GIVE ME THE ROOM TO LEARN: ASSOCIATIONS BETWEEN JOB CONTROL AND WORK-RELATED LEARNING

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ABSTRACT

Societal rhetoric claims that the intellectual capital of workplaces must be leveraged if Canada is to compete in the 'knowledge economy'. To achieve this, however, employers must create work environments that are favorable to workers and conducive to learning. This paper uses a sample of 5800 Canadian workers from the Work and Lifelong Learning Survey and twenty interviews with Information Technology workers from the Education-Job Requirement Matching Project to focus on the relationship between worker control and learning engagement. The data show that increased levels of social and technical control are associated with increased worker engagement in formal courses, informal education (mentoring) and non-taught learning. This research has implications for job design that includes real and meaningful opportunities for worker input and agency into their own tasks and broader organizational decision-making. These results provide important information for future research regarding the inclusion and conceptualization of learning and job control constructs.

INTRODUCTION

In the rhetoric of the new economy, organizations can gain competitive advantage if they can build and leverage the human capital of their workforces. The knowledge and skills that workers have acquired and the ways that they apply their cognitive abilities toward job tasks and problems cannot be outsourced, nor can they be easily imitated or replicated by competitors. In light of this, researchers have identified approaches towards work organization that include employee empowerment techniques to more fully engage the capabilities of employees. These approaches include the use of teams, more decentralized decision-making, and flexible scheduling (Hirst and Zeitlin, 1991; Dastmalchian and Blyton, 2001). However, firms that compete in the changing landscape of today's global economy are also highly motivated by cost-cutting measures and neo-Fordist mechanisms to get more for less. Researchers and unions have noted increased work rationalization and work

intensification through just-in-time production, quality management systems, computer-assisted surveillance and monitoring, and technologically managed production processes (Braverman, 1974; Rifkin, 1995). Through this perspective, employee empowerment attempts have also been criticized as delegated or superficial involvement, or as attempts at cultural or emotional management (Hughes, 2005), rather than true efforts to engage worker opinions and expertise.

Within the environment of the competing pressures to utilize the human capital of workers and also cut costs, it is important to recognize the learning needs and the learning contingencies of the workers themselves. People are making ever-greater commitments to the attainment of higher education and the continual upgrading of their cognitive abilities to gain access to and keep their jobs. Yet, the jobs that they achieve may have reduced opportunities to continue that learning and development or to apply the knowledge and abilities already acquired. In addition workers bear more direct responsibility for their training and learning needs. Workload intensification is leaving less time for formal learning opportunities and changing societal norms emphasize the importance of ever higher levels of formal schooling and credentialing. At the same time, workplaces are becoming more rationalized and the cadre of contingent or precarious workers grows. There is evidence that these individuals receive less employer support for training (Hoque and Kirkpatrick, 2003; Gagnon and Doray, 2005). The conundrum is that many firms are striving to become learning organizations and make full use of the growing human capital of their workforce, even as there may be reduced opportunities for meaningful employee learning and corresponding input.

This paper argues against the expansion of neo-Fordist practices and in favour of workplace structures that provide real and meaningful opportunities for workers to impact their work environment. Specifically, it presents data from two sources (discussed below) and demonstrates the role of worker control in facilitating opportunities for meaningful learning.

DATA

Quantitative data from the Work and Lifelong Learning (WALL) survey[1] gives an aggregate overview of the relationship between control and learning engagement, while qualitative data from interviews carried out as part of the Education and Job Requirement Matching (EJRM) project[2] provide nuance and richness through individual learning experiences. The WALL survey was conducted in 2004 with a large representative sample of the adult (18+) Canadian population (N = 9,063). Respondents who had never worked for pay or who had not worked for pay in the past twelve months were excluded. Self-employed individuals were retained to achieve a final sample population of 5800[3]. The EJRM interviews were conducted in 2004 with twenty workers in the information

technology sector. Using much the same interview schedule as the WALL survey, the interviews were semi-structured and lasted 1½ to 2 hours long. The digital recordings of each session were transcribed and analyzed for themes. Interviewees were ensured confidentiality and pseudonyms have been used. In what follows, all quotations are drawn from these IT professionals who work in the area of software development. The WALL data reported represents workers across all occupational sectors.

