

# Distance and Contradictory Motives in Distributed Workplace Learning for a New Profession

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## **Abstract**

In this paper, I explain the practical learning challenges in distributed workplace learning that are engendered by distance and contradictory motives between distributed instructors. I draw lessons from an empirical study of the institution of a new profession in the British National Health Service that was operationalised through distributed workplace learning. The practical learning challenges are explained from an activity-theoretical perspective to show the need for balance between work practice outcomes on the one hand, and theoretical and accreditation outcomes of learning on the other. I argue that the practical learning challenges in distributed workplace learning are rooted in: (1) multiple sources of instructions and remote separation of instructors; (2) pervasive and stronger contradictions between instructors' motives; and (3) the coercion of learners' core participation towards outcomes of practical learning by immediate (or local) instructors. I propose, further, that reducing the strength of contradictions between distributed instructors and increasing the co-presence of the distant instructor are worthy strategies for managing distributed workplace learning.

**Keywords:** workplace learning, practical learning, motives, distribution, contradictions, activity.

## **1. Introduction**

In contemporary times, the introduction of new skills-upgrading workplace learning activities, the distribution of such activities, and how they relate with the institutional politics that belie the governance of the work and learning aspects of such activities are real. And these realities cannot be disregarded in our need for a proper understanding of the practical learning challenges that confront the institution of a new profession. Reports of the practical challenges in distance learning indicate that distribution of a learning activity is different from its collocated equivalent (see, for example, Webster and Hackley 1997, Dillon and Gunawardena 1995, Svensson 2002). In such reports, however, the socio-political intricacies of distributed workplace learning are often simply taken for granted, overlooked or deemed as mere quantitative additions to their collocated versions. For example, in distributed workplace learning, learners face challenges of institutional control, inertia, resistance and motivational contradictions on the part of remotely-distributed learning instructors; and these challenges are qualitatively different from their collocated equivalents. It is important, therefore, that we do not ignore the more important qualitative dimensions of the learning challenges that have significant implications for instructional design for distributed workplace learning.

This paper reports the practical learning challenges that occurred in a distributed workplace learning (WL) project within the British National Health Service (NHS). The project was instituted to upgrade the skills of twelve health professionals so that they could assume some roles that were hitherto performed by junior doctors. I analyse the practical learning challenges in five facets: first, the institutional politics surrounding the institution and accreditation of a new professional role; second, how this politics relates with the safety-criticality of the work practice which is being learned; third, how safety-criticality shapes the contradictions between motives driving the work practice and learning; fourth, how distance

relates with contradictions; and fifth, how this relationship determines the nature of learners' participation in the work practice.

Education and learning literature are replete with reports of workplace learning, pointing to challenges and opportunities for optimal skills acquisition in the workplace (see, for example, Engeström 2001, Guile and Griffiths 2001, Fuller and Unwin 2003, Hodkinson and Hodkinson 2003, Beckett and Hager 2000, Zemblyas 2006). Likewise, there are many accounts of challenges and opportunities inherent in contemporary distance learning that are facilitated by information and communication technologies in the distance and technology-mediated learning literature (see, for example, Albalooshi 2003, Hildreth et al. 1998, Leidner and Jarvenpaa 1993, Alavi and Leidner 2001, Dillon and Gunawardena 1995). What seem to be missing are explicit expositions of the socio-political challenges of learning that are both workplace- and distance-based. And this paper, discussing the challenges posed by distance and contradictory motives in distributed WL, exposes lessons on these challenges that confronted the institution of a new profession.

The analyses of these challenges explain the idea that contradictions between the motives of remote and workplace instructors significantly shape distributed WL. Drawing upon the theory of Activity (Leont'ev 1978, Engeström 1987), WL is deemed as a set of interacting of activities – each driven by a different motive, and each constituted by a series of goal-oriented learning actions. Activity Theory is deemed a suitable analytical framework because, as a theory of learning, it offers insights and guidelines about the potential challenges surrounding individual learning for the achievement of collective outcomes. The theory proffers a framework for conceptualizing individual learning actions and how they are shaped by collective, organizational or institutional imperatives. Finally, it deals specifically with learning and skills development in the workplace (see, for example, Engeström 2001). Individuals' practical learning actions constitute my unit of analysis; and my discussions

hinge on the idea that practical learning actions are achieved in specific conditions engendered by distance and contradictory motives. The conditions dictate the possible actions (what) and how they will be performed. These actions and the conditions under which they are performed are critical issues of consideration in the management of distributed WL. My aims are to examine the sources and significance of contradictory motives in a distributed WL setting, to analyze their impact on learners' actions and skills development, to draw upon these to theorize the challenges presented by distribution to WL, and to proffer strategies for managing these challenges.

