Human Capability Development:

Blending human resource development and knowledge capital to forge sustainable competitive advantage

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with

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Preface

We hear all too often today that the future of an organisation lies in its people. But stating this premise and actually appreciating the profound social and value implications this statement holds is often overlooked. The statement holds the implicit understanding that success for an organisation lies in extending their focus beyond what people can do (perform) to encompass what people may contribute (potential) to the future competitiveness of an the organisation. Translating this into reality therefore requires effort beyond just training and developing people to perform as human resources.

One of the most strategic roles of Human Resources directors is development of organisational capability for the future; that is, building true sustainable competitive advantage through people. As the 'war for talent' escalates within a global context, organisations must know how to attract, retain and develop their share of future capability in the form of human capital.

This book suggests how to use Human Resource Development (HRD) and Knowledge Management (KM) as the two key platforms of organisational capability. Human resource development is a vital tool to assist organisations to develop their employees, deliver business outcomes, and achieve competitive advantage. Knowledge management is critical in not only developing organisational capabilities, but also measuring and valuing the sustainable nature of these capabilities.

Converging both human resource development and knowledge management to focus on Human Capability Development (HCD) provides a unique insight into not only how to build human capabilities, but also the capital value such activities can generate for an organisation. HRD and knowledge management can provide sustainable competitive advantage when the cohesive power of both the organisation's culture and leadership is harnessed to drive engagement. Application of the resultant organisational capability produces organisational performance that can be measured in bottom-line results.

The identification and application of human capital allows its value to be quantified within the organisation's market value. The potential of human capital is similarly reflected in the

organisation's potential market value. Through this convergence of HRD and knowledge management, Human Capability Development produces more than the basic capital value associated with activities focused on individual capabilities; it, extends far beyond training and development to effect change.

Knowledge capital encompasses the stock of capabilities available in three 'pools' comprising human capital, structural capital and social capital. A 'full-range' approach to effective Human Capability Development utilises these three dimensions. This full-range approach reshapes how human resource development interventions are structured and outcomes are planned and measured. It also simplifies complex theory in an applied context.

This book is designed to assist practitioners and those seeking to better understand and utilise human resource development and knowledge management within a corporate context. It is intended for:

- leaders seeking to:
    - optimise the roles of human resource development and knowledge management,
    - understand how the organisation's leadership and culture impact upon capability and knowledge capital value,
    - develop human resource strategies to underpin sustainable competitive advantage,
    - integrate learning, engagement and performance; and
    - build organisational capability;
- leaders and educational professionals seeking to develop human resource development initiatives to support the longer-term achievement of business strategy; and
- knowledge management practitioners seeking to extend knowledge use beyond technology to encompass human and cultural dimensions.

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Introduction

Congratulations: we have finally succeeded! Professionals working in the Human Resources field have finally convinced business leaders and economists that people are central to business success and vital to the achievement of competitive advantage. Many readers may not be comfortable with terms such a 'human resources' and 'human capital', but for once the study of personnel management and development in the organisation has challenged mainstream 'C'-level executives[1] to consider people as both an investment and as a core asset of an organisation. Managing this investment as an asset has forever removed the blinkered view that the management of people development is a sideline activity of indirect organisational benefit.

Most company annual reports now lead with a section on the company's people. Many organisations' websites pay tribute to or boast about the importance of its people, and about what the organisation is doing to support and develop people. Numerous publications, consultants and books provide guidance on and solutions to achieving organisational success through people. Employee and climate surveys, and other tools such as balanced scorecards have become keys to measure and value the human contribution to an organisation.

Capability and employee engagement are refinements of the more general attributes considered desirable or essential in the past. It is difficult today to navigate the plethora of literature that purports to advise organisations on how to lead, manage change, develop their employees and focus on organisational culture. While many organisations have implemented the programs proposed, it is difficult to directly link these with the bottom line.

A multi-level problem exists: how do we work with our people to ensure business success, and how do we quantify the relationship to ensure that all are delivering on the investment? In a broader context—how do we implement our people programs in a manner that delivers

sustainable competitive advantage? What if we put a huge effort into developing our people and we lose them to an intensely competitive market? There is a talent war in the current employment environment, and Generation X and Y individuals are not as loyal to organisations as earlier generations of employees have been: we may struggle to keep them. How do we retain our competitive advantage?

This book explores some of the essential issues for today's organisations.

- People are critical elements of competitive advantage.
  - How is their contribution determined and measured?
  - How can we build this competitive advantage?
  - How can we quantify the outcomes?
  - What is the role of human resource development in the twenty-first century?
- Sustainable competitive advantage through people is the ultimate goal.
  - How can we build sustainable competitive advantage?
  - How can we quantify the outcomes?
  - What is the role of knowledge management in the twenty-first century?
- There are a number of solutions.
  - Alignment of the various programs proposed with individual corporate goals.
  - Integration of existing programs to reinforce and support the new programs.

Our approach

This book will examine Human Resource Development and management of knowledge, particularly with regards to Knowledge Capital, as two strategic domains that have evolved separately. Nevertheless both fields are converging. At the point of convergence the fields both deal with human aspects within an organisational context that relate to the complex interactions surrounding how we can develop people to achieve and sustain an organisation's future competitive advantage.

[1] CEO – Chief Executive Officer, COO – Chief Operational Officer, CFO – Chief Financial Officer, and

Our approach shows how sustainable competitive advantage can be achieved through the combination of human resource development and knowledge management by identifying the importance of capability, engagement, and culture, creating a link between them, and demonstrating how to use them to deliver bottom-line benefits.

Our approach will be termed Human Capability Development (HCD).

HCD recognises knowledge held by individuals or by the organisation has a capital value that can be managed, evaluated and manipulated. Knowledge has been variously described as contributing to what we will call 'pools' of capital value. These 'pools' are described below:

- Human Capital intrinsic to leadership (the ability for people to create of a vision and lead others to achieve this outcome) and competency (the skills and knowledge required to attain a standard of performance at a given level of employment)
- Structural Capability, intrinsic to the knowledge assets that represent the systems, processes and structures able to bring achieve employee engagement (orientation of individual to collective ends) and design-in work practices (the design of work and jobs to maximise operational outcomes and responsiveness)
- Social Capital, intrinsic to networks and relationships, covers both absorption (the ability to acquire and hold new knowledge) and agility (the ability to deploy knowledge to new opportunities or contingencies)

Sustainable competitive advantage can be derived from the integration and alignment of knowledge capital with human resource development ie our Human Capability Development Reference Model, shown below.

such like.

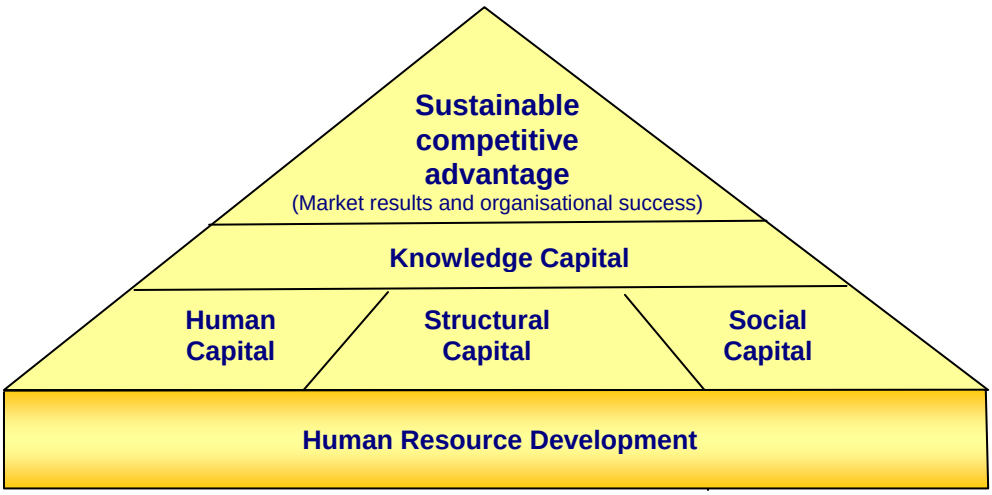

Figure 1 Human Capability development reference model

Human Capital Management

Initial thought has been that the convergence of HRD and KM occurs at the point where the capital value of humans, as assets of the organisation, is evidenced through job performance. This convergence has been encapsulated in the emerging discipline of Human Capital Management (HCM). Human Capability Development is not the same as Human Capital Management. The aim of this book is to overcome the confusion confronting the development of people at an applied or operational level and the narrow strategic focus occurring when taking a HCM lens that sees people as capital assets that mainly have a value only realised through job performance and productivity that contributes to business outcomes.

The HCM view is not necessarily incorrect, it is just narrow. It all to often assumes human capital is the result of some linear relationship between learning, performance or service excellence, knowledge management and the management of human resources (Bowles, 2004:Ch5). But none of these components have a bounded relationship, all exist independently and have different ways to be deployed in an organisation.

Debate on HCM highlights differences between academic and business practitioners' use of key terms in the fields of knowledge, human resources and the surrounding and related practices. A core reason for writing this book is to overcome the division of thought and practice engendered by this debate.

The authors' experiences span both the academic and business fields, and both are applied practitioners with backgrounds consulting with and working within corporations. Through their joint experience in the field they have developed a frame of reference for Human Capability Development that relates it to the practical needs of business; the delivery requirements of HRD professionals; and the theoretical concepts and constructs of academics.

This book is an effort to ensure that the classic academic models that influence current practice are examined as part of a wider, more holistic canvas. The text is neither a 'how to do it manual' nor an academic treatise aimed at proving or disproving other models. Rather it seeks to highlight the convergence of the knowledge, human resource development and human capital fields of practice. It explores these fields and invites further study and analysis.

We show how HRD can be implemented as a transformational practice that encompasses knowledge and human capital management in what we have termed human capability development (HCD).

Three areas of debate in the evolving field of HCD stimulated the development of this convergence of thought and practice:

1. Transactional versus transformational HRD—whereby it is argued that the development of human resources needs to extend beyond improving performance for pay (transactional HRD), to develop the cultural and identity attributes that engage the knowledge and experience innate to the individual (transformational HRD).
2. Competency versus capability—whereby the development of an individual's competencies and qualifications involve more than upskilling an individual to perform better within a job.
3. Current productive capacity (CPC) versus potential productive capacity (PPC)—whereby the development of market value and sustainable competitive advantage is argued to involve strategies that develop deep capabilities (for example capabilities that span and affect all aspects of the businesses' operation; i.e. increasing individual commitment and

organisational responsiveness) beyond the human capital domain of knowledge and include the structural capital and social capital domains of knowledge capital.

Each of the three points above involve some complex aspects and issues. They will be explored in detail in the following chapters.

The core components to our study are depicted below in Figure 2 below. Where HRD is Human Resource Development; KC is Knowledge Capital; PPC is Potential Productive Capacity and CPC is Current Productive Capacity. HRD and KC interact as the fields of academic and professional endeavour. CPC and PPC are the dimensions depicting application of HRD and KC instances to achieve outcomes at a point in time; current or future.

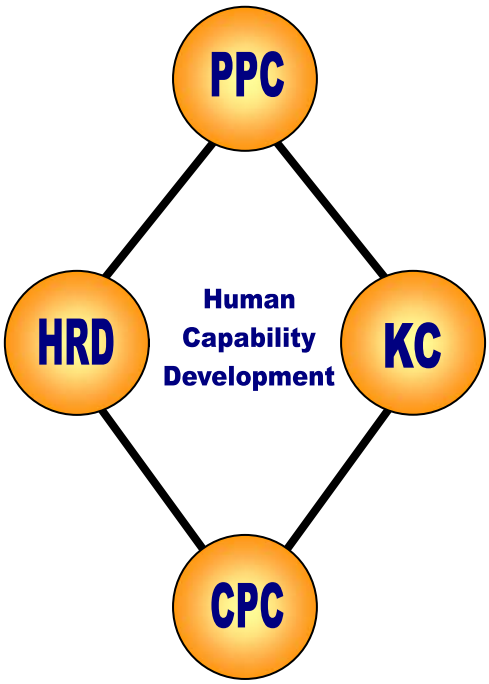

Figure 2 Components to the study of Human Capability Development

To progress our examination of these dimensions the first part of our study will establish a theoretically grounded while practical view on, firstly HRD and then on knowledge management (KM) as a component to our study of KC. The ensuing chapter four will then establish a model for where HRD and KM converge, or what is herein is termed Human

Capability Development. This will end Part I. Part II will then move to an in depth examination of HCD across all its core dimensions.

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Part I Human Resource Development and Knowledge Capital

Revisiting Human Resource Development

Introduction

The challenges confronting managers and personnel dealing with human capital in organisations have escalated dramatically in the twenty-first century. External changes such as globalisation; aging of the workforce and tightening of the labour market as well as internal changes as a result of changes in management processes, bureaucratic regulations, available knowledge, modes of training delivery, and employees' expectations are all having a significant impact.

The term human resource development (HRD) indicates a process orientation towards identifying, organising, transferring and developing skills and knowledge required by an organisation of its constituents to achieve productive outcomes. However, since the late 1990s, the demand placed on HRD professionals has shifted well beyond this narrow scope.

HRD focuses on developing people in a workplace setting to achieve business outcomes. It is not a new discipline. It has been a subject of study since the early 1900s as scientific management theory, and was applied with varying degrees of fervour as part of the organisational behavioural approaches to management in the 1960s.

HRD's role as a strategic function within an organisation has increasingly come under the spotlight, especially in terms of the development of human capital (HC) and of its relationship with knowledge management (KM) and knowledge capital (KC). Mounting research suggests that it is impracticable to develop capabilities and competitive advantage within a global business environment without systematically managing organisational knowledge and learning. The contemporary problem for HRD specialists is to achieve a balance between traditional

process-driven human resources activities, and outcomes based on growing an organisation's knowledge capital.

Perspectives on human resource development

Many enterprises view their competitiveness in terms of the global marketplace. Success may be locally achieved, but local markets and long-term success are strongly influenced by events occurring globally. Both large and small corporations recognise that optimal performance and success require that their workforces possess the capabilities to meet all the strategic challenges present at both local and global marketplace levels. Also important in the pursuit of long-term success is positioning their organisation for the future and for sustainable competitive advantage.

For organisations to develop these capabilities and to ensure their future success, a balance must be struck between three approaches to HRD:

1. Structural-functionalist HRD focuses on job design, the development of skills or competencies of individuals within the organisation, and a needs analysis that integrates these activities into a coherent and purposeful process.

2. Strategic HRD has been used to assist organisations to cope with complexity and organisational change, while increasing the organisation's ability to develop products and services to clients' needs.

3. Holistic HRD that further extends strategic activities and includes the management of knowledge.

Structural-functionalist HRD

The structural-functionalist approach to human resource development suggests that the operational efficiency of the organisation drives both the design of the organisation and work, as well as the skilling of people to fill positions.

HRD programs in the past were implemented through a structural-functionalist mindset. In order to support operational management, skills training became the central focus: a process-driven approach. Improving processes to achieve enterprise goals and objectives added a strategic dimension to this form of HRD.

Process-driven or functional skills training programs focus on operational issues. Their design may not encompass a strategic perspective on the development requirements of both the individual and the organisation.

