

Ignorance Management: The Lessons of Small Enterprises for Knowledge Management

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Abstract

Knowledge management as traditionally espoused has two main strands: dealing with the aggregation of knowledge and the transfer of knowledge. However this official discourse and its key concepts grew out of the experience of large, mature, highly structured and dispersed enterprises. Looking at the environment in which small enterprises work suggests a different set of key concepts, looking at the notions of experience and structural capital as key knowledge manipulation tools. These tools are particularly relevant to environments of high uncertainty, volatility and risk – and so also have a significant contribution to make to the direction of knowledge management for larger enterprises, where adaptiveness and ignorance management tools are becoming increasingly important.

Introduction

If we think about the environment within which small and medium enterprises work, it is one of pervasive risk. Much of this risk is derived from lack of access to knowledge that is relevant to their business and the decisions they need to take.¹ This is not due to poor knowledge management or business/competitive intelligence as traditionally conceived. For SMEs, while knowledge is a critical factor in failure or success, the affordability of, and access to, knowledge resources – whether embedded

in talent or systems, whether available in heads or knowledge banks – is always going to be far more limited than in the large enterprise. What knowledge there is within the firm is relatively easy to manage, by virtue of the enterprise's scale. The critical question is therefore, not the management of what is known, but how the firm manages what it does *not* know.

The inadequacy of the official discourse of knowledge management is apparent. The twin strands of that discourse are knowledge asset-management and collaboration enablement for the exchange or assetization of tacit knowledge. These twin strands may appear relevant to the needs of large, dispersed enterprises, but for the small enterprise tossed on the seas of ignorance and risk they are somewhat inconsequential. The small and medium enterprise certainly aspires to knowledge acquisition, but its environment moves too quickly for it to view this in terms of knowledge *management* as traditionally espoused – the driving issue, rather, is one of *smart* interaction with a hostile environment, *garnering* enough knowledge to make good decisions sufficient to the needs of the moment, and *disposing* a positive bias for the future. The notion of knowledge *assets*, central to the official discourse, is peripheral to most small enterprises, because the acquisition, storage and retrieval of knowledge presupposes (for most) a stability and a resource base they do not possess. Collaboration and knowledge-sharing for business activities both strategic and tactical is, by and large, a given. It is relatively easy to manage using the oldest of human social tools to be re-badged with the KM brand – conversations and meetings. The official concepts of KM assume, in short, resources, scale, organisational complexity and relative stability. The experience of the small enterprise is entirely alien to this: knowledge work here is by contrast a constant series of knowledge interactions with a hostile and

imperfectly understood environment, utilising impoverished knowledge processing capabilities.

The magnitude of the risk and some sense of the struggle are perfectly expressed by the prevalence of failure among small and medium enterprises. While it is difficult to get strictly comparable statistics on failure rates among small and medium enterprises globally, it's fairly safe to say that between 50% and 80% of enterprises will have failed by the five year mark (Storey and Cressy, 1995). The risk-averseness of the local culture as well as the economic environment can have an effect on this. In the United States, for example, where risk-avoidance is low and entrepreneurial vigour high, failure rates run at the higher end of the spectrum (Storey and Cressy, 1995). In the no less entrepreneurial but relatively high risk-avoidance culture of Singapore by contrast, failure rates are lower, at the 50% mark (Singapore Department of Statistics, 2001: 12-13).