In the next section, I discuss the aspects of Activity Theory (the analytical framework) that are relevant for understanding the practical learning challenges in WL. I follow this with a presentation of the empirical case of WL and the data collection methods. Then I analyse the challenges, leading to propositions of management strategies and concluding remarks.

## **2. The Theory of Activity**

According to the philosophical assumptions of Activity Theory (AT), an activity is the act of satisfying a need by a *subject* (an individual, group or organization) that engages in the transformation of an *object* with a physical or psychological *tool* – the object having been perceived by the subject to satisfy the need. The transformation of an object into an *outcome* defines the *motive* driving an activity, and the object is the element that distinguishes one activity from another. In an activity, the subject collaborates with other people who, together, form a *community*. Therefore, the activity is intrinsically complicated by the community of collaborators, the tacit and explicit *rules* which regulate their actions, and the implicit and explicit *division of labour* which manifest among them (see Figure 1).

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Theoretically, the collective essence of an activity system implies that individuals or groups in the community may be transforming different objects, and hence the motives driving their activities will be different from or even contradict the motive of the community's collective activity. This means that, even when the transformation of the "collective" object appears to represent a single collective activity, the outcome of the transformation is achieved through that activity's interactions with others championed by individuals or groups in the community (Engeström 1987). The collective activity matters because it represents what Engeström calls the "culturally more advanced" activity ("advanced activity" hereafter). It is considered advanced and essentially socio-cultural because the legitimacy or acceptability of its outcome is dependent on the socio-cultural context defined collectively by the community. In the socio-cultural context, the outcome has to represent a commodity of exchange-value that is useful to all members of the community rather than a product of use-value that is useful merely to the individual producer (Marx 1909). However, the advanced activity's interactions with other activities of community members should indeed be the focus of understanding the nature of community members' actions and how they are conditioned. This is true especially in advanced activities where the objects to be transformed are human beings as in learning activities.

The general macrostructure of an activity encompasses both mental and physical components that are constituted by a series of conscious and goal-directed *actions* (see Figure 2). These actions are also constituted by subconscious *operations*. The motive that drives an activity answers the question *why*, and the intentional characteristic of goal-directed actions is a response to *what* must be done to achieve the motive. Goals are necessarily intermediate and partial outcomes that are achieved through separate actions in a collective activity. However, they are achieved in specific *conditions* that present a problem of *how* or through what means. The "how" problem is consistent with the range of executable *operations*. An

operation is a methodical aspect of an action “which is determined not by the goal in itself but by the objective conditions of its achievement” (Leont'ev 1978, p.65).

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The complexity of an interacting set of activities lies in the determining capacity of the *conditions* underlying the achievement of goals. Conditions determine what actions can be performed by actors and how they will be performed. An activity’s interactions with other activities can create objective conditions which will affect the community members’ actions. Because one activity is distinguished from another by its object which gives it a “determined direction” (Leont'ev 1978), the strength of contradictions between the motives driving different interacting activities will serve as objective conditions within which the actions of those activities are performed. Contradictory motives driving interacting activities are therefore essential aspects of the conditions underlying those activities; and strong contradictions are likely to engender adverse conditions that will determine the nature of actions and how they will be performed.

### **2.1 Work-Integrated Learning as a Set of Interacting Activities**

AT is a theory of learning borne out of developmental psychology. It offers a cogent set of postulates on human development based on the social psychological implications of human phylogenesis. It elucidates philosophical assumptions about how objective, societal or socio-cultural conditions shape human development, pointing essentially to the importance of engaging learners directly in learning practices that are motivated by the transformation of the learner and learning object (rather than its image) (see Il'enkov 1974). For example, in WL, the learner is immersed in his or her work practice and his or her learning is shaped by the very practice. In WL, the engagement of learners in the practice is purposeful, deliberate and predetermined as a part of work arrangements of an institution rather than accidental or

coincidental engagement. In this scenario, learning objects may be “either real or ideal, either present in perception or exclusively in the imagination or in thought” (Leont'ev 1978, p.62).

WL is normally sanctioned by institutions in times of critical and radical changes when the skills of employees have to be upgraded necessarily. The purposeful and predetermined nature of WL implies that there is a strong focus on specific skills acquisition by learners towards the solution of specific identified problems in the institution. *Skilled practitioners*, therefore, appear to be the desired outcome of WL and *skills acquisition* the motive. However, WL is, intrinsically, a set of two interacting activities. The advanced activity is driven by the motive to transform the learners and theoretical objects (abstract skills) into skilled practitioners that are acceptable to the community of practitioners in the institution. And the *object activity* is driven by the motive to transform practical objects into some predestined outcome to signify learners' practical skills acquisition. I label the latter activity as “object,” following Engeström (1987), because it represents an activity in which the practical or tangible object is being transformed, as compared with the advanced activity in which the learners and theoretical objects, (as well as their legitimacy or acceptability) are the focus of transformation.

