investigator's/institutionâ€™s duties for investigational product(s) accountability at the trial site(s) to an appropriate pharmacist or another appropriate individual who is under the supervision of the investigator/institution. 4.6.3 The investigator/institution and/or a pharmacist or other appropriate individual, who is designated by the investigator/institution, should maintain records of the product's delivery to the trial site, the inventory at the site, the use by each subject, and the return to the sponsor or alternative disposition of unused product(s). These records should include dates, quantities View Clinical Supervision Research Papers on Academia.edu for free.Â  Clinical supervision by a senior therapist is a very common practice in psychotherapist training and psychiatric care settings. Though clinical supervision is advocated by most educational and governing institutions, the effects of more. Clinical supervision by a senior therapist is a very common practice in psychotherapist training and psychiatric care settings. Though clinical supervision is advocated by most educational and governing institutions, the effects of clinical supervision on the supervisees' competence, e.g., attitudes, behaviors, and skills, as well as on treatment outcomes and other patient variables are debated and largely unknown. Request PDF | Disciplinarity Issues in Educational Technology Doctoral Supervision | Interdisciplinary approaches to doctoral education have been identified as a route towards enhancing research capacity to address pressing | Find, read and cite all the research you need on ResearchGate.Â  Increasingly, technological supports for part-time, distance, and flexible access to doctoral programmes are bringing together international groups of supervisors and students.Â  We posit a conceptual framework for examining perspectives on disciplinarity within educational technology and present an argument that the field provides fertile trans-disciplinary ground for represented disciplines to influence and potentially be reoriented by others. Contested disciplinarity in international doctoral supervision. In V. Hodgson, C. Jones, M. De Laat, D. McConnell, T. Ryberg, & P. Sloep (Eds.), Proceedings of the 8th International Conference on Networked Learning (pp. 498â€“505). Maastricht: Maastricht School of Management.Google Scholar. Parker, H. (1890). The seven liberal arts. The English Historical Review, 5(19), 417â€“461.CrossRefGoogle Scholar. Peters, R. S. (1972). Education and the educated man.