Organising HRD along structural-functional lines limits the organisation's ability to adapt to changes that impact upon specific job contexts (for instance re-skilling customer service operators in a call centre to adopt new telephony systems). Non-strategic approaches to HRD stress job competencies that are core to or generic to occupations across all levels within an industry (for instance national strategies seeking to address management deficiencies at the frontline or team leader level). Even organisationally-specific job competencies may be too broad to provide the required responsiveness to change. Therefore, those promoting strategic HRD argue that a more comprehensive and organisationally-focused approach must be adopted.

The strategic or outcomes-based approach

Strategic HRD, as the name suggests, is linked to the strategic outcomes of the organisation. HRD becomes more outcomes-focused, integrating organisational learning principles rather than individual functional skills and competencies. Strategic HRD moves beyond the specific competencies of individuals to also identify and manage the capabilities required at group and organisational level to achieve competitive advantage. Advocates of strategic HRD argue that competent individuals cannot be delivered without developing a broader model for interpreting and managing the impact of learning on the organisation, individuals and teams (Harrison & Kessels, 2004: 35–36).

Holistic HRD

For some HRD practitioners and those concerned with the development of human capital, strategic activities extend further to the management of knowledge. This includes the development of enterprise capabilities to better equip an organisation to compete in an environment marked by rapid change, global competition and complexity. This is a far more holistic vision for HRD and positions HRD as underpinning both process improvement and strategic capabilities. This book goes further still and relates this holistic, strategic view of HRD to knowledge management and the development of knowledge capital (KC).

The origins of human resource development

The Role of HRD

Historically, the most widely-practiced components of human resource development were education and training; however, there are other activities concerned with and essential to employee and organisational development. As well as skills acquisition—through training and development—HRD encompasses activities within the larger field of Human Resource Management (HRM).

The benefits of HRD gained recognition in the last 20 years of the twentieth century as some well-known principles and disciplines were repositioned on the agendas of managers and academics.

Human resource development as an applied field grew proportionally as management researchers and authors intensified the focus on the value of developing personnel. The discipline and practice of HRD was, at its most fundamental level, concerned with activities associated with the development of human resources (people) to enable organisational management to achieve business outcomes.

The role and nature of HRD has been defined and redefined through its relationship with new theories of management and learning and their implementation in organisations across the globe. This has caused the components of HRD to be questioned at each new evolution.

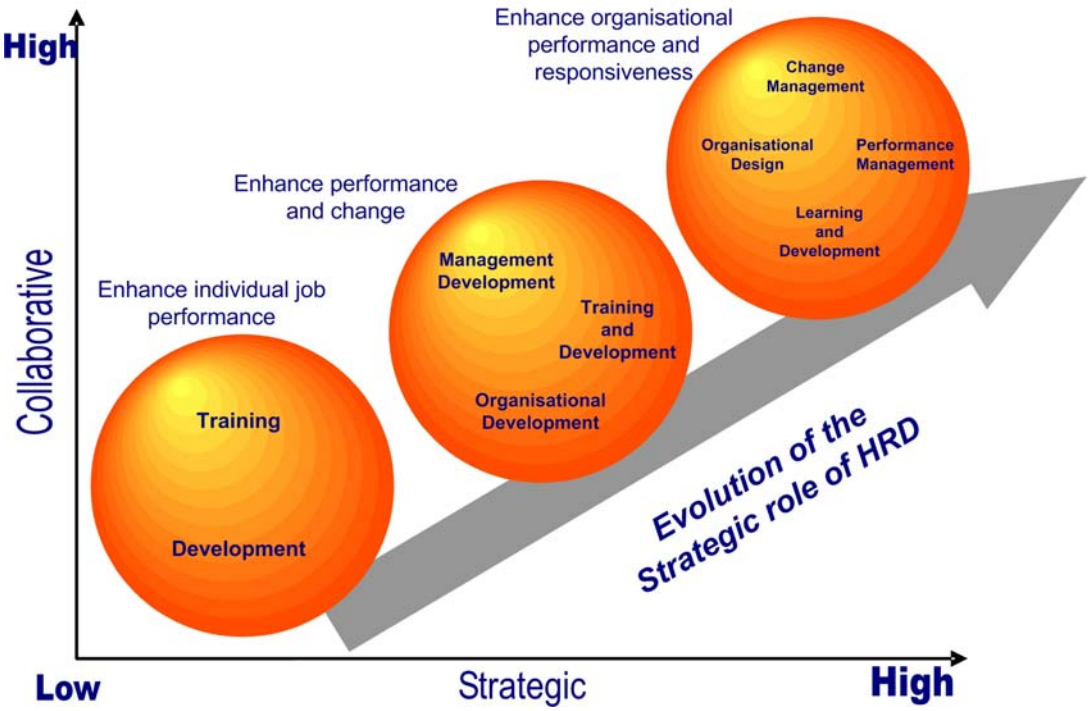

Figure 3 **Evolution of the role of HRD**

The Components of HRD

As the recommended role of HRD shifted, so too did the debate over what constituted HRD. This was derived from its relation to other activities. During the 1990s, HRD sat in a turbulent sea of terms, theories and practices surrounding change management, organisational design and development, career planning and development, and remuneration and reward systems.

A model of HRD as part of a wider human resources management (HRM) setting depicting all the constituent components was proposed in the 1990s by Patricia McLagan (1990:53). McLagan's model was still promulgated by the American Society for Training & Development in 1998 to define human resource development and training (ASTD www.astd.org/training/definehr/definehr.htm). This basis for examining HRD within a 'holistic' model is greatly influenced thinking through the first decade of the twenty-first century.

The so-called *McLagan's HRD Wheel* placed activities around a circle that evolved from the most HRD focussed to those centred on HRM. As such the circle evolved from training and development, to organisational development, career development, human resource planning, performance management, selection and staffing, compensation and benefits, union-labour

relations to HR research and information systems (1990:53). Logically training and development activities were the most centred on HRD and after organisational design the activities tapered away from HRD to HRM, ultimately ending with the most HR centric activities relating to HR research and information systems.

The *McLagan HRD Wheel* presupposes the activities remain distinct in both application and impact. As depicted in Figure 3 above the role of HRD has become more complex and interfaces between the activities depicted on the the *McLagan HRD Wheel* become much harder to delineate. Nevertheless, as HRD is expected to play a more strategic role it clearly has to encompass relationships and activities that once we more HRM in focus and no longer only centre on training and developing individuals for job performance.

HRD and knowledge management

A twenty-first century definition of human resource development needs to encompass the development of relevant learning to enhance individual performance, as well as consideration of how that learning is retained and transferred in the changing world of work. This increasingly occurs where HRD is implemented with knowledge management and forms part of an overall contribution to the sustainable (long-term) strategic success of the business.

Changes to how people work, the relationships between jobs, and the development of capable employees all fall within the jurisdiction of an HRD practitioner (see Figure 4). HRD practice has to embrace these activities while recognising that they continually change.

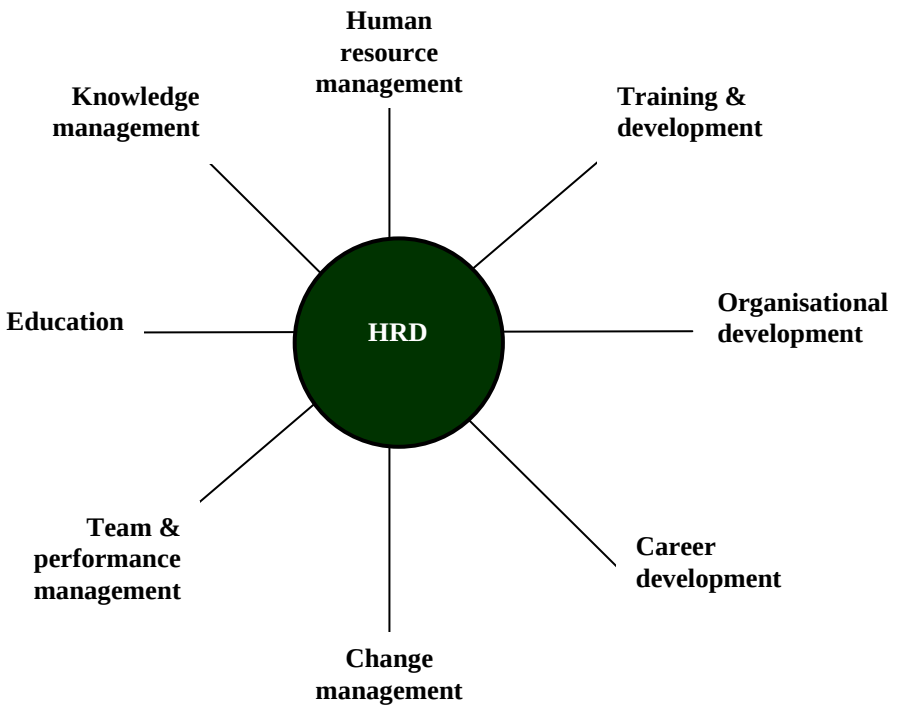

Figure 4 Strategic HRD: Intersection for many organistional activities

HRD's defining parameters and relationship with other enterprise activities must be acknowledged and HRD is therefore defined in this book as follows:

> HRD in the New Economy requires a systematic approach to the enhancement of human capital through development of capabilities within and across individuals, teams, the organisation, and external relationships.

Following from this definition business system design must acknowledge that ultimate success depends on how individuals in the organisation work within the business systems. Business direction can be determined, customers can be identified and nurtured, and strategic frameworks implemented to meet changing imperatives, but it is ultimately people who work to achieve business success.

HRD plans and activities occurring in isolation from strategic frameworks, and from each other, reduce the likelihood of resulting HRD activities contributing to business outcomes. Integrating HRD into the strategic fabric of an organisation is essential in achieving sustainable business success. This integration requires:

- HRD to be aligned with business planning and measurement systems;
- HRD activities to be integrated to reinforce each other and drive desired outcomes

- genuine efforts by management to evaluate business activities;
- HRD to be undertaken proactively, not simply implemented as an internal solution to wider problems residing with existing management systems, process design or management practices; or undertaken to solve issues arising from major change imperatives such as:
    - downsizing or restructuring;
    - skill shortages imposed by changes to technology, resource allocation, market needs, customer preferences, etc.
    - poor results from employee engagement surveys—a major change imperative;
    - cultural barriers to change; and
    - introduction of new management approaches (e.g. quality, reengineering, etc.).
    - HRD to be seen to provide improvement of organisational and individual performance, not only training and development.

Ideally, HRD is not a token solution to problems arising from people-related changes in an enterprise. HRD should be viewed as a strategic tool, not a set of diagnostic or remedial procedures.

The transactional and transformational view of HRD

Global changes constantly impact upon the management of organisations in the Knowledge Age or so-called New Economy. Accordingly, HRD continues to evolve. This evolution is most demarked by the move from functions and individual contributions to operational outcomes to be a strategic contributor to an organisation's future success.

HRD activities must now incorporate the management of knowledge (until this is explored more fully in the next chapter let us limit this definition for now to the tangible and intangible attributes held by an individual, a team or the organisation that can value-add to performance), or what will be developed into **organisational capabilities** (the core attributes that underpin an organisation's unique competitive advantage). This management of knowledge lays important foundations for how well and how quickly companies can translate learning into outcomes.

The **transactional** view of HRD is based on the central principle that people are paid to contribute their skills and knowledge in performances that will deliver the desired organisational

outcomes. From this perspective, the emphasis is on the management of processes and activities that result in optimising the current productive capacity (CCP) of each individual. In stressing the benefits derived from delivering current outcomes, transactional HRD is generally tied to the wider human resources outcomes relating to improved job performance, process efficiencies and overall cost reduction through the efficiencies resulting from HR interventions.

Fundamentally, **transformational** HRD recognises that individuals have innate attributes containing types of knowledge that cannot be owned by the organisation but nevertheless can be captured and utilised by the organisation. To achieve this, development of each individual's productive capacity must recognise that the human capital, and therefore knowledge 'capital', may reside in not only the skills and knowledge necessary to perform in a job, but also in the engagement that emerges when a shared identity is forged between the organisation and the individual. The difference can be starkly described. For instance the difference between completing tasks to perform in a job, as compared with an employee that is committed to working in a company to achieve outcomes that satisfy their customers.

Table 1 Comparison of transactional and transformational HRD

Transactional HRD	Transformational HRD
Supports current job performance	Based on mutual development of capabilities and talent
Relies on human relations	Realises human potential
Is preoccupied with processes and products and services	Is preoccupied with purposes and values, and meaning
Centres on the job	Centres on the person
Has factors of production owned by the organisation	Has knowledge harnessed by the organisation owned by the individual
Is short-term oriented	Is oriented towards long-term goals
Is about reducing the cost of production and HRD activities	Is an investment in assets that hold value
Has jobs designed for people to populate	Has jobs designed to accommodate capabilities required to deliver organisational outcomes
Has static and efficiency-focused structures and systems	Structures and relationships are dynamic and value-focused.

The HRD practitioner must broaden their perspective from the transactional view of pay-for-performance or a 'conscript' view of the worker, to include a transformational view of the

employee as a volunteer or contributor to organisational success operating from a broader motivation than just being paid for applying their skills and knowledge.

Transformational HRD extends from transactional HRD to embrace the potential productive capacity (PPC) a workforce can deliver to sustain an organisation's competitive advantage. The transformational HRD approach moves the development of human capital beyond merely training people to fill positions or achieve process efficiencies, to addressing the creation and harnessing of HC assets for current and future outcomes that hold value for the individual and the organisation. The functions of transactional and transformational HRD are shown in Table 1 above.

To achieve performance improvement as well as sustainable development of potential and talent, HRD must encompass both the transactional and the transformational approaches. This can be termed a full-range HRD approach (after Bass & Avolio, 1990; Avolio & Bass, 2002).

Focus on transformational HRD

This chapter emphasises that HRD has to evolve to move beyond a focus on train gand development and organisational development relating to everyday, job related transaction, or routine explicit activities. Transformational HRD requires a focus beyond job performance. Organisations compete on knowledge that extends beyond the skills and knowledge required to produce goods and services. This does not devalue the importance of such skills and knowledge, it is a recognition organisations also need to develop capabilities relating to other strategic imperatives.

Human resource development has to improve both tangible (i.e. routine skills for machine operation) and intangible (i.e. tacit values or a workgroup) forms of knowledge, in all its forms. It must also encompass areas where embedded, tacit knowledge may reside, that is, knowledge which is not held by individuals per se, but expressed through their relationships and mindsets.

A distinctive trend in HRD in light of knowledge management is advancing the development of human capital. Development of human capital benefits not only the individual who is vested with the knowledge, but also the organisation.

The field and the discipline of HRD study is constantly evolving and adapting its raison d'être. A contemporary and accurate definition is a work in progress. HRD's existence is based on its ability to address root issues that assist the organisation build sustainable competitive advantage. These issues are themselves changing.

HRD has evolved a new significance as the management of human resources and knowledge (HRM and KM) expands in new directions to support how organisations compete in the New Economy.

The next chapter will focus on how organisations develop and manage knowledge capital. This will entail shifting HRD practices from a transactional to a transformational paradigm.

An HRD approach that is holistic, integrated and intent on developing knowledge across all its dimensions is a necessity for an effective organisation. Effective organisations are those that consistently:

- Can meet growth and cost reduction targets;
- have superior strategies for managing and developing people;
- rapidly diversify products and services to meet commercial opportunities;
- focus on both individual and organisational knowledge;
- have learnt to measure people as assets as well as costs; and
- are able to resist the short-run pressures that cause chronic under-investment in the individual.