The legitimacy or acceptability of the skilled practitioner – the outcome of the advanced activity – will be determined by the institution (the socio-cultural context) within which the practitioner's skills will be deployed. Thus, for skilled practitioners to be seen as commodities of exchange-value by members of the institution, the authorities of the institution have to give accreditation to all aspects of the learning activity (the advanced activity).

“Learning is inevitably implicated in the acquisition of knowledge, but it is also implicated in the acquisition of identity. People do not simply learn *about*; they also learn ... *to be*. Learning, that is, doesn't just involve the acquisition of facts about the world, it also involves acquiring the ability to act in the world in socially-recognized ways” (Brown and Duguid 2001, p.200)(emphases in original).

The transformation of the learner, therefore, goes beyond the mere acquisition of some skills: for social identity purposes, it must involve actions that will facilitate the accreditation of the activity (especially its outcome).

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Figure 3 shows the ideal identity of the learner in both activities – an object in the advanced activity, and a subject in the object activity. As an activity is distinguished from another by its object which gives it a determined direction, we can analytically deem the motives driving these two activities as different and indeed contradictory because they interact to determine the overall outcome of WL. This analytical distinction becomes even more critical when WL is distributed over two locations such that each activity is run from each location. In other words, the strength of contradictory motives, and hence the *what* and *how* of learning actions, can be affected significantly by distributing the WL process over two remotely separated locations. Because “distance matters” (Olson and Olson 2000), especially in terms of control and coordination of WL actions over two locations (Wiredu and Sørensen 2006), we should expect distance-related challenges to shape the WL conditions.

I consider these issues – distribution, contradictory motives, learning actions, and learning – in a case of distributed WL in the British National Health Service (NHS).

### **3. A Case of Distributed Work-Integrated Learning**

To understand the practical learning challenges and their impact on skills development, I report on a distributed work-integrated learning activity which was conducted as part of the employment reforms in the NHS. A more detailed account of this empirical study has been documented elsewhere (Author, Year), and thus, only a concise version of this account is presented here to reveal the necessary data required for understanding the challenges.

The key impetus of this WIL activity was the European Union Working Time Directive (EUWTD) that required the weekly working hours of UK junior doctors to be reduced from 72 as of January 2003 to a maximum of 58 by August 2004. In fact, the legislation stipulated that by August 2005, their maximum number of weekly hours should not exceed 48. Thus, the EUWTD placed pressure on arrangements for medical cover within British hospitals. Since the production of junior doctors in Britain was suffering at the time, and even the training of many more of them was expected to take more than a few years to complete, pressure was mounting on the NHS to fill the impending vacancies with a new category of health professionals. A looming crisis in the NHS had to be dealt with immediately.

As a measure to tackle this crisis, the Changing Workforce Programme at the Department of Health instituted a training project to deal with the mandatory reduction in the workload of junior doctors. This project – Peri-operative<sup>1</sup> Specialist Practitioner (PSP) project – was aimed at introducing a new medical professional role to expand hospital surgical teams (see Nestel et al. 2005, Kneebone et al. 2006). The PSPs would take over some of the functions that were hitherto performed by junior doctors. The collective motive driving the project was to produce skilled PSPs who would provide patients with comprehensive integrated care before and after an operation. The essence of integrated care was to afford every surgical patient a stable relationship or affiliation with a single qualified PSP throughout their stay in hospital, rather than a fragmented series of contacts with different healthcare workers. The new role was also aimed specifically at peri-operative management for elective and emergency surgical care which comprises of a range of diagnostic procedural skills. In short, the PSPs would assume many of the diagnostic and procedural responsibilities carried out by junior doctors.

The project was a full-time learning activity that lasted for one year from April 2003. And 12 trainees were drawn from existing medical staff who served in various capacities in

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<sup>1</sup> “Peri-operative“ means pre- and post-operative.

various hospitals under the NHS scheme. All of them were mature professionals with many years experience of working in the NHS. Before leaving their old occupations to become PSP trainees, nine of the participants were nurses, two were operating department practitioners and one was a physiotherapist.

The project took a practice-based approach that was driven by clinical needs and underpinned by accountable assessment of competence. These competences included peri-operative clinical assessment, routine post-operative monitoring and care, identification and management of post-operative complications, and determination of fitness for discharge from hospital. It was work-integrated because they trained in the same hospitals in which they used to work in different locations across UK, and their learning and skills acquisition were undertaken within the work practice of their hospitals. The activity was also distributed because it consisted of two components: intensive one-week training modules conducted at Imperial College London that alternated with longer periods (mostly six weeks) of supervised clinical practice within the surgical team at each trainee's hospital. The administrators of the project – the *project team* – were those who run the one-week training modules in London.