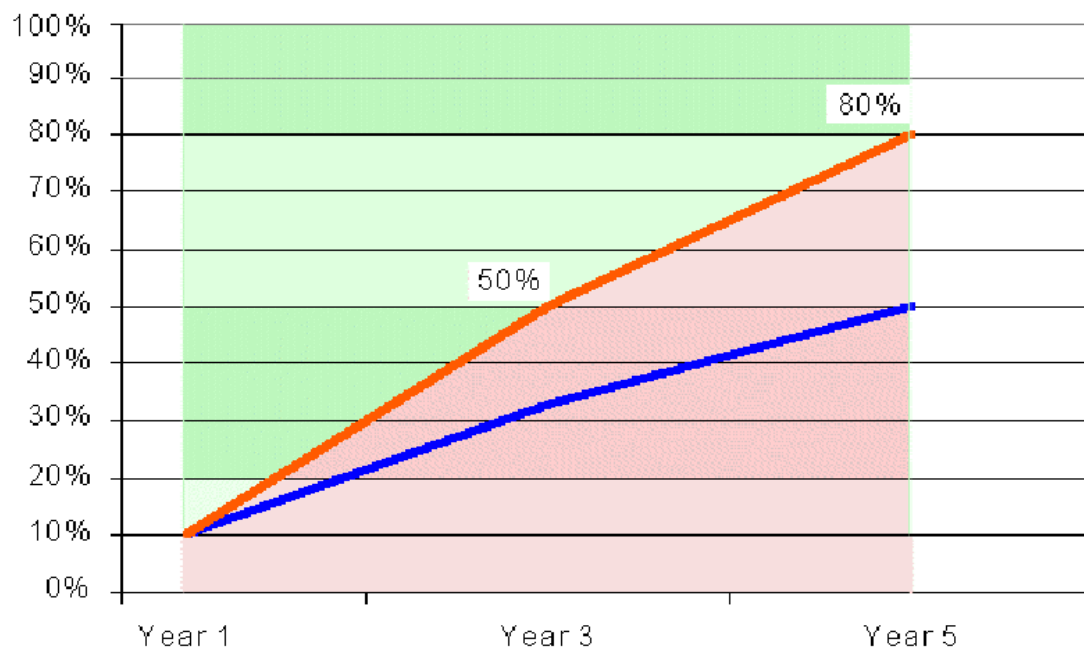


Figure 1: Failure rates of Small Businesses

Levels of risk averseness aside, the characteristics of small enterprise existence are universal. Levels of risk and uncertainty are much higher than for the large enterprise. Competition is more punishing. There is a constant struggle for access to knowledge and resources. Even where knowledge is possessed, the firm may not have the expertise or experience to use it appropriately or optimally.

SME Knowledge Challenges

SME knowledge challenges require a different set of concepts and principles from the official discourse of knowledge management. It is difficult to critique an official discourse from within, particularly one that has been so uncritically espoused.² Sometimes analogous situations give us sufficient distance to reconstitute an interpretive framework within which we can newly identify more useful core concepts.

Professor Birkett's report for the International Federation of Accountants on the strategic problems of SMEs recalls the analogy of small boats adrift on the ocean, at the mercy of wind and wave (Birkett, 2000: 9-10). The example of the early Portuguese navigators extends this analogy explicitly into an enterprise of knowledge. Between 1424 and 1460, the reclusive Prince Henry of Portugal sent an average of one expedition per year down the African coast, pushing back the boundaries of the European unknown, and requiring his navigators to return with new charts, observations and experimental results. Although he himself never travelled to the countries he so avidly explored by proxy, his obsession with Europe's ignorance and the riches to be acquired from the domain of ignorance, resulted not merely in

cartographic innovations, but new discoveries in maritime technology, ship design and sailing expertise (Prestage, 1933; Boorstin, 1983).

The analogy of war provides another frame for the interpretation of the SME's experience. Warfare, particularly offensive warfare, contains strands that when abstracted can be usefully applied to the SME. Since before the time of Sun Tzu, intelligence capability has been a critical success factor in warfare. Contrary to the asset-biased approach of much current business intelligence rhetoric, intelligence is not the simple possession of knowledge about terrain and enemy, because knowledge is static and warfare is dynamic and full of uncertainty. Intelligence properly means the capability to continuously derive meaningful knowledge about one's current and anticipated terrain and enemy, and the capability in using that knowledge to act appropriately in a way that will reduce risk and bias outcomes towards success.

In his classic series of essays *On War*, Carl von Clausewitz notices a second characteristic of warfare that strikes a chord with the experience of the SME: "Danger in War belongs to its friction." (von Clausewitz, 1908: 72). Friction itself is partially a function of intelligence, but also largely a function of uncertainty.

This difficulty of seeing things correctly, which is one of the greatest sources of friction in War, makes things appear quite different from what was expected. The impression of the senses is stronger than the force of the ideas resulting from methodical reflection, and this goes so far that no important undertaking was ever yet carried out without the Commander having to subdue

new doubts in himself at the time of commencing the execution of his work.