Managing knowledge capital in an organisation

Introduction

> New opinions are always suspected, and usually opposed, without any other reason but because they are not already common …[and] …No man's knowledge here can go beyond his experience.
> (John Locke, 1690, *Essay Concerning Human Understanding*)

> The empires of the future will be empires of the mind.
> (Winston Churchill, 5 September 1943, Speech at Harvard University)

> Wisdom is not a product of schooling but of the lifelong attempt to acquire it.
> (Albert Einstein, 1954, *Ideas and Opinions*)

Having examined the broad theoretical context for HRD in the last chapter, this chapter will examine how knowledge can be managed to the advantage of an organisation.

This chapter will explore and differentiate some key terms. Unfortunately, most of the terms covered in this chapter are the source of constant redefinition and heated academic debate. Research on knowledge and related matters continues to reveal greater insights. The aim of this chapter is not to provide an exhaustive analysis or definitions locked in tablets of clay, rather, the analysis and definitions are intended to provide a snapshot sufficient for the reader to appreciate how organisations are defining and deploying knowledge and competing in the New Economy.

Perspectives on the New Economy

As we move beyond what has been termed the Knowledge Age and into the so-called New Economy it is recognised that knowledge resides in the individual and within the relationships and networks that the individual forges. Knowledge held by individual employees or in relationships between other people most often cannot be owned by any one organisation, but may be harnessed through the individual, whether alone or working in groups.

This paradigm has important ramifications for the management of knowledge. Some organisations assume that they can manage knowledge assets as if they were tangible, physical

or financial assets. According to such Industrial Age thinking, knowledge is a factor of production adding value to inputs to help create more valuable outputs (goods or services). There is a fundamental problem with this approach: no organisation can own all the knowledge assets that contribute to its productive capabilities. In fact, most knowledge resident within people is not 'owned' by the organisation. It is owned by individuals and groups, many of which are outside the organisation's domain, including service providers, specialist contractors, supply chain partners, or financial and accounting service providers.

This means that we need to move our measures of the 'value' of knowledge beyond merely gauging how well individuals and groups apply knowledge to enhance productive outcomes. We need to understand how well individuals and organisations can absorb, transfer and expand existing knowledge while also generating new knowledge in response to emerging opportunities.

The Value of Knowledge in the New Economy

The 'old' Industrial Age paradigm of knowledge was that its value to the organisation lay in how it was used to improve the efficiency and effectiveness of outputs. The 'new' Knowledge Age paradigm is that value resides in the current and potential capacity of individuals and their networks to create sustainable competitive advantage for the organisation.

Enter the term 'the New Economy'. The New Economy acknowledges that value resides not just in the sale of goods and services but also that productivity and the efficiencies related to the design and leadership of organisations are not all that is required. While these principles are critical, the New Economy is ultimately about sustaining profits from the sale of goods and services **while** being innovative and able to anticipate and seize opportunities before one's competitors. This shift necessitates organisations embracing the theory and practice that gives them the means to identify and develop the people and systems necessary to be agile and responsive. Thus the true value of a contemporary knowledge worker is in the anticipation of change and therefore in the delivery of solutions to address the opportunities created.

In the New Economy the commercial value of human capital is closely tied to the uniqueness of what the person can contribute to the organisation's available capabilities and the affect they can make through performance that sustains competitive advantage. This is not more apparent than when workers trade their knowledge in the labour marketplace selling their ability to directly contribute to organisation's value in the marketplace. In tight labour markets with limited umber of employees organisations, industries and nation's sustainable competitive advantage lies in how well they can capture and harness the capabilities its employees posses.

What is knowledge?

Knowledge is a hard term to define in an unconditional manner. As a construct it can be divided into four classifications (Bowles, 1999:34):

1. Knowledge of . . .

The knowledge of people, processes and objects and the ability to actively deploy intelligence to construct responses to problems or complexity encountered in everyday life or work. Such knowledge may underpin 'knowledge how'—the application of skills to complete a task.

For example: you may know what project planning is but not know any more facts about the detail of project planning processes. However, you may also be able to solve problems encountered in a project because you can develop mental constructs to deal with the problem.

2. Knowledge how . . .

The knowledge of how to do things. This form of knowledge can be described as skills or competencies.

For example: you can know how to repair a TV set, use a computer, or clean a house.

3. Knowledge that . . .

The knowledge that shapes perceptions and personal responses to people and things. This form of knowledge is derived through experience or derived from others' experiences collected in an established body of knowledge; for instance, one that may be kept by specific discipline groups and deployed by occupations. Such knowledge influences the application of 'knowledge of' and 'knowledge how'.

For example: you can know that there is a computer in front of you because you can show it is there, you believe it is there and there is good evidence for believing it to be there.

4. Knowledge for . . .

Knowledge may also be a collective term applied to a set of parameters: a group of individuals, a context, or a set of relationships. In this type of knowledge, all of the previous forms are collected into a context-specific or context-dependent relationship. Such knowledge can represent a basis of individual and collective action and experience in a context, over the long term.

Separating forms of knowledge removes the limits inherent in a linear view of knowledge as part of a relationship with data, information and wisdom. The linear relationship reflects a transactional perspective. This view suggests that the basic building blocks of an information system are **data**—unstructured, discrete 'packets' or 'objects'. These building blocks are transformed into **information** when they are given structure and meaning. Information in turn gives rise to **knowledge** when it is shaped by its relevance to a particular purpose or set of values. The crucial point to note is that this is a matter of human agency: it is people who select the information and assemble it for a purpose, thereby transforming it into knowledge. Finally, **wisdom** is accumulated knowledge shaped by an individual's experience over an extended period of time (Katezenbach & Smith 1993).

Davenport and Prusak (1998) proposed a wider view of knowledge whereby both the person and the context influence knowledge in a non-linear manner. They see knowledge as:

> a fluid mix of framed experiences, values, contextual information, and expert insights that provides a framework for evaluation and incorporating new experiences and information. (as cited in Snowden, 2005:3)

The structure of purposeful knowledge in an organisation

This section examines how the structure of knowledge will impact its creation, management and transfer within an organisation seeking to harness that knowledge.

Joseph Badaracco (1991) suggests organisational success will be dependent on their identification of two types of knowledge; **migratory** and **embedded** knowledge. Appreciating the distinction between migratory and embedded knowledge is an appropriate starting point for examining the structure of knowledge. Competitive advantage or organisation survival can depend on how well an organisation manages both types of knowledge.

> **Migratory** knowledge is knowledge that can be accessed by another individual or firm, or moved away from one firm to another. Basically it is knowledge that once identified becomes hard to control and protect (Badaracco, 1991:34).
>
> **Embedded** knowledge is differentiated from migratory knowledge because this knowledge '*moves very slowly, even when its commercial value is high and firms have strong incentives to gain access to it'* (Badaracco, 1991:79). Badaracco defines firms as '*vast repositories of embedded knowledge'* (1991:80). How they manage embedded knowledge across its absorption, transfer and expansion can determine a company's competitive success.

Badaracco's structure of knowledge into two categories is a helpful counterpoint to an examination of two other categories commonly used to delineate knowledge; the **tacit** or **explicit** dimensions.

As early as the 1940s Michael Polanyi (1948; 1966) advanced significant arguments for broadening of focus on the constitution of knowledge. Polanyi raised intricate arguments for

separating what an individual knew, the knowledge they were conscious of holding, and the knowledge they could transfer. Basically knowledge could be tacit or explicit. Respectively this referred to knowledge that by its structure and creation could be highly personal and context-specific or it could be codified in a manner that made it transferable between individuals (Nonaka and Takeuchi, 1995:59).

Nonaka and Takeuchi extend the social process of knowledge conversion to include not only individual, group or the organisational levels, but also inter-organisational or levels beyond the organisation. Movement of knowledge and its transferral from tacit to explicit was argued to be central to how Japanese organisation's successfully generated new knowledge, and encouraged greater creativity and innovation. The speed with which knowledge was transferred and converted also was critical to an organisation's competitive advantage (Nonaka and Takeuchi, 1995:5-7).

> **Tacit knowledge** may include subjective knowledge such as experience, simultaneous knowledge use in a specific context, and analogue knowledge relating to practice or application (Nonaka & Takeuchi, 1995:61-65).
>
> **Explicit knowledge** may include objective knowledge such as rationality (mind), sequential knowledge (procedures and rules), and digital knowledge (theory) (Nonaka & Takeuchi, 1995:61-65).

Whether knowledge is explicit or tacit; migratory or embedded; or subject to individual attributes (embodied, embrained or encultured), managers of knowledge need to appreciate its structure before they can better influence how it is captured, transferred, assimilated and created.

Knowledge management in organisations

Our view is that knowledge management is both a theoretical framework and a basis for action. It is more than just knowledge and technology, or knowledge held by an individual, organisation, or society. It is not limited to being a process of management. Rather, it is a framework that can be used to access knowledge at all these levels and ensure knowledge can be captured and deployed into the future.

Emphasising the human focus of knowledge moves the management of knowledge beyond the information technology (IT)-dominant view whereby knowledge management concentrates on capture, organisation, search, transfer and reporting of knowledge. In the IT view, data mining, knowledge clusters, and content or documents are managed to maximise operational efficiency and effectiveness.

To reflect the human focus, we use the following definition:

> **Knowledge management is the creation of an environment where knowledge is not only captured, transferred and generated, but where through the creation of systems of thinking and dynamic action, meaning is created for the individuals involved.** (Bowles, 1999:5)

Knowledge cannot be sorted and managed based on desired outcomes without first understanding the limitations of such an approach and possessing a sophisticated understanding of the structure of knowledge, as covered in the preceding section. For instance, any organisation that assumes it can establish a knowledge manager to manage knowledge assets in the same way that it manages physical and financial assets is limiting the opportunity by this transactional approach. The organisation cannot own all knowledge assets. The majority of knowledge that contributes to productive capacity and the majority of knowledge assets that can posses a capital value for an organisation are not owned by the organisation—and they do not need to be owned by the organisation. These assets are actually owned by individuals and groups that, in many cases, are external to an organisation's domain of operation.

If the majority of knowledge is owned by individuals then its 'value' can be measured only in terms of how well individuals and groups transfer information into knowledge that enhances productive outcomes. Learning is the crucial intermediary process required to leverage the knowledge assets that an organisation does not and in some cases cannot own. The processes of absorbing, transferring and expanding this knowledge and the ability to re-orient and generate new bodies of knowledge in response to emerging demands on the organisation are learning processes.

Harnessing knowledge in an organisational context

Edvinsson and Malone (1997:44–45) studied intellectual capital (IC) as a means of building successful organisations. From experiences at Skandia, a Swedish insurance company, they determined that:

> Intellectual Capital is the possession of the knowledge, applied experience, organisational technology, customer relationships and professional skills that provide Skandia with a competitive edge in the market.

In the formula they devised:

Human Capital + Structural Capital = Intellectual Capital

where structural capital refers to the knowledge possessed by the company or having only contextual value within the organisation (Edvinsson & Malone, 1997:46).

This early formula reinforces human capital as the knowledge 'owned' by an individual and harnessed by a company to achieve strategic ends. Edvinsson and Malone confirmed that, besides traditional financial capital, management of structural and human capital requires a strategy to build intellectual capital.

The market value of an organisation and its success is tied to the management of more than just people and the management of knowledge and intellectual properties. It requires management of relationships, values and the technology within the workplace. This formula (above) varied

from an earlier version advanced by Edvinsson and Sullivan (1996), which had the additional dimension of relational capital. Relational capital was viewed as knowledge embedded in the relationships established with the outside environment which included suppliers, customers, communities, and so on. This is definition runs very close to what others call social capital.

In 1999, Brooking extended the debate on knowledge in an organisation to examine it at the level of an individual or group. She determined that the knowledge base of competent employees encompasses more than the knowledge required to perform work. They require experience and the capabilities that enable proficiency. Therefore, knowledge management requires organisations to enhance not only competencies but also factors promoting proficiency. The Brooking formula (1999:46) states:

Organisational Capability = Competence + Proficiency

Organisational capability also requires transfer of knowledge between individuals. Codification of knowledge is therefore viewed as essential to the construction of infrastructural assets (processes, management systems, etc.) and generation of intellectual capital. Managing knowledge as a corporate asset relies upon managers considering the tacit and explicit dimensions of knowledge (Brooking, 1999:51–52). Brooking elaborates, suggesting two critical rules for knowledge management: 'making knowledge explicit generates infrastructural assets' (Brooking, 1999:53), and 'strive to make critical knowledge explicit' (Brooking, 1999:60).

Basically, Brooking argues that tacit and explicit knowledge (see definitions below) in an organisation require different management strategies and these directly impact upon both how intellectual capital is generated and the asset value of this knowledge to a corporation.

The many researchers who provided the foundations for the conceptualisation of intellectual capital and knowledge management note that the creation, transfer and utilisation of knowledge are all implicitly affected by the organisation's capacity to learn (Choo & Bontis, 2002:16–17).

Learning is also a major force enabling the flow of knowledge across and outside an organisation.

In fact, value may reside in moving knowledge across levels of employment or from one organisation to another (migratory knowledge).

Migratory knowledge has a less than tangible relationship to explicit knowledge. Certainly, the more explicit the knowledge, the more the factors influencing the migration of that knowledge can be determined (accessibility of the packaged/codified knowledge, compatible capabilities, incentives, barriers). But tacit knowledge is far more dependent on the individual. It is given meaning by interaction with others in a social context.

Tacit knowledge, when built into the relationship between individuals and their work or social context, can become embedded into a context that is difficult to replicate. Tacit knowledge held by individuals within 'pools' of human capital cannot be owned by an organisation. One would therefore argue that generally, tacit knowledge is less likely to migrate rapidly to a competitor than explicit knowledge. Certainly a person may take tacit knowledge with them to a competing organisation. Nevertheless, often this knowledge will be tied to the previous context and the social relationships unique to that context.

This, however, is the crux of the problem. Explicit and tacit knowledge may be either migratory or embedded. Making knowledge explicit can embed the knowledge into the processes and systems owned by the organisation and completed by individuals. However, this action also increases the factors influencing how knowledge can become migratory: codified knowledge is easier to manage and convert within the organisation. It is also easier to absorb, transfer and generate outside that organisation into another organisation or context.

Uncodified or tacit knowledge may be hard to transfer and can be embedded within a specific context. Take the individual out of the context and the knowledge can diminish in value, meaning or relevance.

Tacit knowledge and embedded knowledge are closely related. How explicit knowledge is embedded may vary greatly. By definition the two seem to be mutually exclusive. The factors

that make knowledge explicit also make it more vulnerable to migration. Embedding explicit knowledge is therefore conceptually very difficult to grasp.

Migratory tacit knowledge is also difficult to achieve, albeit not impossible. For instance, tacit knowledge could be held within groups or individuals who leave or are removed from an organisation and who can take advantage of their knowledge; for instance, traditional tradecraft skills or relationships between individuals and groups that cease to be utilised by a company, perhaps because markets no longer exist for specific activities, the company removes large components of its workforce, or a company simply closes. The pool of knowledge, however, still exists and can migrate to another user, assuming that the knowledge can be utilised. This migration of knowledge can occur as a deliberate activity, or often as an indirect outcome. Evidence of this is apparent when we consider how advertising may present a verbal and physical message but be constructed to convey an underlying or implicit message. It is not tangible but humans, as social animals, absorb non-verbal and implicit messages very rapidly. A company seeking to instil a certain culture has to ensure its actions reinforce the underpinning values and beliefs. For instance the culture can be represented in the brand of the organisation. In this sense migratory tacit knowledge can be harnessed if the organisation is disciplined. Staff and customers will be very quick to pick up where actions or communication from the organisation implicitly support the brand promise, and therefore the underpinning values and beliefs, being espoused by the company.