#### **4. Research Design**

I pursued this study through an action research strategy in which I actively collaborated with the PSPs and the authorities of the project over the project period. I assumed the role of a 24-hour 'helpdesk' support to their use of Personal Digital Assistants (PDAs) – they could call me on the phone anytime for help if they encountered any problems with the use of the technology during their training. I was, therefore, a facilitator, an active participant, and a “clinician” (Schein 1987). I have to stress that I was strictly an action researcher not a consultant. I accepted the invitation to participate in the project as an action researcher not to gain monetary rewards, but to use the opportunity as a means to obtain as much in-depth information as possible. Judging my role with Baskerville's (1999) five key parameters for distinguishing between an action researcher and a consultant – motivation, commitment,

approach, foundation for recommendations, and essence of organisational understanding – I was an action researcher. Offering myself as a facilitator for the adoption of technology and implementation of technology decisions in the project was a welcome gesture to the practitioner not only in cost-saving terms; but also on the grounds of my resolution of most of the emerging problems with the PDA use. This role was very significant because it eased my access to information and facilitated the process of data collection at all levels of the project set-up from the outset to its conclusion.

#### **4.1 Data Collection Methods**

I held several meetings, conversations and interviews with the project manager and trainees throughout the project. Although, these meetings were far fewer in number compared, for example, with the number of interviews, they were a reliable and rich source of information on the challenges the PSP confronting the PSPs in their practical learning.

Although my involvement in the project was participatory, I employed direct observation instead of participant observation, and that only proceeded as far as their London-based actions were concerned. It would be fair for one to think that an investigation of practical learning challenges should entail a significant dosage of direct observation within the PSPs hospitals. However, this form of observation could not be done because of official restrictions associated with medical ethics. To observe PSPs' learning actions within their hospitals, I needed permission from the Ethics Committee of the General Medical Council. The processes and requirements for granting this permission were extremely complicated at the time of this study. At the background of these complications is the fact that the I would be observing, in addition, all sorts of extreme scenes of sick patients' conditions in the hospitals. In truth, all the signs were pointing to the fact that I would not be allowed to observe the PSPs' actions in their hospitals.

In open-ended interviews, the trainees were asked questions leading to discussions of their experiences with their various hospital surgical teams. The objective was to induce and entice them to elaborate because when they did, their languages and social cues reveal attitudes, morals, beliefs, and opinions and feelings (Kendall and Kendall 1993). Furthermore, open-ended interviews were most suitable for gathering information on questions of 'how' because they are explorative in nature.

I also conducted formal interviews, both face-to-face at their hospitals and over the phone. During my visits to their hospitals, the face-to-face formal interviews were largely interspersed with informal interviews or conversations as part of my problem-solving role in the project. I also held several informal conversations with them anytime they returned to London for their modules – beside the tea table, in the classroom before a session, in the canteen, and during the official three-hour “PDA session” of every module.

The project manager instituted an official “PDA session” to allow the PDA application designers and I to interact with the PSPs and solicit their problems and concerns about the PDAs use in their learning activities. I always used these opportunities to throw open questions about their learning experiences for discussions. These sessions presented an environment where their personal experiences were shared among themselves, revealing critical information that could not be discussed in a formal interview.

The project manager also instituted another three-hour session in every module called “How things went,.” This session, the first of every London module, was designed to solicit feedback and experiences from the trainees in relation to their learning experiences over the previous six weeks spent in their individual hospitals. “How things went” sessions were always very emotional and presented the PSPs with the official opportunity to pour out their feelings and frustrations. Although it was the project leader himself who moderated the “How things went” sessions, I was always present as an observer and took notes of the proceedings.

## 4.2 Data Analysis

Data analysis was conducted alongside and after my data collection. My interventions as a facilitator of the learners' mobile computing in the project were occasions for gaining first hand information on their experiences – both computing- and learning-related. In the beginning, my analysis occurred as part of or in-between these occasions as it was necessary for me to apply some theoretical ideas about distance, workplace and technology-mediated learning to understand the information they provided me and suggest solutions for subsequent technology designs. While my main aim was to see the learners' technology use experiences improve, I was, at the same time, developing my understanding iteratively of how distance and institutional politics were challenging their learning. This iteration was premised on their reporting and discussions in our conversations and sessions.

Then after receiving a flurry of reports from the PSPs about their territorial disputes with surgical team members, I drew upon the principles of motives and contradictions of Activity Theory to understand how and why the PSPs were not achieving optimal learning experiences with their surgical teams. Part of this drawing was done during my data collection; and the derived understanding was evaluated also during my data collection. After the data collection period, I continued with full scale analysis with the aim of inducing explanations on how distance and institutional politics challenge the practical aspects of workplace learning .

Note that, in another paper (Wiredu 2005), we have discussed the dynamics of control wielded over the PSPs by the project's distributed authorities in relation to the PSPs' mobile technology use.