FINDINGS

Knowledge and abilities are still most often defined (and therefore acquired and rewarded) through a formal and institutionalized system of teachers and learners. As such, a growing number of people will experience learning within formalized institutions and systems. However, this formal learning is only the tip of the iceberg of adult learning activities (Livingstone 1999). For all adults, the larger portion of learning is a constant and sometimes unconscious part of everyday life. It is important to delineate these learning spheres because there is growing evidence of a lack of correspondence between formal and informal learning activities (see for example Kusterer 1978; Burns 1999; Livingstone 2005; Livingstone and Scholtz 2006).

In the WALL sample used for this research, almost one-quarter of workers are engaged in primarily or partially work-related formal learning. For this paper, *formal learning* includes job-related employer-sponsored training and other courses, workshops, seminars or on-line modules that rely on a set curriculum and/or teacher, but does not include formal schooling such as degree or diploma programmes at colleges and universities. Informal learning includes *informal education* (i.e., mentoring, tutoring, and advice-seeking), as well as *non-taught learning* such as individual or group learning experiences that occur without the presence of a set curriculum or identified 'teacher'. These activities can be intentional acts of learning or unintentional and tacit experiences of daily life (see Colley, Hodkinson and Malcolm 2003; Livingstone 2001, 2005; Livingstone and Scholtz 2006). In the WALL sample, 37% of workers are engaged in informal education through the act of asking a knowledgeable other for advice about knowledge and skill development. The vast majority (80%) of workers in the sample are engaged in non-taught learning.

Job control is most often defined along one dimension: the control or discretion that workers have over their own or others' work activities. This narrow definition does not recognize that the labour process involves both social and technical relations of production that can work singularly and together to dictate the landscape of work environments. For example, McNamee and Vanneman (1983) describe three dimensions of social relations - economic (ownership), political (authority), and ideological (the distinction between

mental labour and manual labour - managerial) - and two dimensions of technical relations - symbolic (workers' relationships to information) and material (workers' relationships to machines). Discussed in this way, social and technical relations are actually manifests of social and technical aspects of job control. Social control, or social authority, is the control over people and the larger work system and encompasses ownership, authority and managerial roles. Technical control, or technical task discretion, is the control over tools and tasks and includes the discretion workers have to shape and perform their own work. The WALL data shows that professional workers (like the IT workers here) tend to have the highest levels of both social and technical job control, with service workers reporting the lowest technical control and industrial workers reporting the lowest social control. The WALL data is presented in the aggregate below so as not to confound the job control variables with occupational patterns; however the interview data presented highlights the case of workers who enjoy relatively high levels of job control and suggests opportunities for workers in occupations with less control.

Workers are actively engaged in choosing learning activities and they make those choices depending on their personal preferences and particular needs. Workers have vast amounts of knowledge about their jobs that is often underutilized and undervalued in the workplace. It is the individual worker who completes the job tasks day in and day out who best understands what the job entails, what the job requires and, therefore, what learning is most suitable and helpful for her performance and development. Nisha, a computer programmer in her mid-twenties explains her decisions about engaging in formal versus informal learning:

> *The first set of courses I took, one was recommended by my manager, just as I was here to get started. One I took because I thought I should know this stuff. The second year I thought I am learning what I need to know on the job and a part of it was my job slightly changed. When I started I was doing product development and once I started working at the product overview level, [the formal course] was not so important. The pace of learning increased so much and I did not think I could get that from a course.*

When she was a newer employee, Nisha engaged in formal learning as somewhat mandated professional development and to build a foundation in a new area. Once she had settled in to her job and her duties became more complicated, she relied on informal or on-the-job learning to support her job performance. Carlos, a software developer with considerable experience with his company, also reported that he engages in formal or informal learning based on his particular needs. He also seems to accept the implication of the broken

psychological contract that the company is not responsible for maintaining or supporting his development.