Knowledge as a valuable asset

Knowledge has value. Knowledge held by individuals or by the organisation has a capital value that can be managed, evaluated and manipulated.

Knowledge has been variously described as contributing to what we will call ‘pools’ of capital value:

> There are many forms of capital. Financial capital deals with qualification of value of assets. Physical capital covers various resources which may be described as natural and

> environmental which have not been adequately valued but are on the agenda. Human capital is used to describe the knowledge owned and acquired by individuals for use to earn and produce, and cultural capital is the knowledge used by individuals in the course of daily life . . . social capital is different completely because it deals with the social links which create society and cannot therefore be owned or depleted by one. (Cox & Lewis, 1998:2–3)

Valuing forms of knowledge capital

Value is a relative term. Value may involve the concepts of:

- a fair return or equivalent in goods, services, or money for something exchanged
- the monetary worth of something: marketable price
- relative worth, utility, or importance
- a numerical quantity that is assigned or is determined by calculation or measurement
- something (as a principle or quality) intrinsically valuable or desirable (Ariely, 2003:3)

Sullivan suggested that the economist views value as the 'sum of benefits (or income) stretching into the future, summed and discounted to a net present value in dollars' (2000:xxii). Value is therefore determined by its market. Knowledge capital has value because it can contribute to current performance and has potential for future contribution. To stakeholders in the production process and shareholders who may be investing in the organisation, both current and future potential hold a relative current value. This relative value is only realised through proof of productivity and the ongoing strategic ability of the organisation to, for instance, learn, innovate, and to seize or create new opportunities. The value of knowledge, wherever it resides in the organisation or its relationships, is realised only in the context of the organisation's ability to deploy knowledge capital (Sullivan, 2000:247).

Two fundamental forms of classifying knowledge asset—intellectual assets and intangible assets—are depicted in Figure 5. These assets can be considered to hold knowledge capital value that can be mapped to our previous delineation of the available pools of knowledge capital (structural, human and social capital) that form overall knowledge capital.

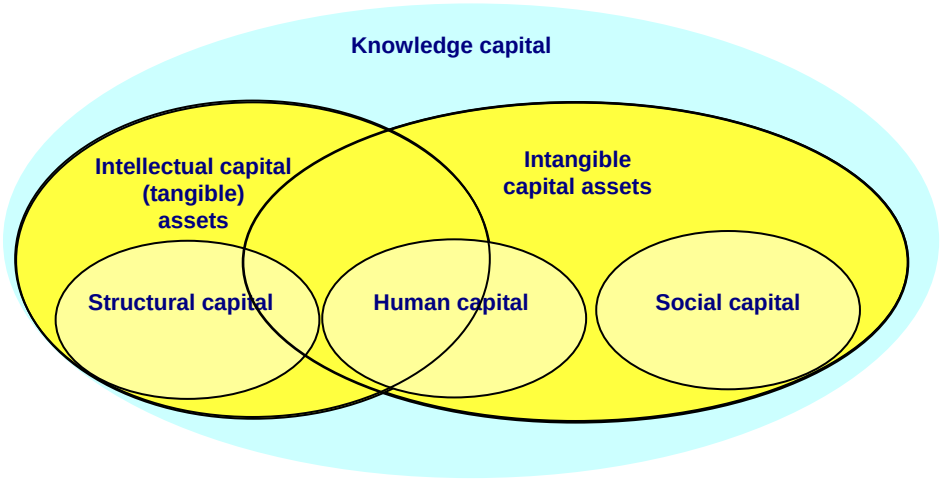

Figure 5 Relationship of knowledge assets to pools that form overall knowledge capital
(Bowles, 2003:12)

Valuing intellectual assets

Intellectual assets are the 'know how' and the associated knowledge artefacts, solutions and methodologies that are developed by a company to perform, improve responsiveness, become more competent or innovate (Huang, 1998). In this sense, intellectual assets are capital assets residing in the structural capital pool of assets. Davenport and Desouza (2003:2) noted that intellectual assets can be categorised into two main types: product assets and process assets.

Product assets are the specific outputs or work products of knowledge work. A person who writes a legal brief, codes a software program or drafts a product design specification is creating a product asset. Product assets must generally be modified or adapted to some degree in reuse, because the objective of two work products is seldom identical. A programmer who borrows a software module from a code library and modifies it for a new purpose is reusing a product asset.

Process assets in an organisation can be defined as the codified knowledge of how to perform a task. One form of process assets are 'rule-based' assets, 'where following procedures yields the one correct answer to a specific problem' (Davenport & Desouza, 2003:2). These rules can be automated, as in spell-checkers or software-producing circuitry design, or embodied in worker routines and guidelines.

Valuing intellectual assets largely revolves around how these assets contribute to the commercial success of the organisation. This brings into play the importance of organisations

being able to manage and value intellectual property (IP). As organisations move to compete on what they know, not just what they can do, the value of strategic assets lies in intellectual knowledge capital, not in physical plant and other tangible assets. Intellectual property is where intangible assets—copyrights, patents, trademarks, etc.—are managed and leveraged as a valuable asset.

Valuing and measuring knowledge as an intangible asset

The challenge facing knowledge managers is that traditional accounting and economic measurement systems focus on tangible assets such as the cost of labour, plant, and materials; not on intangibles like knowledge.

Since the 1990s, significant effort has resulted in ways to value not only intangible assets, but also, specifically, knowledge capital. A seminal example is that of Sweden's Skandia Insurance Company which publishes supplemental financial reports on its intangible assets. It accounts for its intellectual capital by documenting assets not recognised by generally accepted accounting practices and issuing a supplementary report unconnected with the official financial statement. The supplement includes a valuation of its technology, IT networks, procedures and manuals, trademarks, patents and customer lists, and employee competence (Strassmann, 1999).

Various methods are employed to measure and subsequently value intangible knowledge assets (Sveiby, 2004).

- **The Direct Intellectual Capital method (DIC):** Estimates the dollar value of an intangible asset by identifying its various components. Once these components are identified, they can be directly evaluated, either individually or as an aggregated coefficient.
- **The Market Capitalisation method (MC):** Calculates the difference between a company's market capitalisation and its stockholders' equity as the value of its intellectual capital or intangible assets.

- **The Return on Assets method (ROA):** The average pre-tax earnings of a company for a period of time are divided by the average tangible assets of the company. The result is a company ROA that is then compared with its industry average. The difference is multiplied by the company's average tangible assets to calculate an average annual earning from the intangibles. Dividing the above-average earnings by the company's average cost of capital or an interest rate, one can derive an estimate of the value of its intangible assets or intellectual capital.
- **The Scorecard method (SC):** The various components of intangible assets or intellectual capital are identified and indicators and indices are generated and reported in scorecards or as graphs. The SC method is similar to the DIC method, except that no estimate is made of the dollar value of the intangible assets. A composite index may or may not be produced.

The ability to measure and value intangible knowledge assets can be augmented with the means used to measure knowledge capital. Table 2 lists various features of the three pools of knowledge capital (structural capital, human capital, and social capital). Contrasting features can be isolated by considering how knowledge capital may be affected by aspects that vary across each of the three pools; aspects including scope (the core focus of each pool); model (the procedural dimension), measures (the indicators and examples of how to measure this form of capital), and outcomes (the deliverables that form value).

Table 2 Comparative aspects to knowledge capital pools

Aspects	**Knowledge capital pools**		
	Structural capital	**Human capital**	**Social Capital**
Scope	Systems, processes and intellectual property	People	Relationships
Model	Linear	Linear–Interactive	Interactive
Measures	Financial • Total turnover • Speed of claims Market • Customer satisfaction • Market position	Employee satisfaction Qualification levels of staff Total turnover percentage per person/per salary Staff turnover	External organisational image Internal organisational image Brand awareness, perception and value Customer satisfaction

	• Brand penetration Technology • IT expenses per employee • IT staff as percentage of overall staff • IT spend as percentage of overall turnover • Content under management • Access and use of content Processes • Speed of activities • Error rates • Volume of activity Innovation • Translation of R&D into realisable assets • R&D spend as percentage of turnover Intellectual property • Number of patents • Percentage turnover of products • Investment in R&D	Replacement costs Demographics (i.e. average age of employees) Talent and succession pools (especially leadership) Training days per person Spend on learning as percentage of overall turnover Competency gaps Cultural climate	Revenue per customer Scale of business relationships (turnover, commitments) New customers Retained customers Numbers involved in communities
Outcomes	Improved: • income • profit • efficiencies • process speed	Increased competency (skills and knowledge that is position-/domain-specific) Increased identity alignment (cultural, values, behaviours, values, visions, traits, etc.)	Synergies Supply chain effectiveness Trust Cohesive relationships Good citizenship Business relationships

(Model constructed from Bowles, 1999:86 & 141; D'Egidion & Caredda, 2002:123–124; Leitner, et al., 2002:279–81)

Creating pools of human capability that enhance organisational capability

The bases of 'organisational capability' used in this section will follow the classic three 'pools': structural capital (intrinsic to organisational systems, processes and structures), human capital (intrinsic to people) and social capital (intrinsic to networks and relationships).

- ### Human capital

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The fact that humans have had a capacity to contribute knowledge that leads to organisational performance is certainly nothing new. However, only recently has effort extended to systematically manage individual capabilities as part of an overall organisational knowledge value equation.

A focus on human capital has evolved to ensure human assets are accommodated properly in an organisations accounts and financial reporting systems (Parker et al., 1989:147; Stittle, 2004:314). Traditionally the delineation of capital resources in organisations has been between tangible and intangible resources. Tangible resources are made up of financial, physical human and organisational resources. Intangible resources are identified reputation, technological resources and innovation.

Tangible resources also revolve around items that could be ascribed an accounting value; (a) Raw materials, (b) Plant (machines, tools and auxiliary materials), and (c) human labour. Unlike the first two components, human labour was not a finite resource. It can be enhanced, developed and so improve its value. This meant it did not neatly fit into organistional accounting systems.

Intangible assets such as knowledge in organisations have always been an essential part of successful organisations. The development and access to knowledge and capabilities is now being identified as a critical asset that can contribute towards an organisation's success or failure. Savage stated 'The basis of wealth (in the 'knowledge age') is shifting from that which is 'possessed as a commodity' to the value of human capability' (1996:121). Attempts therefore have been made to develop systems to quantify and support how organisations can enhance the capital value of people through improved knowledge acquisition, transfer and generation.

It has been suggested that the breakthrough came when human resources were considered an organisational asset rather than a 'cost' (Stittles, 2004: 323). As such they could be meaningfully accounted for as a 'human capital asset'. An asset is:

> . . . rights or other access to future economic benefits controlled by an entity as a result of past transactions or events (Accounting Standards Board, 1996, cited in Stittles, 2004:321)

Definitions of human capital tend to focus on knowledge as a capital asset vested in the individual that can be deployed to maximise organisational and industry competitiveness (Davenport & Prusak, 1998; Davenport, 1999; Bontis, 2002:630-631; Gimeno, et. al, 1997:750-1). This core focus in many ways can be traced back to the 1991 model from Skandia AFS where Edvinsson tied human capital to structural and relational capital to form Intellectual Capital (Edvinsson & Malone, 1997).

Fitz-ens argues value is created in human capital as part of the contribution knowledge held by individuals makes to the attainment of the enterprise goals (Fitz-ens, 2000:9 & 66-67). Over time the organisation can also invest in strategies to accelerate knowledge acquisition, deployment and improved goal attainment. An individual's capabilities included talents, knowledge and experience that could be deployed and developed by the organisation (von Krogh, Ichijo & Nonaka, 2000:92; Edvinsson & Malone, 1997:34).

Some authors on human capital stress not all assets resident in the individual are held as a personal asset. Human capital may be resident in the systems and structure of the organisation that permit individual knowledge to be deployed (Nonaka & Takeuchi, 1995: 62–70). It may also be resident in relationships where knowledge flows between individuals in teams or in communities or networks that span boundaries outside the organisation (Wiig, 1997:71; Dixon, 2000:142-143). This links to the next two 'pool' of capability that can add capital value to an organisation.

- Structural capital or organisational capital

Structural capital encompasses the knowledge that exists in the organisation's systems, processes and culture (Bowles, 1999:66). Structural capital is often termed organisational capital. Given this term is also used by other authors in a completely different academic context we will retain the traditional term.

Bontis strongly advocated for structural capital centring on the mechanisms and structures of the organisation that support the optimum deployment of knowledge resident in humans for the productive benefit of the organisation (Bontis, 1998:66; Bontis, 2002:631). Structural capital has been seen as the means deployed by the organisation to harness human capital (Winter, 1987; Bowman & Ambriosini, 2001; Bontis, 2002:632).

Table 3 Comparing structural capital with other pools of knowledge across different levels of organisational deployment

	Individual knowledge for individual task performance	**Group knowledge and adaptive improvement**	**Organisational knowledge for competitiveness and futures**
Structural capital	Value placed on physical assets that deliver product and service: • Machinery, technology and land the province of owners and management • Offices designed to reflect job roles	Links made with processes and people delivering product and service providers: • Standardised processes • Tools and systems that remove variations • Removal of non-conforming systems and practices • Philosophy and approach • Environmental responsibility discussed not fully accepted (e.g., greenhouse emissions, Environmental Impact Studies etc.);	Links made with product and service providers and structures that realise improved value for: • customer goodwill • intellectual property • processes • systems • philosophy • partnerships • physical capital • environmental ecology • workforce health
Human capital	• Economic rational value of individual linked to work outcomes • Training for tasks • Training occurs off-the-job • Hierarchical management structure • Work practices more Taylorist, production line	• Contribution of individual respected and acknowledged • Training for jobs • Training increasingly on-the-job • Flatter management structure • Teamwork • Work practices move to be more team-based	Reintegration of HRD, training, work and wellbeing to enhance: • competencies • experience • commitment • craftsmanship • service ethic
Social capital	• Craft and skills are respected • Innate value of 'skilled' workers • Task efficiency • Crafts hold responsibility for training	• Peer and mentor systems to exchange knowledge within the organisation • Talk OK if about work • Talk outside work frowned upon	Construction of partnerships and learning communities able to advance: • culture • networks • wellbeing • community support • political stability

(Bowles, 1997:141)

The pools of capital in the left-hand column of Table 3 are inputs, and performance and potential capacity are outputs that result from their deployment.

- Social capital

All relationships are enhanced by the quality of their interrelationships through trust, networks and shared values. Social capital is the 'social dimension to human activity and relationships that enables knowledge creation, transfer and generation processes' (Bowles, 1999:44).

Social capital—the shared values, networks and trust—enriches the effect of people working and interacting together. It enhances the productivity of people's interactivity. Social capital is the product of learning that has an intrinsic shared and worthwhile purpose.

Some core features of social capital are that it:

- 'inheres in the structure of [individual] relationships' (Portes, 1998:7);
- is mobile and cannot be embedded in structures or processes;
- cannot be physically banked (Portes, 1998:7) or placed on a balance sheet;
- is not easy to gauge by studying types of relationships because it is context-specific (i.e. weak relationships may provide the information and links necessary to achieve a profound outcome where strong relationships may not have generated the same outcome);
- resides in humans and in their 'accumulated mutual obligations' and the societal need for reciprocity (acquittal of obligations) (Portes, 1998:7);
- is built as acts of reciprocity and relationships that promote group trust, norms and collective 'rituals' that govern behaviour and facilitate further interaction (Falk & Kilpatrick, 1999); and
- is both the means that reside as individual property and the ends achieved through networks and relationships.