## 5. Results

Each PSP's learning occurred within the work of the *surgical team* of his or her hospital. Each of these surgical teams comprised of a consultant as head, and junior doctors and

nurses. In their learning, each PSP was supposed to integrate or be integrated into their surgical team and develop their pre- and post-operative care skills. According to prior agreements with the project team, the consultants were supposed to facilitate the integration of the PSPs into their teams and ensure that they achieved optimum learning experiences. This arrangement would allow the classroom-based skills learned during training sessions in London to be consolidated, tested and extended in the PSPs' hospitals. These skills included pre-operative assessment and investigation; understanding normal and abnormal states of surgical patients; identification and treatment of common and important complications; and, carrying out clinical procedures including taking patient histories, ordering tests, taking blood and putting up intravenous infusions.

In order for the project team to monitor, control and “scaffold” (Salomon and Perkins 1998) the distant actions of the trainees, each PSP was required to document, immediately after each action, all of his or her learning actions, and write reflections-on-action (Schön 1983) at the end of each day. Thus, the documentation was authentic. It would also construct the new professional role because the project team would use the data to generate reports to seek accreditation for and garner acceptance of the PSP as a medical professional. Thus, accredited PSPs would represent outcomes of exchange-value because they would be accepted as commodities of exchange and would be able to apply their skills in any British hospital. Without accreditation and acceptance, their usefulness would only be limited to the surgical teams in which they learned their skills implying that they would represent outcomes of use-value (products as compared to commodities).

The underlying learning challenge lied in the motivational differences between the project team and surgical team. The project team was interested in outcomes such as the PSPs' skills development, learning evidence, accreditation and their eventual utility in any hospital (rather than just their training hospital). Interestingly, the surgical team was interested in the PSPs'

learning only insofar as they contributed directly towards treating surgical patients. In this instance where the project team was removed from the hospital, the surgical team ensured that all the PSP's learning actions would contribute directly towards treating surgical patients. It is also interesting to note that members of the surgical teams, being disdainful of the whole PSP idea, stifled and resisted the PSPs' participation in the routines of the surgical teams.

The accounts of the PSPs pointed to considerable interpersonal problems in their hospitals which were directly confrontational as far as their learning actions were concerned. They reported of serious encounters of resistance and non-acceptance by their surgical team members. This was not too surprising given the volatility and novelty of the new role; it was also not too surprising given the natural uneasiness on the part of the surgical team members as they comprehended PSPs who would end up higher in the ranks above most of them.

These attitudes manifested in the PSPs over-acting or under-acting in the performance of their clinical actions in their hospitals. Some of them reported, on the one hand, that they could perceive overt and covert tactics of rejection and resistance on the part of surgical team members which stifled their participation in caring for surgical patients. For example three of them complained bitterly that in much of the time spent with their teams, their roles were reduced to running errands which constituted total aberrations as far as their learning objectives and actions were concerned. On the other hand, in instances where their participations were not stifled, they were so overloaded with clinical tasks by their team members that they were not able to do the concomitant documentation of their learning actions.

More importantly, the nature of work-integrated learning which this project exemplified entails pragmatism and extreme local control by the surgical teams which coerced the PSPs to concentrate more on the treatment of surgical patients. In healthcare, the pragmatic demands and safety-criticality of patient care override and overwhelm any other concerns. Therefore, it

was not surprising when the PSPs reported that the clinical demands of patient care did not make the contemporaneous documentation of learning actions possible most of the time.

## 6. Practical Learning Challenges

### 6.1 The Strength of Contradictions

In this project, the advanced activity had the project team as the subject and the PSP and peri-surgical skills as the objects which were to be transformed into a skilled and accredited PSP, suitable for assuming some functions of junior doctors (see Figure 4).

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On the one hand, the success of the project team was partly dependent on the PSP's successful practical learning within the surgical team, and partly on documentation of their learning actions. On the other hand, the success of the surgical teams was partly dependent on the PSPs' classroom-based learning conducted by the project team and partly on the experience they would gain from the practical learning in their hospitals. However, the surgical team's activity was quite different from the project team's activity because the object of the latter (surgical patient) was different from that of the former (PSP and skills). In activity-theoretical terms, the surgical team's activity is the *object activity* (Engeström 1987) because it represented the activity in which the practical or tangible object (surgical patients) was embedded. Note that "peri-surgical skills" is the abstract or theoretical version of the practical object. An object activity is the practice in which the learner has to engage to access the practical learning object; without the object activity, only the theoretical object will be accessible to the learner as is witnessed in classroom-based learning.

