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Management Toolkit

How to fix IT skill shortages and misalignments

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The Theory of Constraints states that a system is only as fast as its slowest component. The concept has been applied to resources and processes for both manufacturing systems and service systems, but never — to my knowledge — has the concept been applied to skill-set resources.

That's rather strange. Our personal and business lives are filled with examples of skill shortages and misalignments. Certainly, in the information technology world we see it every day: outsourcing of specialised business and technical functions to vendors, offshoring to take advantage of lower labour costs, and the hiring of consultants to fill gaps in staffing and substantive knowledge. Skill-set resources are a primary variable in our ability to analyse a problem correctly, and to respond to its circumstances both appropriately, effectively, and efficiently.

Lifelong learning

In IT, where we are constantly faced with technological advances, lifelong learning, once a hobby for the intellectually inquisitive, is now a professional imperative. "Learn, or become irrelevant," has become the watchword of our age.

But the imperative of lifelong learning has rarely translated itself to the workplace, other than as a market-force goad to the individual who wishes to survive and perhaps even thrive in a highly competitive job market. And despite the obvious benefits to both society and the bottom line, government, corporate, academic, and labour institutions have been content to largely leave the issue alone, for reasons of budget, benign neglect, indifference and self-interest.

We see the results all around us. Everywhere, there are civil servants and employees who are so functionally specialised and so technically lacking that when a new operational or functional need arises that necessitates a shift in labour resources from one sector to another; it's less expensive to proceed with lay-offs and voluntary retirements than to consider internal retraining or re-deployment. We see an education system that focuses on the rationing of opportunity and competition of all against all, rather than the encouragement of effort and personal competition with self.

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Some may say that the advent and phenomenal growth of distance learning is evidence that a great deal of effort has been invested in lifelong learning already. But is that an accurate analysis? Twenty years ago, there was virtually no distance learning, not because there was no demand but rather because universities and colleges perceived their role as non-vocational. Training was confined to the physical classroom setting, and technical training was in the form of an academic degree.

The demand for technically-specific trained workers, however, exerted itself from the private sector. The market could not wait for engineers to graduate, they needed technical people now. The demand was great, and the vocational training sector filled this void, followed closely by local community college offerings, and more recently by mainstream colleges and universities. Distance learning has only become realistically possible with the emergence of significantly high popular access to the internet, high throughput bandwidths that were affordable to the mainstream consumer, and sophisticated switching and data configurations. All of these conditions are products of the dot com frenzy of the 1990s, and the aftermath of Y2K.

On the corporate level, certainly businesses recognise the need for specific skill-sets to meet organisational needs and future growth. Many companies train internally, and some even encourage skill-set training through educational grants or reimbursement. But only a few take a proactive approach. Developing skill-set growth is generally viewed as an employee benefit left to the sensibilities and desires of the individual. Specific training efforts initiated internally are almost always a reaction to some other event — for example: the purchase of a new software application.

Corporations and their governmental equivalents continue to categorise by job title and/or function, as opposed to defining a specific skill-set universe. And when corporations do define skill-set criteria in a job requirement, they almost always get it wrong. Skill-set requirements are generally just not fully understood, either by virtue of lack of experience, lack of accurate information, or shifting and changing functional and technological needs.

Eli Goldratt, the father of the Theory of Constraints, said: "Tell me how you will measure me and I will tell you how I will behave." Consider what would happen if workers were paid on the basis of their demonstrated skill-sets in specific knowledge areas, functional skills, and technological acumen, rather than their title and longevity within the organisation? As new skill-set needs became the standard, compensation could be phased-out. As new skills set needs were identified, compensation could be phased-in. What would be the likely outcomes of such an approach?

Labour unions, too, are bottlenecks to the process. The issue of collective bargaining has been decided, long-since. But while the needs of the job market have changed radically over the past 30 years, the approach to maintaining viable collective bargaining organisations has not kept pace with that change. Rather than fighting the change that is inevitable, labour unions should embrace it and capitalise on it.

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For example: in an age where certification of professional and technical skill-sets is an increasing requirement in the job market, why would unions not proactively enter the training market as they once did in the building trades, both as a preserver and overseer of skill-set quality, as well as a means of income generation for organised labour?

Here are my suggestions for fixing the problem of skill set constraints:

1. Increase emphasis on lifelong learning and personal competition with self

2. Pay workers on the basis of their demonstrated skill-sets — Civil servants and employees are so functionally specialised and so technically lacking that lay-offs and voluntary retirements are less expensive than internal retraining or re-deployment.

3. Labour unions should embrace and capitalise on change — The approach to maintaining viable collective bargaining organisations has not kept pace with radical changes in the job market. In an age where certification of professional and technical skill-sets is an increasing requirement in the job market, labour unions should proactively enter that market as a preserver and overseer of skill-set quality, as well as a means of income generation for organised labour.

Inefficiencies in skill-set distribution will continue to constrain our ability to react to external and internal change in an agile way. With the oncoming retirement of the baby-boomer generation, more and more skill-sets and institutional knowledge will be walking out the door in both the private and public sector. We need to understand this problem better, and we need to understand it better pretty quickly.