Real lessons can be learnt from an analysis of social capital when it is considered in relation to an organisation-wide approach to the management of knowledge capital. Firstly, managers must acknowledge that the asset value of social capital is inconsequential. The 'capital value' resides in the *potential* to utilise social interactions or the capacity to *source* knowledge utilising social capital (Woolcock, 1998:157, 185; Portes, 1998:6; Bowles & Baker, 1998). This concerns those wishing to add social capital to existing knowledge management equations that have social aspects tied to performance, and the 'asset value' of knowledge being determined through attainment of set customer and market outcomes. Any model or framework for developing people should then acknowledge that the stocks and flow of knowledge within an organisation will span the three 'pools of knowledge capital'; inside and beyond the organisation's boundaries.

Secondly, different types of social relationships, such formed in sporting clubs or other private networks forged outside job-related activities or professional communities-of-practice, involve forms of interaction that add to the tacit knowledge held by individuals. Social capital provides a mental construct that warns us, at the very least, to be aware that the organisation may wish to encourage membership of professional development networks or encourage staff-member's involvement in non-work related social activities as the individual relationships that occur beyond the organisation's parameters may stimulate certain sources of knowledge that can affect organisational outcomes.

Thirdly, there is no predictive model that can classify social capital into means–ends, negative–positive and cost–benefit parameters the organisation can manage. Social capital does, however, exist and is a positive factor that can be harnessed in the generation of knowledge capital.

Social capital revolves around people, individually or collectively developing relationships and networks that can generate knowledge. It resides not only in individuals but also in networks and relationships between individuals. To harness social capital for required outcomes, the organisation has to develop the structural capital necessary to provide a systematic means to capture, absorb and transfer knowledge.

Quantifying the capital value of managing knowledge as an asset is being limited arbitrarily if the aim is only to embed explicit knowledge. Maximisation of the asset value of knowledge (i.e. its contribution to required outcomes), requires recognition that organisations need a mix of explicit, tacit, embedded and migratory knowledge, each varying with the specific context. Management based on the achievement of set actions or strategic outcomes may well deny the competitive advantage inherent in how individuals source knowledge. Ignoring the individual and social dimensions that promote tacit knowledge assets may restrict the sorts of knowledge an organisation acquires, if it is to be responsive, agile and able to generate the capabilities necessary to meet potential market demands.

Knowledge also has a value that is determined not by its possession but rather by the processes that impact upon the acquisition, transfer and expansion of the knowledge required by an organisation. This process may be both a knowledge management and a learning process. It can promote an organisation's responsiveness to new and emerging customer demands. In other words, knowledge also has a social value. It is valued by colleagues as a possession—something that bestows upon the 'owner' some respect and authority. It is valued by the organisation, however, for its strategic capacity to enhance productivity in the dollar value sense.

Developing human capability to improve organisational Knowledge Capital[2]

Knowledge capital is directly related to the Current Productive Capacity (economic performance) of the organisation across what we have termed pools of knowledge assets (knowledge capital), structural capital (physical assets), social capital (relationships), and human capital (people). Knowledge capital also contributes value to the potential productive capacity of knowledge held by individuals and the organisation that is not currently deployed for productive purposes. This value relates to agility, absorptive capacity and other capabilities that may be deployed by the organisation to create or seize opportunities.

[2] This section draws on materials first published as Chapter 3 'Knowledge Capital asset' in Bowles, M (1999), *Learning the True Value of Strategic Knowledge: Valuing capabilities and knowledge assets in the Knowledge Based Economy*, Major White Paper, Melbourne: Huon Institute.

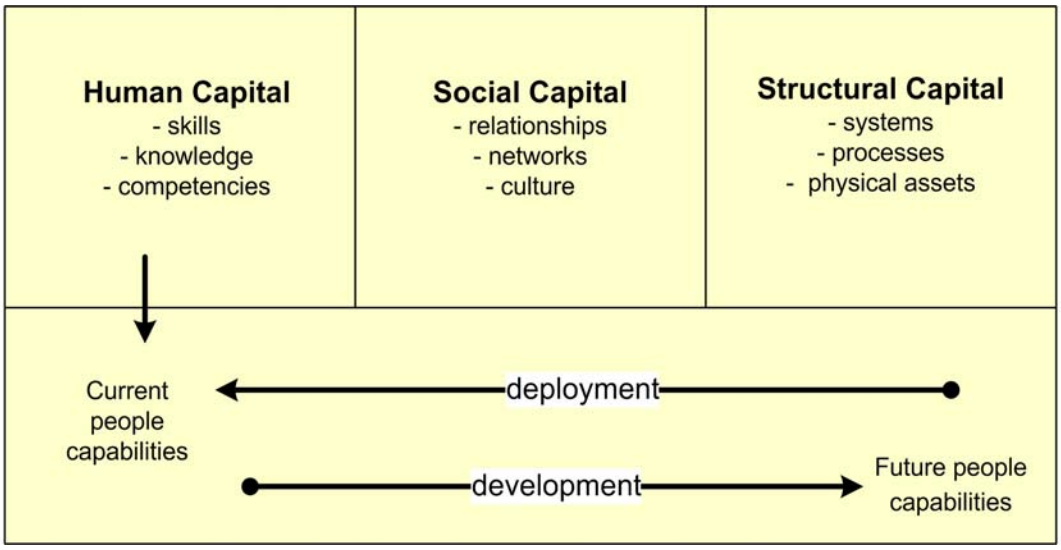

Figure 6 Moving beyond developing human capital for current performance

As depicted above if HRD was solely to focus on developing people to enhance human capability for current performance the true value of these activities is truncated. From the view point of building knowledge capital in an organisation the capacity of the organisation is more than its current productive capacity, or just developing people to deploy knowledge skills and competencies to achieve job performance. It must include the ability to redeploy knowledge assets to meet future demands. Transformational HRD has to place in its charter the need to develop people by addressing social and structural capital dimensions of knowledge.

Knowledge capital is therefore central to current performance and also has value because it is an indicator of the organisation's capacity to manage knowledge to seize future opportunities and create competitive advantage.

From this perspective the type of capabilities being developed are critical. Reflecting on the capital value will vary with capabilities required for current and future needs we also have to recognise the array of capabilities will span different levels of knowledge. But value is not locked-into one of the quadrants established in Figure 7. Building strategies for HRD or knowledge management based on only one of the quadrants is therefore inherently too narrow.

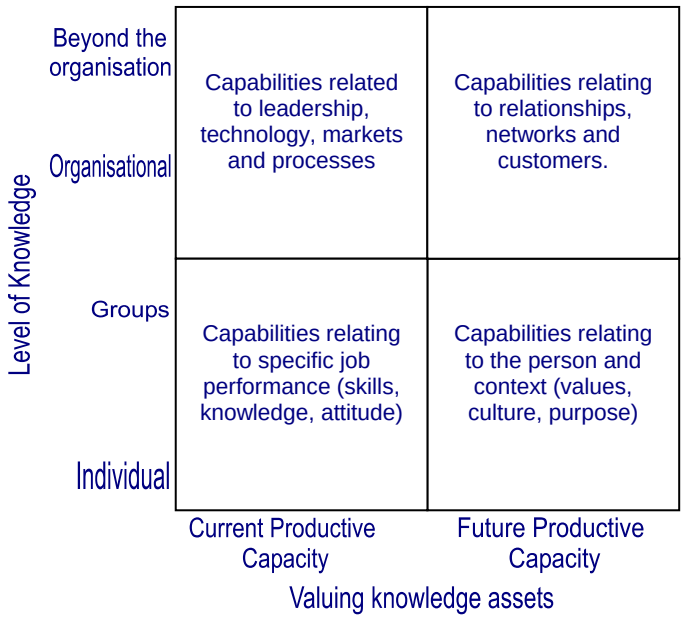

Figure 7 Dimensions that differentiate Knowledge Capital and Intellectual Capital approaches

Knowledge capital and capabilities

Capabilities exist at cross-organisational, organisational, group and individual levels. Capabilities are also used as an encompassing term for the building blocks for knowledge capital. As such, capabilities can be targeted and developed to optimise knowledge capital and, therefore, organisational capabilities (see Figure 8).

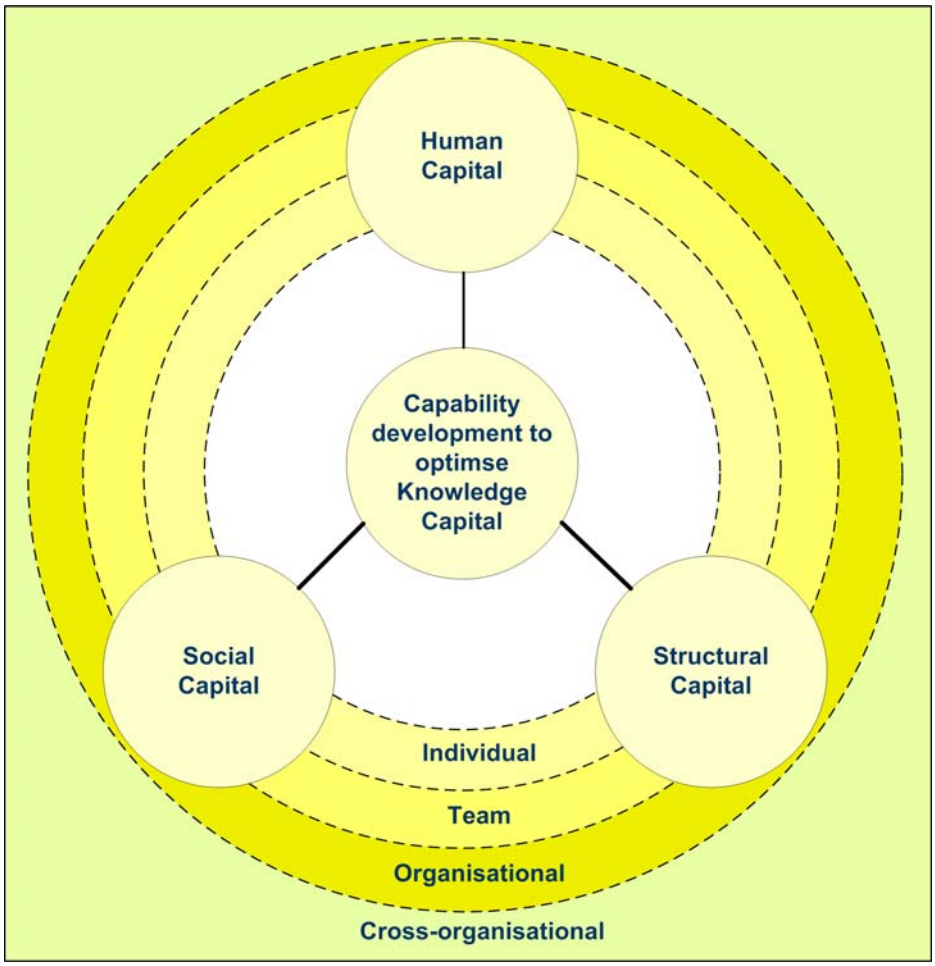

Figure 8 Developing capabilities to optimise an organisation's capabilities and knowledge capital

By examining capabilities, Quelin (1997), and later, Tovstiga and Birchall (2002), classified different forms of capabilities within an organisation. Tovstiga and Birchall, who sought to use key capabilities in innovation and growing organisational knowledge, developed a capability methodology that could encompass:

> . . . the knowledge internalization trajectory that describes (1) the sourcing; (2) the internalization of new knowledge streams and, ultimately, (3) the reconfiguration of existing knowledge in the form of maximum impact. (Tovstiga & Birchall, 2002:105)

Capabilities hold value not only for their current application to perform, but also for their future potential. The differentiation of levels or classes of capability improve flexibility, resource allocation and the effective deployment of learning interventions.

The capability-based approach to how an organisation can develop knowledge and human resources is in alignment with other literature that views skills and knowledge related to task and functional performance as one aspect of overall organisational performance. Having the skills to perform may be accounted as a human capital knowledge asset, but it does not guarantee successful deployment of these skills.

The competency approach to building skills and knowledge (that is, competency-based human resources [CBHR], or competency-based training) offers an effective means to define and measure individual and collective capacity to perform (Spencer & Spencer, 1993:105; Fitz-ens, 2000:15; Lapierre & MacKay, 2002:308). However, other factors contribute to performance and must be considered when organisations attempt to affix an overall value to knowledge. Calculation of a bottom-line for human capital, and any mix of the constituent components such as learning, performance and knowledge, has to encompass all aspects contributing to potential performance capacity.

Capabilities reside in the potential capacity held by individuals interacting in teams, organisations and community groups. These capabilities once specified do not represent actual performance, but rather the potential capacity to perform (Bowles 2003:209). The context of application and the interaction generating performance determine which capabilities the individual is able to apply to that situation. The definition of capabilities as adopted herein, therefore, extends beyond the traditional knowledge and skills required to predict performance to also encompass the human factors that shape performance capacity in a known current, and unknown future, context.

Knowledge capital and human resource development

A wider view of knowledge assists us to better understand HRD. Knowledge may also be codified and explicit or tacit and be held in the experiences of individuals. It may be migratory and easy to replicate or embedded and tied to the context of current application. Personal knowledge may relate to that which individuals know, not what they can do (Polanyi, 1962).

Transactional HRD encourages a focus on the organisational nature of knowledge and learning, ensuring that 'knowledge how' and 'knowledge of' are deployed to maximise the efficiency of the individual in achieving functional outcomes. It is about collecting data, converting data into information and building personal knowledge relating to action.

If knowledge has a linear relationship to data, information and wisdom, then transactional HRD is an input–output model. It is a linear process with a direct relationship to the beginning of an intervention (that is, learning) and the end-point or desired outcome (that is, learning outcomes).

A transactional approach to HRD alone will only develop the codified knowledge that can be replicated and transferred across the organisation in training that can enable other individuals to better 'do' things. In terms of an organisation's management of knowledge this approach is both limited in its scope and in the value it can generate for both the individual and the organisation.

On the other hand, transformational HRD is an open process driven by the context and the exchanges that may occur. A set beginning and end-point might not exist. Relationships may be loosely connected and outcomes derived through serendipitous interactions not derived from originally agreed outcomes.

In terms of how an organisation manages its knowledge transformational HRD requires practitioners look beyond the organisation to individuals and their context and experiences. At this level we can see how individuals build group, organisational and trans-organisational knowledge ('knowledge that', 'knowledge how'). Such knowledge can extend beyond the scope of that applied to performance and how knowledge is acquired and shared for routine activities. It involves a wider perspective that is necessary to reveal knowledge currently not being developed by the organisation that may have value (that is, knowledge capital). This confirms the individual as a repository of knowledge assets beyond what they deploy to perform in a job. The role of the HRD strategy has to therefore extend beyond just a focus on harnessing the cap[abilities required to perform now, but to address the social and structural capital aspects that enable the organisation to harness all forms of capability resident in the individual that can contribute to productive capability, now and in the future.

Human Capability Development: A conceptual model

Introduction

Organisations seeking to compete in the New Economy must not only apply knowledge to existing situations but also be able to rapidly reconfigure knowledge to respond to emerging needs. As such organisations leveraging knowledge have to acknowledge individual capabilities extend well beyond the skills and knowledge required for an existing job.