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The comparison of Figures 4 and 5 explains why the individual motives driving the surgical and project teams were contradictory. The one (project team) was motivated by the transformation of PSPs and skills into skilled PSPs and, further, seek accreditation for the outcome; and the other (surgical team) was motivated by the transformation of surgical patients into treated patients. The interesting aspect of this comparison is that the surgical teams form part of the community of individuals and groups of the advanced activity that contribute in different ways towards the outcome of that activity. The surgical teams contributed by hosting and facilitating the PSPs' practical learning. Another potential contributor in the community was the British medical institutions – in particular, the General Medical Council (GMC) and British Medical Association (BMA) – whose contributions would be the accreditation of the PSP as a new medical profession. This accreditation would translate into the acceptance of PSPs by all hospital surgical units across Britain. The imperatives for accreditation went beyond curriculum development and practical learning to include detailed logs of all learning actions performed by each PSP over the learning period. Moreover, it was most important for learning actions to be logged immediately after the action was performed and not later lest they would forget some actions. The project team wanted to ensure (albeit from a distance) that the PSPs logged in these details because the details would be processed into reports for accreditation purposes. In short, the PSPs' practical learning actions were as important as their concomitant documentation of those actions.

We can draw from the safety-criticality of healthcare and the deeply entrenched, legitimized and time-honoured medical profession to expect the institutions that govern the profession to exhibit high degrees of inertia and conservatism (see Leicht and Fennell 2001). Such inertia and conservatism, on the one hand, induced the strict institutional requirements for accreditation of the PSP role. On the other, they induced scepticism, resistance, territorial

disputes and the perception of threat by the surgical teams. Thus, the *strength* of contradictions between the motive driving the advanced and object activities lies in the combined influence of the safety-criticality of the outcome of the practical learning action, and of the degree of inertia and conservatism in the medical institutions. Normally, safety-criticality induces inertia and conservatism. For instance, in lowly safety-critical practical learning tasks like secretarial training, wider error margins are allowed, the necessity for practical learning input is less strict, and the institutional imperatives for accreditation and acceptance are less pedantic. This instance is quite the opposite of the PSP training project in which practical learning was safety-critical, error margins were very narrow, practical learning input was strictly necessary, and institutional accreditation imperatives were very stringent.

LESSON 1: *The more safety-critical the work practice of WIL, the more stringent will be the institutional requirements for evidence of practical learning.*

LESSON 2: *The more safety-critical the work practice of WIL, the stronger will be the contradictions between the motives driving the work practice and the documentation of practical learning.*

The irony is that the very surgical team members who were supposed to facilitate the means to accreditation were the same people who opposed the PSP profession and translated that opposition into resistance attitudes. The ideal scenario of the PSPs' learning actions should have been a balance between practical learning and concomitant documentation of learning actions. However, what transpired was that the surgical teams' either resisted extremely the PSPs' participation in practical learning which meant there was almost nothing to document; or they coerced the PSPs to engage in extreme practical learning which would

not allow them to do any documentation. The safety-critical nature of treating surgical patients dictated extreme practical learning; and the perception of threat dictated extreme resistance. In the early days of the project, extreme resistance was the reality. When the PSPs complained about such resistance attitudes to the project team, it intervened by relaying the complains to the consultants heading the surgical teams, and this started the reality change process from extreme resistance to extreme participation. Interestingly, however, extreme participation annulled the concomitant documentation of learning actions. Thus, towards the end of the project, extreme practical learning was the reality.

## **6.2 The Role of Distance**

What the project team had wished for, after relaying the complains, was the ideal balance between practical learning and concomitant documentation of learning actions. However, the project team's absence from the hospitals enabled the surgical team members to control the PSPs' practical learning by coercing them into extreme participation in clinical duties. Thus, the strong contradiction was even exacerbated by the distance between the project team (in London) and the surgical team (in the PSP's hospital) as the surgical team usurped the authority of the distant project team to control the clinical learning actions of the PSP in the hospital.

*LESSON 3: Distance between instructors who champion the theoretical and accreditation aspects of learning and those who champion the work practice aspect exacerbates the strength of contradictions between their motives.*

In another paper (Author, Year), we point out that this local control was a result of strong contradictions between the motives of the project and surgical teams on the one hand, and of weak co-presence of the project team in the hospital on the other. Because the project team was not there (in the hospital), and because its motive contradicted the surgical teams', it was

easy for the surgical teams to wield local control over the PSPs' learning actions. And by virtue of such strong local control, the surgical team members, who perceived the PSPs as threats, stifled the PSPs learning actions by hindering their full integration into the surgical teams in the early days of the project. In short, the surgical teams' overt and covert tactics to resist the PSPs' full integration were sustained by the strong local control that they (the surgical teams) wielded. These tactics coerced the PSPs to align their learning actions to the surgical teams' motive as means to gain full acceptance and membership into the community of surgical team subjects.