(von Clausewitz: 76)

Everything is very simple in War, but the simplest thing is difficult. These difficulties accumulate and produce a friction which no man can imagine exactly who has not seen War... So in War, through the influence of an infinity of petty circumstances, which cannot properly be described on paper, things disappoint us, and we fall short of the mark. A powerful iron will overcome this friction; it crushes the obstacles, but certainly the machine along with them... This enormous friction, which is not concentrated, as in mechanics, at a few points, is therefore everywhere brought into contact with chance, and thus incidents take place upon which it was impossible to calculate, their chief origin being chance. As an instance of one such chance the weather. Here the fog prevents the enemy from being discovered in time, a battery from firing at the right moment, a report from reaching the General; there the rain prevents a battalion from arriving at the right time, because instead of for three it had to march perhaps eight hours; the cavalry from charging effectively because it is stuck fast in heavy ground.(von Clausewitz: 77)

Von Clausewitz was a working soldier. He draws a strong distinction between the theoretical simplicity of the military machine, and the complexity and difficulty of operating in real environments.

Activity in War is movement in a resistant medium. Just as a man immersed in water is unable to perform with ease and regularity the most natural and simplest movement, that of walking, so in War, with ordinary powers, one cannot keep even the line of mediocrity. (von Clausewitz: 79)

Experience

The force of the environment, its uncertainties and its consequent risk provide rich parallels to the experience of the small enterprise. In particular, von Clausewitz's description allows us to unpack several useful concepts around the enterprise's knowledge activities in mitigating this risk. For example, it becomes clear that the acquisition of knowledge alone is not sufficient to mitigate vulnerability to the environment. It is also necessary to assess the relevance and significance of that knowledge, decide where knowledge is to be used or discarded, and to be able to act decisively under conditions of uncertainty in a way that at the very least does not increase risk, and at the very most maximises the advantages of the environment that have been perceived.

Von Clausewitz characterises this ability as *experience*, and here he also displays the practical soldier's contempt for the dangerous simplicities of theory.

Further, every War is rich in particular facts, while at the same time each is an unexplored sea, full of rocks which the General may have a suspicion of, but which he has never seen with his eye, and round which, moreover, he must steer in the night. If a contrary wind also springs up, that is, if any great accidental event declares itself adverse to him, then the most consummate

skill, presence of mind, and energy are required, whilst to those who only look on from a distance all seems to proceed with the utmost ease. The knowledge of this friction is a chief part of that so often talked of, experience in War, which is required in a good General. (von Clausewitz: 79)

If we can readily identify von Clausewitz's characterisation of friction in the experience of the small enterprise, we can also identify with his description of experience. For example, as the millennium turned, and as the later stages of dot com frenzy unravelled into chaos, the notion of experience as a critical success or failure factor became an explicit topic of discussion, as young, immoderate founder-CEOs painfully discovered the limitations that society, ignorance and the environment place upon sheer energy and will (Daniel, 2000). In 1998, Cranfield School of Management produced research findings that suggested that managers made more significant contributions to their organisations as they grew older. "Older senior managers emerge as more disciplined... more able to take a balanced view on issues before reaching a decision and more likely to evolve positive relationships with colleagues, subordinates and people from other internal departments and external agencies than their younger colleagues." (Korac-Kakabadse, Korac-Kakabadse and Myers, 1998). Three years earlier, McKinsey had pointed to the value of "high priests and old warriors" in resourcing the leadership capability of organisations (Hsieh and Barton, 1995).

Experience, and access to experience, are obsessively critical factors for small enterprises. Players in SMEs struggle constantly to build their own experience without making any fatal mistakes. They are keenly aware of their inability to compete for

talent with mature organisations. Only as the twentieth century drew to a close did two parallel factors – prior large scale downsizing in mature organisations and accelerating capital investment in new technology enterprises – suddenly but temporarily release new supplies of experience into the ambit of small-scale enterprise. As the entrepreneurial confidence tide turned, small businesses again struggle to acquire the right people experience in an environment that favours the large, mature enterprise.

Experience is a much more useful concept to play with than tacit knowledge from the point of view of ignorance management. Although the philosophical origins of tacit knowledge are hospitable to notions of expertise and experience, the positivistic regression of knowledge management theory has made it a somewhat reductionist concept, useful only for identifying that knowledge which can be extracted, exchanged or deployed for measurable value.

Compelling a higher level focus on the common sense notion of experience allows us to consider also the capacity and the practice of making sound judgements and decisions based on an enacted history. The recognition of that enacted history (and its successes or failures) also conveys attributes of authority to decisions and judgements, affects their believability in a social context, and therefore also affects the speed, depth and durability with which decisions can be implemented socially.