> *I see it as part of my job to make sure I'm saleable. It's part of my job to make sure that my skills are current. I can't find myself way behind the times and technology one day and say well it's [the company's] fault they didn't send me on a course. So I think it's very important for me to do the informal training and…then seek out formal training if I feel I need it.*

Tariq, a software developer in the middle of his company hierarchy, expresses similar sentiments about individualistic attitudes to career development and his choice of learning opportunities:

> *No one is going to come and say do you want to do this? Do you want to do that? You want to be an architect? Well, be an architect for a year and make yourself recognized. And once people see that you have done that for a certain period of time, then it will be recognized and then you will get the title. So essentially your title is always a little bit behind what you are doing…And so informal learning is a big part of that – making progress.*

These comments from Nisha, Carlos, and Tariq illustrate the active role that workers play in their learning development. As they navigate increasingly demanding jobs due to technological change and work intensification, workers are continually assessing their current and future job requirements in relation to their cognitive abilities. Based on these dynamic acts of comparison, workers make choices about and engage in different forms of learning. However, those choices, and the resulting learning experiences, are often hampered by workplace structure and job demands.

These comments also highlight the difference between formal courses and informal learning. In the WALL survey sample, 89% of the respondents indicated that informal learning was somewhat or very helpful to their job performance. This compares with 76% for the smaller proportion of workers taking formal courses. The reduced helpfulness of formal courses is most likely due to their inaccessibility and their inapplicability. Regarding inaccessibility, many workers face a constant struggle to fit formal courses into their work schedule. Half of the WALL survey sample reported that they wanted to take formal courses in the past year but did not. The main barriers to this learning activity were a lack of time (66%) and that the course was at an inconvenient time or place (59%). Simon gives an account of this problem:

> *I got into – I don't want to say rut, but I got into a situation where things were so busy, there was so much to do…I actually did schedule a course one time and it came up and I was like I can't go. I've just got too much stuff to do. And I don't want to go to a course and then work ten hours at night. That is when I was like I'm not signing up for any more courses.*

The sentiment that there is not enough space or time in the job to allow for engagement in formal courses was shared across the information technology interviewees. Fiona reported that she actually takes formal courses in order to force time and space into her job so that she can reflect and better apply her cumulative learning and experience:

> Fiona: *A lot of times the classes are more taking the time aside to think about how you are going to handle stuff. Especially the two I took last year. I mean I know how to solve a problem – it is giving me an alternate way to think about it and it is forcing me to sit down for two days or however long the class is and sort of try to apply a certain methodology to the situations I am in.*
>
> Interviewer: *So it is not teaching you something new, but it is giving you space to think about it in a different way?*
>
> Fiona: *Ya.*

Informal learning, on the other hand is by definition more integrated into the daily work routine. It is therefore seen as more applicable to specific job tasks and problems and is relied upon more heavily within hectic job schedules. Every interviewee commented on how formal courses were sometimes an important way to access a large piece of new information, but that their informal learning, "sitting down with a team member who has got the time and just going over a problem" (Haiyan), was much more accessible and relevant. As Susanna says, "I find that if it wasn't for the informal learning, I couldn't do [the job] much at all."

Though workers seem to be better able to engage in informal learning than formal learning, in each case they must still have a minimum level of space to restructure or re-weight their job tasks and priorities to allow for productive learning opportunities. The level of job control that workers hold is at the heart of their ability to engage their jobs and shape them to match their accumulated abilities, learning needs, and personal preferences. Human beings are goal directed and learning oriented: they engage in activity (often learning) to achieve

goals and solutions (see Leont'ev 1978). Within this framework, the changing requirements of modern jobs have many goals that need to be attained. As workers address these goals through learning activity they use various tools and are influenced by the community (i.e., peers, supervisors), the rules (i.e., social and organizational) and the division of labour (i.e., workplace structures) of their realm of activity. In this way, the level of control that workers have over their jobs will dictate how, when, and if they use certain tools and also how they interact with the people, norms and structures around them. "Control offers active engagement with the problem domain on which learning and solutions depend." (cited in Holman and Wall 2001)

Table 1 depicts the percentages of respondents from the WALL survey who are participating in learning activity by levels of job control. In each case, there is a statistically significant relationship between learning and job control such that higher levels of social and technical control are associated with more participation in formal courses, informal education and non-taught learning[4].