*LESSON 4: When WIL is confronted with highly safety-critical practice and distribution, there is a high tendency for learners to align their actions with the parochial outcomes of the practical activity at the expense of the holistic outcomes of the WL activity.*

If they had not aligned, they would not have learned much from the practice because learning in a community of practice is achieved by the learner's progression from peripheral participant of that community's practice to core participant (Lave and Wenger 1991, Wenger 1998). Peripheral participation is usually associated with undertones of non-acceptance, conformity, subjugation and being perceived as a tool by core community participants. On the contrary, core participation is associated with acceptance and recognition by core community participants as an equally capable peer. And capable peerage can only be achieved through adequate core skills acquisition which, further, can only be achieved when the learner is allowed access to the core skills. In activity theoretical terms, peripheral participation reflects the status of the learner as tool, while core participation reflects his or her status as subject. Thus, the learner's identity as tool or subject of activity depends on his or her degree of "social participation" (Wenger 1998) in the practice of that activity. The PSPs' pursuit of full integration and acceptance into their surgical teams can be explained as

their orientation from peripheral participation (tool-identity) in their surgical teams towards core participation (subject-identity). In alignment, however, they committed themselves to the actions of the surgical teams even if that meant they had to overlook the concurrent documentation actions that had been sanctioned by the project team, and they did so. The remoteness of the project team, therefore, proved to be a significant conditioner of the strength of contradictions, and hence of the PSPs' extreme practical learning actions.

## 7. Discussion

In order to attempt a theorization of how distance and contradictory motives pose a significant challenge to practical learning in WL, I will discuss, first, the typical practical learning scenario in a collocated WL activity. In this scenario, the advanced and object activities are collocated and would, most likely, both have one instructor as subject (Figure 6). Note that in this collocated scenario, my distinction between advanced and object activities are for analytical purposes; in reality, such a distinction is not so clear.

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Insert Figure 6 about here  
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In collocated WL, the objects of both activities may be different, signifying that both activities are, theoretically, different; however their collocation ensures that the objects' transformations are ensured by the same instructor. The practical learning challenge lies in *what* learners are allowed to do and *how* they do them as they progress from peripheral to core participation in the object activity. In the collocated scenario, even if the instructor's motive to train the learners into skilled professionals and to transform the practical object contradict each other (due to the different objects), such contradiction would be easier to resolve by the instructor because of his co-presence in the object activity. Even if core participants of the object activity exhibit resistance tendencies towards learners, the instructor's control over both activities will ensure the achievement of a right balance

between practical learning actions and concomitant documentation of those learning actions. His or her control will also ensure that learners' core participatory actions do not supplant or eliminate those learning actions that contribute to the motive of the advanced activity. Dealing with the practical learning challenge, therefore, is relatively easier in collocated WL because the learner acts under one instructor; and his or her progression from peripheral to core participation is enhanced or facilitated by the co-presence of the instructor. The corollary is more harmonious control over learners' actions, concomitant documentation, and skills acquisition (Author, Year).

In distributed WL (Figure 7), however, both interacting activities are likely to have different instructors, and they will be remotely separated as we witnessed in the PSP case. Although the practical learning challenge also lies in the *what* and *how* of learners' actions, there are significant differences between the two scenarios in terms of the magnitude of such contradictions and control over learners' actions. These two factors, together, explain the qualitative difference between collocated and distributed WIL in terms of participation and progression. In distributed WL, contradictions between the motives behind both activities are external because each motive is championed by a different instructor (1 and 2 in Figure 7). External contradictions between instructors who are remotely separated would be more difficult to resolve; and this can translate into disharmonious control over learners' actions and affect the outcome of the advanced activity eventually.

*LESSON 5: Multiple instructors, their remote separation, and external contradictions between their motives are essential conditions of WIL that challenge learners' actions; they make learning actions and concomitant documentation of learning actions more difficult.*

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Insert Figure 7 about here  
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Progression from peripheral to core participation, and the kind of learning actions permitted even when core participation is assumed to be achieved in the object activity, can be problematic in terms of the accreditation outcome of the advanced activity. As the PSP case shows, contradictory motives between the project and surgical teams, exacerbated by the fact that both motives were championed by different instructors and conditioned by the distance between them, spawned problems of resistance or extreme participation from core participants of the surgical teams that directly affected the PSPs' actions (both learning and documentation). In sum, the practical learning challenge in distributed WL, therefore, lies in the interplay of three main parameters: (1) sources of instruction or control, (2) strength of contradictions between the remotely-separated instructors' motives, and (3) nature of core participation (see Table 1 italics).

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Insert Table I about here  
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The gist of my argument is that remote distribution of WL is a conditioner for challenges in terms of multiple sources of control, of strong and pervasive contradictory motives, and of participation in practical learning. There is no doubt that collocated WL has learning challenges in these terms. However, my point is that these challenges in the distributed WIL scenario are more difficult to manage than those in the collocated scenario.