We can point to the specific characteristics of experience in a nuanced, sophisticated way that is outside the ambit of reductionist knowledge management theory. We can point, for example, to the resource bank of memories of environments and conditions

and events that resides in an experienced manager's head, and her ability to abstract, generalise and analogise very rapidly from those memories at an almost instinctual level, when facing new environments, new conditions and new events. We can point to the habits of observation, recall, imagination and communication that the experienced manager routinely practices to great effect. We can explore the ways in which problem situations are represented, structured and analysed by experienced managers in the course of approaching a solution or decision.

In short, exploring the concept of experience gives us much greater definition for exploring and usefully differentiating the subtleties of human knowledge work than does the simple tacit/explicit distinction espoused by knowledge management theory to date. In particular, we can begin to see how the practice and development of individual experience can positively or negatively influence the systematic work of the organisation.

Structural Capital

This brings us to a feature of small enterprise existence that von Clausewitz did not identify in his discussion of friction. If we look at the activities of the small enterprise from start-up to maturity, and if we exclude the niche enterprises that find equilibrium and cease to evolve, we can discern a series of transitions – it may be expansion into new market segments, new geographic markets, new product range or depth. All of these involve the acquisition of knowledge, talent and experience – whether in the form of new people or new learning.

At a more abstract level, however, the objective of the small enterprise in ensuring its future through *growth* is not merely about doing more business or making more money or acquiring greater prestige through greater size. Growth is a strategy that fundamentally addresses the issue of dangerous and uncertain environments, through the acquisition of greater influence over the environment within which the enterprise operates. If we marry this idea with Karl Weick's concept of the *enacted environment* of a social organisation, we suddenly have an insight into the great importance of *structural capital* in ensuring the survival and prosperity of an enterprise (Weick, 1979: 131-2).

As soon as a start-up is formed, the process of building structure and predictability into the internal operations of the business must commence. It is only through such structure and predictability in its internal environment that the enterprise can leverage the value of its talent and experience against the uncertainties of its external environment.

Interestingly, structure is not simply about avoiding untidiness or ensuring repeatability in value creation, nor is it particularly an internally focussed function in its ultimate intent. *Structure is, rather, a strategy aimed at reducing risk by enacting an environment that is controllable and systematic.* As the enterprise grows, so the structure grows, and its aim continues to be the mitigation of uncertainty and risk from the external environment. Bureaucracies are all about congealing the experience and learning of an organisation in relation to its environment, predicting critical risk factors and evading them, and about leveraging limited talent and knowledge to best, repeatable effect.

Structural capital is therefore a critical knowledge component in the survival and prosperity of an enterprise. The enterprise builds its structural capital by congealing the “soft” observations and experience of its talent into processes, rules, habits and cultures. Small enterprises, in contrast to large enterprises, must practice extreme flexibility in the building and the maintenance of their structural capital. Small changes in their environment can mean significant changes in their processes, habits and cultures. Large enterprises, by contrast, possess larger enacted environments, and having apparent control of more predictable, controllable environments, they sense risk and danger less acutely. *Hence they are disposed towards regarding their structural capital more as a productive resource to be defended, than as a protective resource to be continually adapted.*

If the dilemma of the small enterprise is that of how to acquire the right experience to make good decisions and build protective structural capital, then the dilemma faced by large enterprises is of how to use their experience to adapt ossified structures that are no longer well-adapted to a more volatile external environment. Small enterprises are advantageously disposed to adjust their structural capital and evade risk from the external environment, but they lack access to good reservoirs of experience. Large enterprises possess large reservoirs of experience, but tend to lack the ability to engage with their structural capital and make it more responsive to rapidly changing environments.

Their enacted environments, precisely through the philosophy of controllable knowledge assets, impede the visibility of uncertain and risky conditions. The

consequence is powerful organisations in their prime that suddenly fail to adjust to rapid changes in their markets and fail to engage productively with those changes – Encyclopaedia Britannica, Sears, IBM, Digital Equipment, Wang, JP Morgan, to name but a few.³ Entrenched structures impede the visibility of external risk, prevent recognition of significant opportunity, and isolate the perceptions, intuition and experience of managers from the possibility of action. Hence the experience of managers does not impinge on entrenched structures, or adapt them effectively to leverage off opportunity and protect from risk. Large enterprises achieve this exalted state largely by qualifying who can change rules and structures, limiting that authority only to a small number of specialists and leaders. In some cases, organisational culture acquires implicit authority over its own structures, limiting the capacity even of leadership to adapt or authorise adaptation.⁴

Ignorance Management

If we want to summarise the implications of the experience of the small enterprise for knowledge management then it must be an alchemical explanation. In looking at the small enterprise, we see that the challenge is less about what knowledge assets are possessed and how they are deployed. It is more about how the enterprise can perform the alchemy of rapid learning in environments of high ignorance and uncertainty, so that value-producing decisions are made to deal with fleeting risk and opportunity factors, and so that durable risk and opportunity factors are embedded into structures. This alchemy involves process creation as well as process audit and adaptation skills.