As contended in earlier chapters, HRD focuses on a transformational activity developing capabilities and improving access to stocks of knowledge across all three dimensions of knowledge capital. Implementing HRD with consideration of KC suggests an approach that encompasses the transactional view (development of people for performance), but extends to address the transformational issues relating to developing the potential resident in people and the collective capacity that can may be required by an organisation in the future.

HRD can transform how an organisation manages knowledge resident in its employees. HRD can support human capability development (HCD) if it moves to encompass more than just a narrow focus on defining skills for task performance focus and training people for skill gaps related to current job performance. While critical this focus is to narrow both in methodology and actual organisational outcomes. HCD within organisations requires HRD underpin three key outcomes:

1. **Increasing performance and productivity** by investing in leadership, education, training and development activities that increase the capabilities held by people and therefore affect performance.
2. **Increasing individual commitment and organisational responsiveness** by investing in processes and technology that enhance the ability of people to collaborate and

communicate in a manner that will enhance organisational goal attainment and the communication of shared visions.

3. **Accelerating the accumulation and integration of knowledge** by investing in strategies that will increase the stock of capability available to the organisation, teams, individuals and members of collaborative communities.

Capabilities will be forged in this chapter to become the building block or 'currency' for converged HRD and knowledge capial activities. HRD develops the capabilities resident in human capital that are required to meet and sustain competitive advantage. Linking HRD to human capital acknowledges that learning and development plays a key role in asset development; whether intangible knowledge assets, or tacit or explicit knowledge; or whether it resides inside or outside the organisation's operational structure. As these assets are developed, the stock of capabilities available in the pools of knowledge capital (social, human and structural capital) grows. However, the value created by HRD's role in developing human capital is not limited to the pool of human capital. Table 4 shows how even the basic transactional HRD process (inputs, activities and outputs) links to the other pools of knowledge capital.

Table 4 Process view of HRD and the contribution of knowledge to different pools of capital

	Structural capital	**Social capital**	**Human capital**
Inputs	• Policies and procedures • Structures and processes • Learning technologies • Content • Job descriptions	• Learning communities • Professional networks (Communities of practice) • Effective training providers • Engaged personnel	• Competent: o trainers o coaches o mentors o instructional designers o assessors
Activities	• Manage • Discover • Collate • Codify • Access • Distribute	• Increase access to other knowledge networks • Increase flow of tacit knowledge • Acquire intelligence • Collaboration	• Increase competence of employees • Reinforce culture and behaviours • Embed future vision

Outputs	• Quality systems and procedures • Increased value of HRD: o Knowledge architecture o Intellectual property and content o Transfer of knowledge and learning	• Improved pool of knowledge capital • Access to more stocks of capabilities within and outside the organisation • Perceptions of the organisation • Coherent culture	• Strong bench-strength ('talent ready to succeed to a job) • Improved: o competence o service o productivity o performance o learning o commitment

Targeting HRD to enhance capabilities can vary with the level of application and the resulting scope, purpose and outcome being sought. Indications of the different scopes of and dimensions to HRD interventions and measures of outcomes are indicated in Table 5.

Table 5 The scope and impact of HRD on capability

	Individual	**Group**	**Organisational**	**Cross-organisation (Community)**
Scope	Personal	Team and interactions	Market	Partnerships and networks
Purpose	Build capabilities of the person	Build capabilities available to a team or group aligned by an agreed purpose	Enhance the availability of KC to sustain competitive advantage	Increase the reach of the organisation to share or access capabilities
HRD measures *(Examples only)*	Productivity and commitment Qualification level of employees Competency of individuals Readiness of candidate to move ahead (career readiness) Identity alignment and commitment Employability and replacement cost Employee satisfaction	Diversity of workgroup Trust Commitment Problem solving Collaboration Cycle time from research/ innovation to market Size of talent pool (number of candidate ready to succeed to a position) Volume of knowledge flow	Available pool of talent (bench-strength) Effectiveness of people sourcing and development strategies Quality systems and efficient processes Cycle time to proficient performance of new appointees Employee compensation-to-productivity equation Organisational image (internal and external) Employee retention rates Customer satisfaction	Numbers involved in communities Range and immediacy of access to capabilities Service agreements Business customer satisfaction

While the logic seems twisted, acknowledging HRD has a relationship with knowledge creation and its deployment means that every effort to develop knowledge will create more knowledge.

Building learning experiences that increase the alignment and engagement of individuals to organisational goals and shared visions may grow human capital. This growth is supported when HRD establishes the preconditions to improve future learning and extends the organisation's ability to improve future development activities. This transformational effect of HRD occurs at both the level of individual capability improvement and at the organisational level.

HRD's three major roles as defined at the start of the chapter support human capability enhancements that translate into an organisation's 'deep capabilities'. The term deep capabilities is used to identify properties of a company's competitiveness that arise not just from acquiring the knowledge that will underpin the capabilities to do something (Hamel, 2003), but on enhancing capabilities that reinforce collective purpose. Elements of deep capabilities in an organisation may hold some or all of the following features. They may be:

- embodied in the business model;
- embedded in the culture (guiding how people think and act within the business environment);
- self-evident (shaping beliefs and assumptions which enable further learning and action)
- embodied in the way in which business is conducted;
- broad (spanning all discontinuous change and/or business practices);
- durable (surviving the test of time);
- extensive (encompassing all levels and all positions); and/or
- pervasive (foundation for the core promise made by the organisation to employees, shareholders and customers).

Defining capability as the building block of human productivity

In this section we consciously enter into a minefield of modern debate; how competencies are described and what elements of knowledge they encompass. We are not intending to reconfigure existing theory but better inform current practitioners that

difference does exist. The biggest single hurdle confronting practitioners of HRD and learning and development is the predominance of theories and approaches that fail to make sense of the distinction between different approaches to competencies and the resulting effort to manage non-competency-based development activities.

Capability is being used in this text as the general term for the knowledge accessible to the organisation to underpin individual, group and organisational productive capacity (Bowles, 1999:20–23). It is more than the current capacity to perform: it encompasses future potential to perform. As described in Figure 9, the capacity of the organisation is inherent in and able to influence many cycles of performance. It ensures that the potential is being cultivated to create sustained performance and to create and seize opportunities.

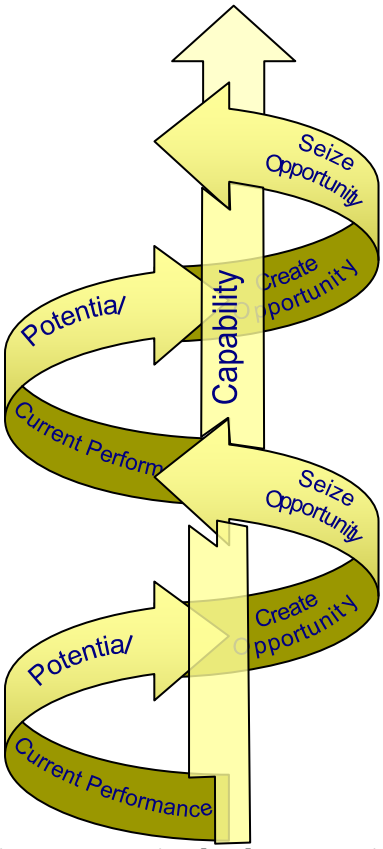

Figure 9 Capacity development spiral

An employee's value cannot be determined solely by focusing on the development of task competencies required for performance in a current job role. As suggested earlier capabilities must encompass both current performance and future potential.

In the New Economy organisations require more than process skills to remain competitive and adapt to change. A broader measure of the factors that contribute to performance is required to assess the bottom-line value of knowledge to an organisation.

Competency, competence and competencies

This section really pre-empts the later important discussion on competence contained in Chapter 5. However, it is necessary to establish the relationship between capability and competence.

Two distinct approaches to the use of competence have emerged world-wide. One movement arose out of the perceived need to break what was termed the 'techno-rational model of competence' (Schön, 1983) that sought to define the specific knowledge and skills required to perform in an occupational role. Under the reframed approach competence is defined as the skills and knowledge that compose a behaviour an individual must have, display or develop in a situation to achieve success, effectiveness or appropriate levels of motivation. This countered the techno-rational' approach that was educationally oriented and sought to shape learning outcomes to a standard of performance required when doing a job.

Summing up over four decades of wide debate and extensive work, in simplistic terms two movements emerged. One based on the qualities and attributes an individual requires (inputs) and should display. Such competencies being based on critical incident analysis and evidence collected on the attributes individuals or groups display that define, delimit, and/or rank competence within a given context. It is primarily about the person in a given context or role (human competence) (McClelland 1973; Raven, 1977; Spencer, 1983; Spencer & Spencer, 1983). The second movement focussed on occupational performance. This movement has promoted competencies that focus on setting standards of performance, or the output expected at a level of employment. This approach was framed independent of the person or the position and individual behavioural changes were assumed, rather than explicitly stated for an individual. This latter approach views competency as a standard of performance expected at a level of employment in an occupation or job role. It is primarily about what people do (technical and functional competence).

Early authors—including M.A. Bunda and J.R. Sanders (1979) *Practices and Problems in Competency-Based Measurement*; W.J. Popham (1979) *Criterion Referenced Measurement*; D.C. McClelland (1976) *A Guide to Job Competency Assessment*; T. Gilbert (1978) *Human Competence*; and G.O. Klemp and L.M. Spencer (1980) *Job Competence*—all promoted the concept of competence and its importance to individual effectiveness as a major component of both the management of people and the development of competitive organisations. The distinction of human competence and technical and functional competency caused divergent when applied in the world of education or of work; especially where these groups had to assess competence or incompetence.

This foundation of competence in the world of work was completed firstly by David McClelland and the McBer company on behavioural competencies and motivation.[3] Momentum was later gained with the release in 1982 of Richard Boyatzis' seminal work *The Competent Manager: A model for effective performance* released (Boyatzis, 1982).

Boyatzis proposed a model of managing people and HRD systems based on competency. He stated competencies would tell us:

> ...what sort of person will be effective in our organisation in specific jobs ... a template for decisions such as selection, promotion, firing and design of and assignment to management development activities...interpret responsibility for success or failure with respect to accomplishment of performance objectives ...communicate to all managers how they should act and what they should be doing ...basis for the design of management jobs and the organisational systems, policies, procedures and programs (Boyatzis 1982:13).

While the behavioural or human competence approach had its foundations in USA, especially with leadership development, the technical and functional competence approach grew in the 1980s and 1990s to underpin national industry and occupational competency-based training frameworks. This included most Scandinavian countries, the United Kingdom, Australia, New Zealand. By the turn of the century the approach can be found in over 30 countries including countries such as Spain, Singapore, Malaysia and South Africa. The occupational approach clustered competencies by industry areas to occupational streams and job families.

The two competency movements are distinct and have different applications. So long as this is acknowledged and their principles and focus clearly delineated both approaches have been implemented together. Some recent national approaches, such as Singapore and to some extent France, have integrated skills and knowledge (as occupational attributes) and behaviours (as human attributes) into each competency description and the overall framework[4]. Many organisations have also worked to integrate multiple approaches to competence under a single capability, performance or skills framework (e.g. Royal Dutch Shell PLC, Australian Public Service Commission, Woolworths Limited and Qantas Airways Limited).

Most competency approaches concentrate on explicit knowledge and the linear, input–output, transactional view of HRD. The hope is that the focus on standards of performance can be codified into statements that carry the transparency, accountability, and quantifiable outcomes a human resources professional or line manager can directly relate to job performance (Kuchinke & Han, 2005:386).

Ultimately, competencies reside within individuals and their relationships. Competencies can be used to encompass how skills and knowledge held by the individual can be targeted, developed, reported, integrated and analysed for their contribution to an organisation.

We can define technical and functional competence as the combination of the knowledge plus the skills:

Competency = Skills + Knowledge

An occupational or role based approach to competency ties skills and knowledge to a technical and functional specification for a standard of performance expected at a level of employment. It is not about the individual or the position in a given context.

[3] For a summary of Mclelland and Mcber competency models see for an analysis of the McClleland/McBer approach see John Raven, 'The McClelland/McBer competency model', Chapter 15, in Raven, J & Stephenson, J (Eds.) (2001) *Competence in the learning society*. New York: Peter Lang. pp:225-23.

[4] For a very useful analysis see Delamare Le Deist, F & Winterton, J, 2005, 'What is competence?', *Human resource Development International*, vol. 8[1], pp. 27–46

Where the focus is human competence a behavioural descriptor defining skills and knowledge in relation to an individual reaching a level of proficiency for an outcome in a given context is required. Such descriptions may fall either into competency or what we will term identity categories. This will vary depending on how they are authored. However, if they describe or can be used to determine talent or the future potential of an individual based on values, traits or cultural attributes then they fall into the Identity category described below.

Identity

Identity is the sum of cultural attributes, roles and behaviours embodied in the individual within a given context. The concept of identity encompasses both an individual's inner sense of self and his or her relationship with the broader social and cultural environment.

Identity = Cultural values or beliefs + Roles + Traits

To establish the current performance capability in a given context, we must also take identity factors into account. The current performance capability therefore can be defined as:

Capability = Competence + Identity

Competence is the sum of skills and knowledge, and identity is the sum of cultural attributes, roles and behaviours.

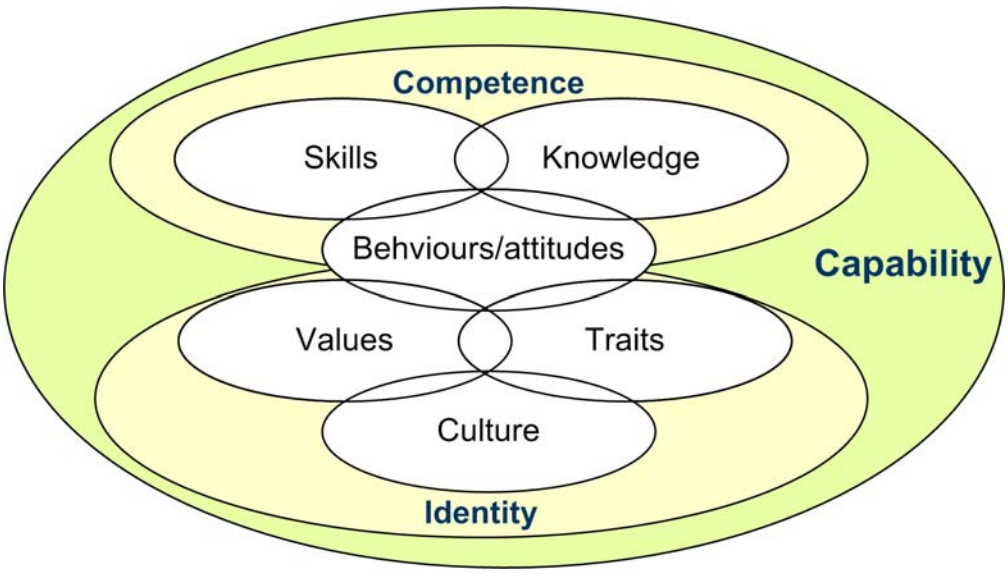

Figure 10 Competency, Identity and Capability

(Bowles, 2003:241)

In the model presented in Figure 10, competency is not a behavioural or cognitive descriptor but a standard of performance formed by skills and knowledge. The value of the competency approach to human capability development is its applicability at individual, team, transitional, industry or even national levels. Such performance standards are independent of the person, place or organisation.