Table 1:
Percentage of Respondents Participating in Learning Activity by Job Control Variables

		Social Control			Technical Control		
		High (%)	Low (%)	χ^2	High (%)	Low (%)	χ^2
	Expected	46	54		58	42	
Formal courses	Actual	57	43	46.9**	71	29	38.1**
Informal ed.	Actual	56	44	84.7**	67	33	48.6**
Non-taught learning	Actual	50	49	108.3**	63	37	75.0**

** denotes statistical significance of $p<.001$

Interview comments from Katie and Chris, both workers with high levels of technical control and fair degrees of social control, enrich the above findings. In our initial interview, Katie explained that her technical expertise was being underutilized in her current job. In later correspondence, she clarified this point saying that after the interview she had maneuvered to change some of her job tasks:

> *I also reach outside my core job. I work on an open source project where I get to write code. Also, this new role [details omitted] should help with [perceived underutilization] too, as I plan to have some hands-on activities. My manager has been supportive of all these activities. A plus of this job is that there are many opportunities to do things outside the main scope of the job according to your interests.*

In this case, Katie's high technical control allowed her to accommodate ancillary projects with the duties of her core job. She is now able to better utilize her existing technical abilities and she has created space in her job to engage in additional learning in that area. With regard to social control, Katie was able to participate in the allocation of her own labour and make decisions about her job duties. The result is that she is exposed to a broader set of interesting challenges and interacts with more coworkers. Each of these will likely lead to increased learning opportunities.

Chris, a security specialist, regularly stated that the high level of task discretion and autonomy in his work was the prime reason why he could engage in the necessary learning to be effective at his job. He likened himself to a sleuth who often had to think like the bad guys and always had to be searching for new information and new methods. Regarding his informal learning he said, "It is more a matter of being able to impress my boss with being able to say you know this is coming out we should probably look into it. Where did that come from? Oh, you know, I was reading it in an article."

The WALL data and EJRM interviews confirm past research that indicates the importance of control to learning participation and the utilization of cognitive abilities. As illustrated by the interview comments from IT professionals, workers with more discretion over the planning and content of their work (technical control) and more authority to make decisions or influence organizational or work group decisions (social control) will have more opportunity to engage with their work, confront obstacles and develop potential solutions to those obstacles. Compared to workers who follow rigid work structures, high technical control workers have more opportunity to ask a colleague for assistance, spend some time on-line or with a resource guide, use trial and error, or reorganize the problem/task in order to reach their goals. High social control workers are exposed to a larger problem domain or scope of work and have more opportunity to interact with others, model behaviours and learn from their increased responsibility. They also have more opportunity to access learning resources tailored to their specific needs. It is with added control that workers can seek their own personalized and experience-based solutions to problems or glitches.

CONCLUSION

Talk of the knowledge economy, maintaining the currency of workers' knowledge and abilities, and competing on value-added is pervasive in our society. However, to truly encourage and support the human capital development of their workforces and benefit from the large amounts of learning that is currently taking place in their organizations, managers and employers must create environments that are conducive to the participation in and use of

learning. One step in this direction is to recognize that workers have the most up to date and intimate knowledge about the changing requirements of their jobs. Rooted in this recognition is the implication that job design should encourage real worker input and agency. In other words, workers must have enough social authority and technical task discretion to optimally engage in learning activities and maximally apply that learning. A related step is to encourage and support a full gamut of learning opportunities through the provision of funding, time within the work schedule and recognition in performance reviews.

NOTES

[1] Funding for the Changing Nature of Work and Lifelong Learning Research Network was provided by the Social Sciences and Humanities Research Council. See www.wallnetwork.ca.

[2] The work of the EJRM project was spearheaded by David Livingstone and made possible through a grant from the Social Sciences and Humanities Research Council.

[3] In this analysis self-employed individuals were coded as holding the highest level of social job control similar to the highest management levels in a firm (i.e., CEOs). It was reasoned that though the burden of ownership is different, the decision-making authority of a CEO is likely similar to self-employed individuals – particularly those with employees.

[4] The variable for social control is a combined measure of two survey questions: (1) participation in policy decisions (i.e., the services or products delivered, the allocation of work, budgets, hiring decisions), and (2) managerial or employer status. The variable for technical control is also made up of two survey questions: (1) the ability to plan or design some aspects of your own or other's work, and (2) choice in the way you do your job. 'High' control respondents reported levels that were one standard deviation above and below the mean value for the control variables while 'low' control respondents reported levels one standard deviation below the mean. The mean and standard deviation for social control are 4.85 and 2.74, respectively on a scale of 2-10. The mean and standard deviation for technical control are 7.64 and 2.06, respectively on a scale of 2-10. A Chi Square test was used to compare the cell frequencies that would be expected if there was no relationship between control and learning activity to the actual frequencies observed in this sample.

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