The more that large enterprises are exposed to volatile business environments, the more the ability to manage ignorance in this way becomes relevant, and the less useful

becomes the positivistic approach towards knowledge as an asset. Sometimes large enterprises under conditions of extreme stress recognise this implicitly, by fragmenting and creating suddenly diverse, federalist collections of internal identities, cultures and prevailing structures, more or less adapted to the circumstances each particular unit faces. Smarter enterprises – like GE and Motorola – recognise the key ignorance management advantages any successful business must have if it is to prosper in an uncertain environment:

1. the ability to discern both risk and opportunity beyond the enacted environment of the firm
2. the capacity to acquire and develop the human experience that can turn perceptions into judgement and decisions
3. the capability to turn enduring environmental factors into enduring structures and value-creating processes
4. adaptive sensitivity of structural capital to the external environment, and avoidance of undue investment in existing structures by the “soft” cultures of the organisation.

Conclusion

Very little of this discussion is captured by the official discourse of knowledge management. A recognition of the agenda posed by ignorance management sets out issues that we need to explore more closely – indeed, issues that are now becoming problematic for knowledge management theorists. These include issues of the relationship of organisational culture to structural capital; how organisations diffuse learning, change and innovation; how organisations adapt to risk and how they recognise it; how cultural interventions can be structured and *designed* for optimal

effect; how the notion of experience can be defined, measured and managed to create value; how individuals and their interpretations of uncertainty acquire the authority that turns judgements into value-creating processes within an enterprise.

To date, knowledge management has provided an impoverished, simplistic account of how the enterprise can successfully interact with its environment. Its failures can be discerned in the difficulty it has in dealing with organisational culture, learning and diffusion of knowledge, the interface between learning and structure. The experience of the small enterprise displays the limitations of knowledge management at its most extreme, because it points up the complete failure of the asset-based approach to give a useful account in a knowledge-depleted environment. In conditions of uncertainty, organisations must manage what they do not know. It is time that knowledge management took up the challenges posed by ignorance. That probably means taking its eyes off the intangible assets register and focusing again on competency, skill, learning and decision-making capabilities, and process creation and adaptation. There is a lot of work to be done.

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Endnotes

¹ "... many SMEs are likely to drift into the future, impelled by their enthusiasms but at the mercy of circumstance and their own blindspots. Second, many SMEs are likely to lack ready sources of advice on financing and strategic issues, and the sources of advice that are available may be seen as uninformed about the substance of their enterprise – about the nature of the services that can be offered and the capabilities that can be mobilized... Moreover, both the future and an enterprise's present situation may be well or imperfectly understood. Deficiencies in such understanding open up an enterprise's future to chance, while enhanced understanding is likely to provide a firmer grounding for future directions. Better understanding of the future and an enterprise's situation cannot guarantee success, but it is likely to limit misdirection and unforeseen or unnecessary failure." (Birkett, 2000: 9-10)

² For a critique of the cultural bias inherent in conceptualisations of the knowledge based enterprise, see Jacques, 1996.

³ For a useful discussion of the resistance of mature structures to change from the slightly different perspective of innovation, see Christensen, 1997.

⁴ In late 1998, Dirk Jager was appointed new CEO of Procter and Gamble. He immediately proclaimed a cultural offensive, promoting innovation, change and rule-breaking to replace the almost militaristic systems of conformity that had made the company great but inflexible. *Fortune Magazine* loved it. "Jager is here to deliver Procter & Gamble a serious kick in the pants" announced Katrina Brooker in a feature article. "In some ways P&G's success has been its undoing. Because its brands have been so dominant for so long, the company's culture acquired a pervasive, slavish adherence to precedent. P&G has kept going by simply repeating the same formula over and over." (Brooker, 1999: 148) Eighteen months later, Jager was sacked. Procter and Gamble had floundered under his leadership. P&G culture had chewed him up and spat him out (Blair, 2000).

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