In essence, a competency is what a person can actually do within a real job but involves more than just completing a range of tasks. It requires that performance be assessed to an agreed standard, and that it can be completed in a range of different contexts. A competency allows for a range of variables that may impact upon performance (for example, type of technology, or time). A competency standard is the actual specification or benchmark for the knowledge and skills in application. Nationally, industries developed competency standards for occupations and job families at various defined levels of work or qualifications. These domains may also be customised and contextualised to a specific organisation.

Identity in this context relates to the capabilities acquired in a given performance situation and expressed based on an individual's experience. Unlike competencies, these attributes or qualities are tied to the person, context, their social interaction (relationships) and how they think (cognition). An individual within an organisation may possess identity attributes that are more extensive and enduring than developed through work. For instance, an individual may hold more deeply embedded influences such as language, culture, location, ethnicity, religion and so on.

The drivers for the organisational identity may include more dynamic and specific factors that do not impact upon individuals until they associate with the organisation. These may include:

- technology;
- information and communication;
- product and market placement;

- competitiveness; and
- organisational structure (Castells, 1997:31–32).

Individual competence, capabilities and human capability

Capabilities help distinguish the parameters of an organisation's capacity and purpose. They are the interface between the individual and the organisation. Competencies may be the physical embodiment of the actions required to deliver the organisation's performance. They are delivered through codified processes, content or learning packages that are tied to explicitly stated outcomes.

Identity reflects the relationship between the individual and the organisation, which will be based on the culture of the organisation. Identity draws on the tacit knowledge embedded in the person, the context or an individual's interactions. Organisations seeking to manage capability and knowledge must address both explicit and tacit knowledge.

The development of technical and functional competence and capabilities distinctly differs. A different development approach is therefore required for each aspect of a capability:

- A technical and functional **competency-based** approach concentrates on the development of **knowledge** and **skills** related to performance (that is, training on or off the job).
- A **behavioural** approach to human competence **or traits-based** approach relates directly to **observable attributes** or **actions** which demonstrate or provide evidence relating to the individual motivation, behaviour, effectiveness (for example behavioural events interviews, climate surveys, personality tests, trait modelling, simulations, in-box exercises, etc.). If written as a competence the skills and knowledge descriptors become the basis for valid and unbiased predictors of performance and potential. They specify attributes in behavioural terms that are comparable across populations of specific individuals. The descriptors serve to distinguish typical performance from other levels of performance.

- Traits and human competence may follow a **roles-based** approach which will depend on the individual's **acquisition** and **application** of capabilities required to perform or interact successfully with others in a given job role (for example, case studies, job rotations, etc.).
- A **cultural or values-based** approach **contextualises** and **prioritises** activities appropriate to the beliefs, values, meaning and world view promoted by diverse interests (individual, societal, organisational, etc.) impacting upon a given performance context (e.g. experiential learning, collaborative problem solving exercises, social networking, etc.).

The identification, management and development of a person's capabilities therefore requires different strategies. Knowledge that is routine or related to products and processes can be codified and transferred in a number of different ways such as manuals; training courses and related resources (content); routines, procedures and systems (for example, production flow or control charts); and documents and written communication. This may best fit a technical and functional competency approach.

Non-specialised or identity-related knowledge will be much harder to transfer because of its very nature. Successful transfer of tacit knowledge lies in the individual or shared language, cognitions, beliefs and attitudes, experiences, and shared vision and futures. This may for instance require a human competence approach.

The ability to address both tacit and explicit dimensions and knowledge is transferred cognisant of the individual and the context involved will ultimately influence how the organisation creates competitive advantage.

Aligning capabilities to strategic direction

Capabilities extend beyond the individual. An organisation may hold capabilities at three levels:

- the organisational level;
- the process or team level; and
- the individual level.

Capabilities are not just the collection of competencies and identity attributes. They should reflect the current and future practices at which the organisation needs to excel to constantly perform better than its competitors. Capability requires development of both competencies and the distinct identity attributes an organisation wishes to portray to employees, strategic partners and customers. To the organisation, capabilities fill the gap between utilising available resources to achieve strategic imperatives and competitive requirements.

Capabilities are part of an organisation's strategic toolkit. To be effective they must be aligned to the range of strategic options open to the company. Competing on capabilities provides competitive advantage over organisations using traditionally process-focused management systems.[5]

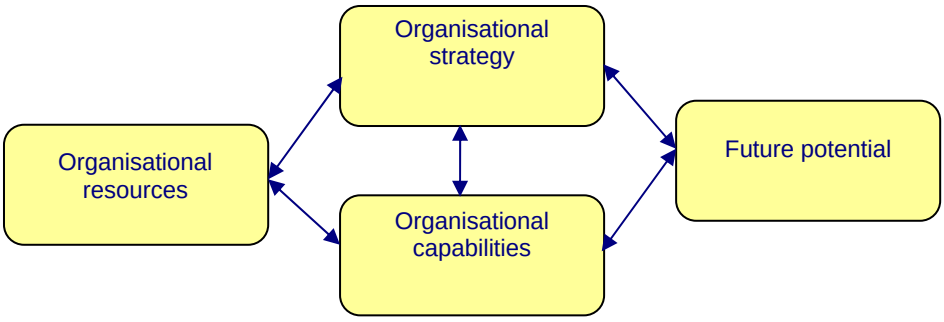

Figure 11 Aligning organisational resources, capabilities and strategy

Competing on organisational resources alone may have to be balanced by the capabilities available to achieve strategic outcomes (Figure 11). Alignment of capabilities—including human and knowledge assets—with strategy and resources is a central factor in the planning and design of organisations. Just as strategies, capabilities and resources vary, so will they be clustered and organised differently. This results in a wide array of organisational designs. As an organisation matures, it will also develop different ways to harness capability strengths and overcome weaknesses.

Capabilities and strategy form the basis for organisational structure. Alignment of capabilities with strategy therefore often entails resolving organisational design and structural issues related to:

- activities that are central to customer needs (customer-facing);
- activities that support priority activities (support);
- activates that can be outsourced;
- activities that require strategic partnerships to acquire the necessary capabilities (for example, supplier or distribution partners); and
- reporting and authority relationships between activities.

Just as capabilities shape strategy, so they are shaped by an organisation's strategy. Stalk, Evans and Shulman (1992) established 'Competing on Capabilities: The New Rules of Corporate Strategy' a number of dimensions and categories under which Kmart and Wal-Mart had organised to deliver competitive strategies. These included four principles of capability-based competition: business processes, superior value to the customer, strategic investments in support infrastructure that links units and functions, and the CEO being the champion of a capabilities-based strategy. They proposed five dimensions to each of these principles: speed, consistency, acuity, agility, and innovation.

[5] Terminology in this area can be confusing. Often, distinctive organisational capabilities are also described as an organisation's core competencies, and the terms are often used interchangeably.

Capabilities, Knowledge Capital and productive capability

All the of forms of capital generate knowledge assets that form the knowledge capital required to maximise productive capacity where current productive capacity is the knowledge capital actually deployed and valued based on contribution to performance

Potential productive capability is the ability of an organisation to access knowledge capital that deliver the capabilities required to meet both current performance and future market demands (Figure 12). KC arises from not just the enhancement of individual capability but the organisation's ability to transcend the level of the individual employee to capture, transfer and harness capabilities within and across all three pools of knowledge capital resources.

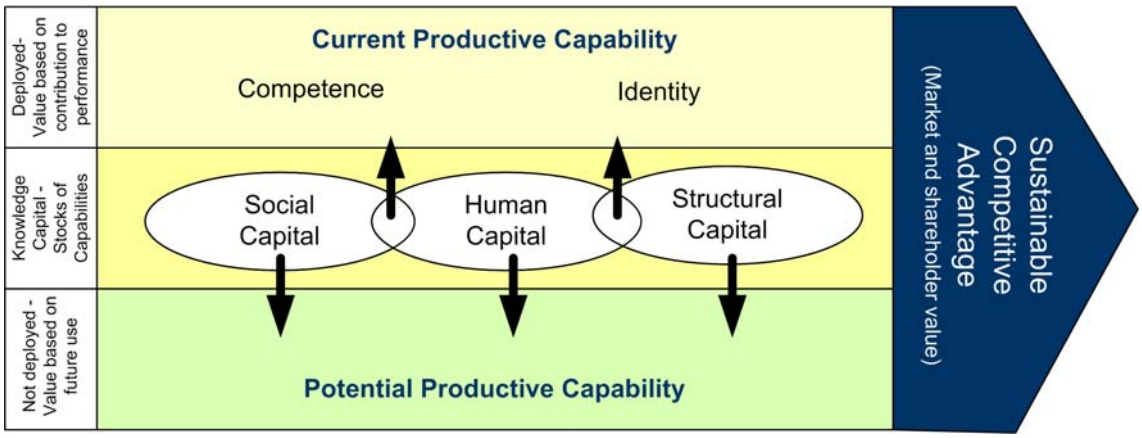

Figure 12 Knowledge Capital, capabilities and organisational competitive advantage (After © Bowles, 1997; Bowles, 1999:24, with permission)

Remember that KC not only supports current productive capacity (market performance) but also encompasses the potential productive capacity of the organisation derived from harnessing capabilities across all the pools of KC. Value can be ascribed to an asset because of its future contribution to potential productive capacity. This, relates to agility, absorptive capacity and other capabilities that may be deployed by the organisation to create or seize opportunities.

KC is the higher order classification for the capabilities all humans may hold and have developed and harnessed by an organisation to achieve productive outcomes. . As such:

HC + StC + SC = Knowledge capital (KC) and productive capability

where human capital is developing individuals to enhance Current Productive Capacity (CPC). Adding Structural Capital (StC) and Social Capital (SC) dimensions to the implementation of HRD to build a full range of knowledge capital extends performance capacity over time: what we have termed Potential Productive Capacity (PPC). Implementing Human Capability Development (HCD) without reference to knowledge and value creation in terms of potential or future opportunities is undesirable. As such, HCD recognises that as stocks of capabilities that affect productive capacity will not reside solely in anyone of the three pools, human capabilities must be developed across all three pools of knowledge capital.

An organisation must achieve CPC to be competitive. However, PPC must also be identified and supported to access the total human capabilities resident in the organisation and available to achieve sustainable success (Figure 12 above, previous page). This allows a more complete valuation of how people contribute to an organisation's knowledge capital.

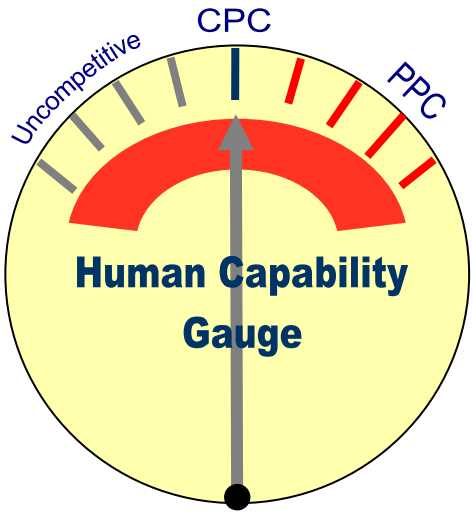

Figure 13 The 'human capability' gauge

For an organisation to be competitive it must be able to meet outcomes through CPC. Beyond that level sustained competitive advantage requires ongoing attainment of CPC and the development of capabilities that contribute beyond just task performance (PPC) (See Figure 13 above). As detailed in Table 6 this can be achieved through HRD addressing six deep capabilities which align with different knowledge capital dimensions where stocks of capabilities reside that affect people and their performance.

Table 6 Aligning the role of HRD in HCD with deep organisational capabilities

Role of the elements of HRD	Deep capabilities enhanced by HCD
Increasing performance and productivity through human capital	• Leadership • Competence
Increasing individual commitment and organisational responsiveness through structural capital	• Employee engagement and alignment to collective outcomes • Work practices and their responsiveness
Accelerating the accumulation and integration of knowledge through social capital	• Learning for agility • Learning for absorptive capacity

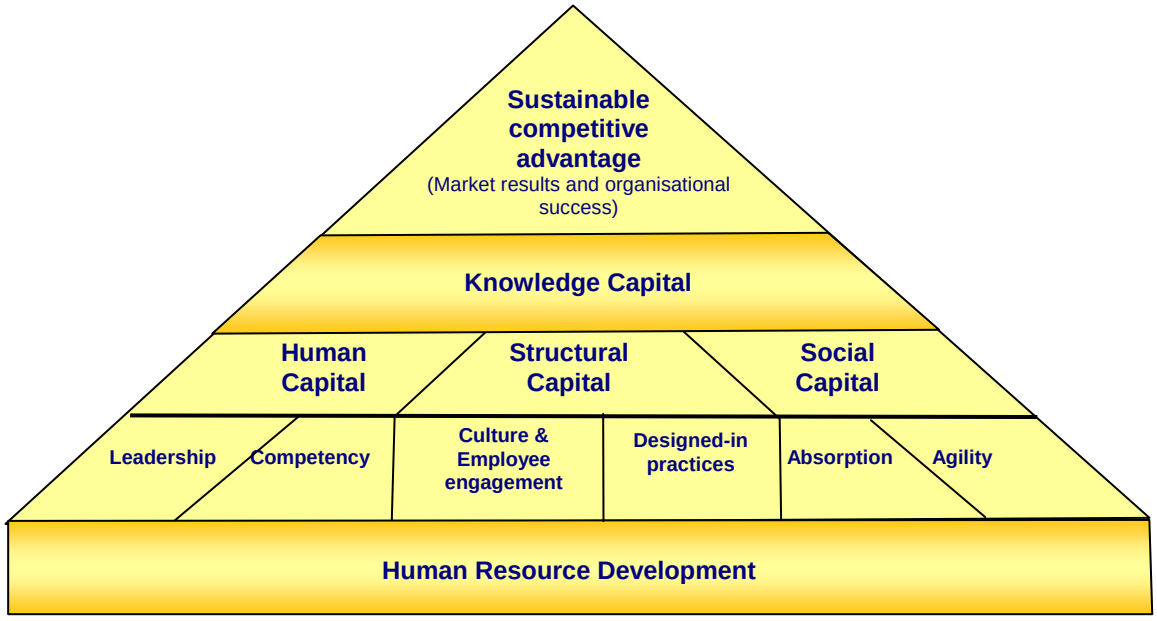

Figure 14 A conceptual integrating HRD and KC to enhance sustainable competitive advantage

As depicted above the implementation of HRD can be conducted to enhance the stock of capabilities in the three pools of KC that affect current and future productivity. Six dimensions to deep capabilities exist that can be targetted by HRD. Based on the above model:

HRD can address these deep capabilities to…	*Build stocks of capabilities across all three pools of knowledge capital*
Leadership + Competency	Human Capital
Culture & employee engagement + Designed in practices	Structural capital
Absorption + Agility	Social Capital

This conceptual model can be refined further to focus on Human Capability Development.

A framework for human capability development (HCD)

Figure 15 below models how the deep capabilities can be enhanced by HRD to address knowledge across the three pools of knowledge capital. In this sense the stocks of capabilities available to the organisation from development of human resources are the human capabilities. This model confirms the value of HCD is evident through the capabilities able to be harnessed by the organisation for current outcomes and to assist transform and meet future requirements. It is a reference model because it is a basis for others to study, interpret and use to modify existing implementation approaches to achieve a more holistic approach to HRD and the development of human capital.