### **7.1 Strategies for Managing Distributed WL**

An obvious strategy for managing WL activities is to ensure that learning actions are oriented towards motives driving both advanced and objects activities; and that learning outcomes are designed to align with this orientation. These strategies notwithstanding, my analysis shows that the most effective way to address challenges of distributed WL is to tackle the variable conditions within which learning actions are performed. Judged against inevitable (fixed) conditions of distributed WIL such as distance between instructors,

multiple sources of instructions, and contradictory motives, the variable conditions are the strength of contradictions and the degree co-presence of the distant instructor. These variable conditions should be the targets of strategies for managing distributed WL, and I propose two main strategies in that respect: (1) the strength of contradictions should be reduced, and (2) the co-presence of the advanced activity instructor should be increased. I will go on to explain in detail *how* these strategies can be made to work.

**Reduce strength of contradictions:** This strategy can be achieved through alignment of skills development with transformation of practical learning object; and through promotion of instructors' continuous learning about each other's motives and orientation.

Aligning the skills development motive with the motive to transform the practical object is the first step to creating harmony between instructors. For example, the transformation of the practical object should be considered as an integral part of the skills development outcome and legitimized accordingly. Alignment is tantamount to making a statement to effect the sharing of learning outcomes and ensuring continuously that the strength of contradictions is minimal. The spirit of shared outcomes reflects a scenario in which the success of the object activity is judged according to what extent it enhanced professionals' continuing education and skills development.

WL policy makers should also promote mutual continuous learning about the different motives and orientations among instructors. Continuous learning is achieved mainly through interactions between instructors; and it also engenders mutual awareness between them. Interaction, mutual learning and mutual awareness are key ideals for managing interpersonal and task-related contradictions between instructors. They are also ideals for reducing uncertainties among instructors and learners. Transparency in WL is a way of not leaving anyone in the dark about how things are going, and about how each party is going to benefit from learners' skills development; and it is significant for reducing the strength of

contradictions. The success of this strategy would depend highly on its alliance with the alignment of skills development and transformation of the practical object.

**Increase co-presence of advanced activity instructor:** There are two dimensions to this strategy – quantitative and qualitative. The quantitative dimension is to increase the frequency of visits of the advanced activity instructor to the location of practical learning. Since his co-presence would engender interactions with the practical learning instructor, facilitate his first-hand observation of learners' experiences (learning and awareness), instituting or increasing his visits would complement the working of the strategy to reduce the strength of contradictions, and to reduce uncertainties. Through such visits, the advanced activity instructor can enhance his or her control and coordination of the practical learning. Visiting would also reassure learners of the necessity of the actions oriented towards the advanced motive.

The qualitative dimension of the strategy to increase the co-presence of the advanced activity instructor can be made to work by designing WL in such a way that his representation would be co-present within the practical learning setting. Information and communication technologies (ICTs) are typical representations that have proven effective as remote control mechanisms in distance learning. As we witnessed in our empirical example, portable computers such as PDAs can even serve as better representations of remote control if they are equipped with functional applications and appropriate graphical user interface designs (see Soloway et al. 2001). The advanced activity instructor's control and coordination instructions can be inscribed into the technology; however, it is important that those inscriptions are flexible enough to fit into the demands of practical learning. It is also necessary for such technology representations to be institutionalized so that all parties would be aware of its importance, and so that it gains legitimacy and acceptance among members of the object activity.

## **8. Concluding Remarks**

In this paper, I have reported on the practical learning challenges that confronted a distributed work-integrated learning project in the British NHS. The analysis and discussion suggest that, in distributed WIL, the safety-criticality of practical learning actions, which has strong correlations with strict institutional regulations for accreditation, also engenders strong contradictions between, on the one hand, the motives of instructors who take charge of both theoretical and evidential aspects of learning and, on the other, the motives of instructors who take charge of practical learning. I have shown that managing practical learning from a distance requires more effort because the remote separation of instructors exacerbates their motivational contradictions.

An important implication to be drawn from the analysis and discussion is the mutual causation between professional institutions and the operations they govern: that is, the mutual relationship between institutional structure and local interactions (Meyer and Rowan 1977, DiMaggio and Powell 1983). Structures bear on the details of what happens in interactions – in the operational details which practical learning is an epitome. An institutional structure is an order which is imbued with time-honoured values and elaborate legal edifices; and these engender a specific political culture (e.g. conservatism and inertia) among practitioners in the profession. In distributed WL, both safety-critical (interaction-related) and institutional imperatives bear on practical learning; and when instructors who are responsible for institutional and interaction-related imperatives are remotely separated, the remoteness of those who are responsible for institutional imperatives can supplant their degree of control of practical learning actions. And to this end, I have proposed the reduction of the strength of contradictions and quantitative and qualitative increases in the co-presence of distant instructor in practical learning as worthy strategies for managing workplace learning.

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