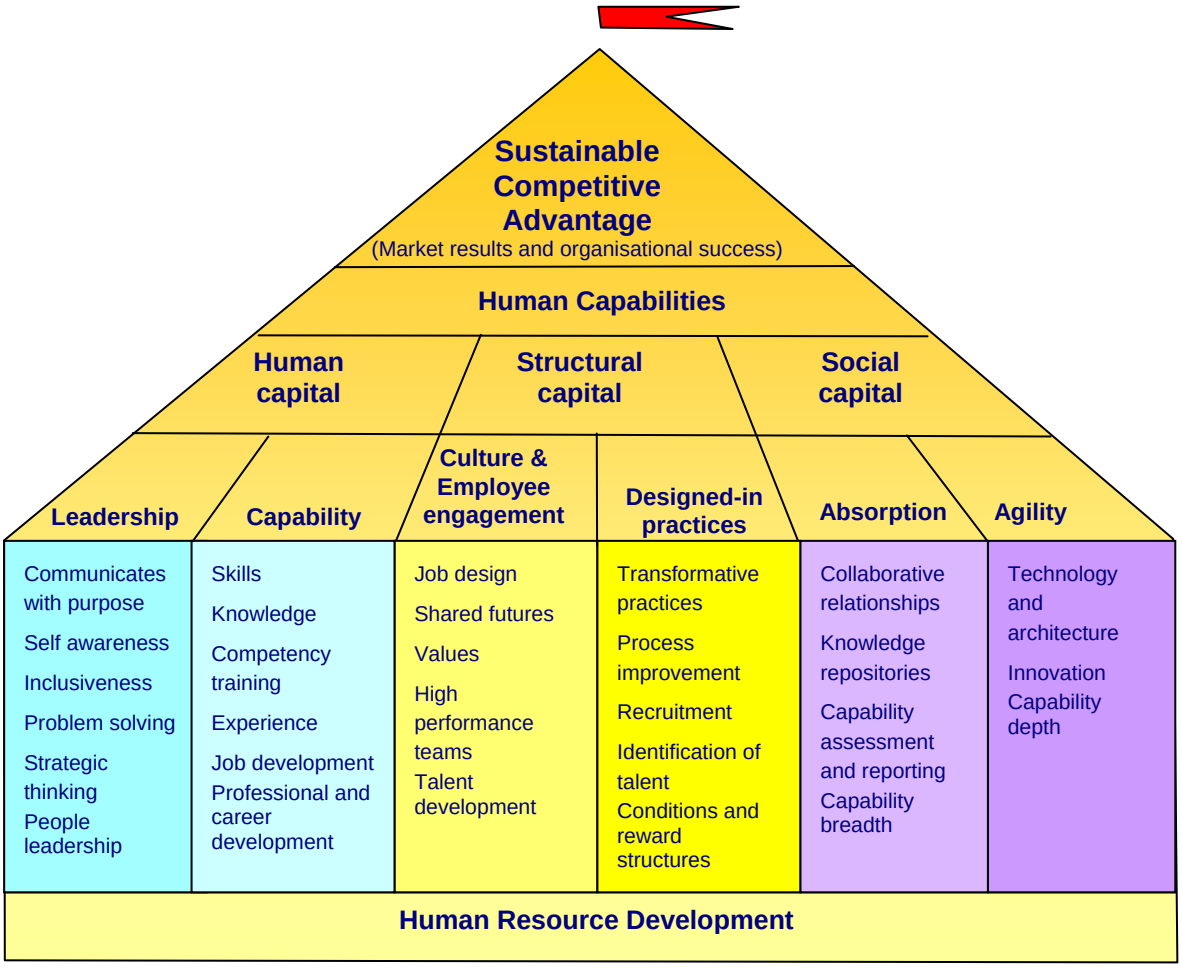

Figure 15 Human Capability Development reference model

Our model is depicted in the form of a circus tent, which provides a neat parallel and wry nod to the noise, diversity, and range of experiences required to achieve this model!

Learning is considered to be a universal factor, omni-present at all levels and through all dimensions of the model.

The remainder of the book will explore each of the elements composing six elements that will underpin how human capabilities can develop deep organisational capabilities by targeting capabilities resident in the three pools of knowledge capital.

Part II Developing deep organisational capabilities

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Applications of human capital to human capability development

Introduction

A focus on current performance is not an unexpected driver for modern organsitions. What the first part of the text has challenged is the myopic drive for current performance capabilities (CPC) that expect HRD to sustain and support a linear relationship between individual competence and job performance. What has been contended is sustainable competitive advantage requires HRD practitioners and senior executives to move beyond a narrow input, current performance focus to a paradigm where future or potential productive capabilities are also addressed. This view raises the investment in CPC to a level where it can link into knowledge capital and overall strategic approaches to an organisation's competitiveness.

The foundation of the suggested paradigm shift was to move from a transactional approach to a transformational approach to HRD. The concept of transformation and transactional approach is central to the study of leadership.

Our study in this chapter will extend our analysis to examine two aspects to human capability resident in human capital; leadership and competence.

Table 7 Aligning the role of HRD in HCD with deep organisational capabilities

Role of the human capital element of HRD	Deep capabilities enhanced by HCD
Increasing performance and productivity	• Leadership • Competency

This chapter will explore the concept of transactional and transformational leadership. Our study will explore transactional leadership and the movement to transformational leadership where there is a focus on the leadership of change.

Leading transformation calls for a deeper understanding of change and a new set of leadership competencies and strategies. Leaders must broaden their understanding and insight about what

transformational change requires, let go of or build off of their old approaches, and guide the process of transformation differently. In particular, they must transform their beliefs about people, organizations, and change itself; they must view transformation through a new set of mental lenses in order to see the actual dynamics of transformation and the unique requirements of transformational processes.

As such 'leaders themselves must transform in order to lead transformation successfully in their organizations' (Anderson & Anderson, 2001:3). This means a shift from the competence relating to doing a leadership role, to the overall capabilities, personally and in the leadership team, to drive transformation.

The human capital resident in leaders and leadership capabilities is complemented by the competencies resident in the workforce.

Competencies are defined and discussed in relation to capabilities. This is important as many organisations use the terms inter changeably or use definitions of competency that vary. In these variations we can uncover how definitions are influencing action.

Leadership and human capabilities

Leadership is the ability to both guide and influence. However, in the current, demanding global and economic contexts, the parameters of the functions and qualities required of leadership are constantly expanding, making a practical/contemporary definition difficult. Many variables and issues impact organisations today and as the number of variables increases, so do the factors that reduce certainty at the organisational level. This reinforces the need for an effective leader to provide direction and clarity.

Foundations of the study of leadership

What constitutes an effective leader can be derived from a range of early leadership theories many of which inform and are integrated into subsequent theories, or can be used to usefully categorise leadership activities.

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The 'Great Man': This was based on the belief that exceptional leaders are born and have innate qualities. These qualities emerge at the time of need or as the person assumes the leadership mantle. This approach reinforces the importance of charisma and strongly reinforces the features of a 'great leader' by examining great men who have led nations, armies, and movements in the past century (for example, Caesar, Napoleon, Churchill, Hitler, Stalin, Ghandi). The models and traits identified were male-oriented.

Traits: The trait approach establishes a list of traits or qualities associated with leaders and are generally thought to apply to leaders in different roles or situations. Traits and roles can, however, be distinctly separate: roles may be used to assist in categorising certain traits (for instance the role of serving customers may require the trait of being empathetic). Bass, Avolio and others have used traits to define the transformational leader. Traits of leaders have also been identified by proponents of Emotional intelligence (EQ).

Behaviour: Behaviourists focus on the visible expression of what leaders do. While data has been collected on the characteristics that leaders display, leadership behaviour has mainly been studied to better classify and appreciate the styles of leadership and patterns of behaviours that leaders evidence.

Situational and contingency: Situational theorists tied effective leadership to a specific context and environment. Practitioners classify styles of leadership according to situations (for example, an autocratic style may be required in an emergency situation). Contingency theorists refine the situational approach to introduce a predictive element into how leaders use styles to not only fit situations, but also to influence future contingencies.

Transactional: Transactional theorists emphasise the relationship between the leader and the leader's staff or those who directly report to the leader. While stressing the mutual benefits derived from delivering outcomes, transactional leaders rely on their ability to deliver outcomes and motivate goal attainment through reward structures.

Transformational leadership: At its heart, transformational leadership is the belief that leadership has to carry a vision to the workforce sufficient to drive the transformation of organisational performance. Beyond all other attributes, the transformational leadership approach confirms the importance of leaders involving others and inspiring followers to achieve a vision. The refinement of transformational leadership arises from the most productive elements of the earlier studies.

Transactional and transformational leadership

Transformational leadership underpins our analysis of Human Capability Development in Part II. It is useful firstly to examine the distinction between transactional and transformational leadership.

Transactional leadership

Transactional leadership focuses on the relationship between the leader and the leader's staff or those subordinates in a direct reporting relationship. This form of leadership places an emphasis on the leader:

- setting clear goals;
- establishing performance targets for each individual and the team;
- identifying performance gaps;
- coaching those in a direct reporting role; and
- gaining commitment to performance and goals through pay, reward, recognition and praise.

The transactional approach to leadership makes a strong link between leadership and the ability to motivate goal attainment and improved performance through reward structures. An emphasis is therefore placed on interpersonal communication and contingent reinforcement (Bass, 1985). At its foundation is path–goal theory and the expectancy theory of motivation, and the importance of the leader emphasising the path to the goal and the rewards gained for successful effort (House, 1971; & Bass, 1985:127).

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Transformational leadership

Transformational leadership has been constructed on the theoretical platform established by Burns (1978) and built on over twenty-plus years of research, writing and thought by Bass (1985a; 1985b, 1990a; 1990b; 1996; 1997; 1998; 1999; 2000), Bass and Avolio, (1990; 1991; 1994; 1995; 1996; 2002), or by Avolio alone (1997; 1995) or with Waldman and Yammarino (1991).

James MacGregor Burns suggested the original 'transformational' aspect to leadership when he wrote that:

> Leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents'. (1978:4)

Burns suggests that the core purpose of leadership is to stimulate others to be leaders, not to remain as followers. Burns (1978) and later Bass (1985) shifted leadership theory so it centred on the promotion of commitment and the capacity resident in individuals. The leader's role was to not only orient action towards goals, but also to build commitment within an organistional culture setting. By promoting and modeling shared visions, values and beliefs, transformational leaders are able to establish an organisational capacity that governs not just performance, but how people work and treat each other (Sergiovanni, 2000:1). The views of Burns and Bass on leadership started over a decade of empirical study to test and validate whether increased capacities and commitment do result in extra effort and greater productivity (Leithwood & Jantzi, 2000:4). Initially, the most convincing research came from the educational sector (Leithwood & Jantzi, 2000:5–6), and it was not until later that a much broader set of studies emerged (Bass, 1999). This research recommended the need to balance transformational leadership with a realisation that transactional leadership practices cannot be excluded from the transformational leader's repertoire. This was encoded in Avolio and Bass's Full Leadership Range approach to leadership theory (see Avolio & Bass, 2002).

Bass and Avolio suggested that the attributes of a transformational leader built upon but transcended earlier theory and discussion. The 'full range' view of leadership behaviours and styles suggests that both transactional and transformational qualities may be found in the same person and in the same leadership role. Therefore, any study of transformational leadership should not place boundaries on what styles or behaviours a transformational leader may require in a specific situation.

Thus, while transactional and transformational leadership may appear to be different (Table 8), leaders may at times call on the full range of behaviours reflective of either approach.

Table 8 Comparison of transactional and transformational leadership

Transactional leadership	Transformational leadership
Builds on [a person's] need to get a job done and make a living	Builds on a [person's] need for meaning
Is preoccupied with power and position, politics and perks	Is preoccupied with purposes and values, morals, and ethics
Is mired in daily affairs	Transcends daily affairs
Is short-term and hard data oriented	Is oriented towards long-term goals without compromising human values and principles
Focuses on tactical issues	Focuses more on missions and strategies
Relies on human relations to lubricate human interactions	Realises human potential—identifying and developing new talent
Follows and fulfils role expectations by striving to work effectively within current systems	Designs and redesigns jobs to make them meaningful and challenging
Supports structures and systems that reinforce the bottom line, maximise efficiency, and guarantee short-term profits	Aligns internal structures and systems to reinforce overarching values and goals.

(Covey, 1992)

Beyond all other attributes, the transformational leader is intensely passionate about involving others and inspiring them to achieve a vision. Avolio, Waldman and Yammarino (1991) confirmed four main behaviours that have come to define the transformational leader:

- idealised influence (or charismatic behaviour);
- inspirational motivation;
- intellectual stimulation; and
- individualised considerations.

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Later, Bass and Avolio (1994) added 'idealised attributes', and further explained these 'styles' and behaviours. The addition of the traits column isolates trait descriptions originally identified within the Style classification.

Table 9 Transformational leadership styles and behaviours

Style	Trait	Expressed behaviour
Idealised influence	Living one's ideals	• Talk about their most important values and beliefs • Specify the importance of having a strong sense of purpose • Consider the moral and ethical consequences of decisions • Champion exciting new possibilities • Talk about the importance of trusting each other
Inspirational motivation	Inspiring others	• Talk optimistically about the future • Talk enthusiastically about what needs to be accomplished • Articulate a compelling vision of the future • Express confidence that goals will be achieved • Provide an exciting image of what is essential to consider • Take a stand on controversial issues
Intellectual stimulation	Stimulating others	• Re-examine critical assumptions to question whether they are appropriate • Seek differing perspectives when solving problems • Encourages others to look at problems from many different angles • Suggest new ways of looking at how to complete assignments • Encourage non-traditional thinking to deal with traditional problems • Encourage rethinking those ideas which have never been questioned before
Individualised considerations	Coaching and development	• Spend time teaching and coaching • Treat others as individuals rather than just as members of the group • Consider individuals as having different needs, abilities, and aspirations from others • Help others to develop their strengths • Listen attentively to others' concerns • Promote self development
Idealised attributes	Respect trust, and faith	• Instil pride in others for being associated with them • Go beyond their self-interests for the good of the group • Act in ways that build others' respect • Display a sense of power and competence • Make personal sacrifices for others' benefit • Reassure others that obstacles will be overcome

(Bass & Avolio, 1994; Gosling, Marturano & Dennison, 2003:16)

In the first decade of the twenty-first century, the view of leadership has broadened. Transformational leadership now incorporates:

- sharing the formation of visions and meaning in the workforce;
- creating cultures and identity that endure beyond individual, team and even organisational goals;
- creating trust and empowering people;
- role modelling ethical and inclusive practices; and
- creating a focus on shared futures while stimulating agility through a workforce able to embrace change and innovation throughout change or innovation processes.

Developing transformational leadership capabilities

> . . . leadership must now be **visionary**, **developmental** and **service-oriented**, **ethical**, **stimulating**, **facilitative**, and **clear in establishing expectations**. The dimensions of leadership that dominated discussions for nearly forty years are only a small portion of what's discussed today in terms of the 'full range' of leadership behavior and styles. (Avolio, 1997)

Developing transformational leadership talent within an organisation cannot occur without a leadership development program. Skill transfer for leadership performance as a managerial task is insufficient. The development program needs to mirror and reinforce transformational leadership attributes. It needs to:

- have a shared vision with workers on the organisation's purpose;
- have logical and unambiguous personal and career pathways;
- have outcomes that can be measured and evaluated;
- be personalised and relevant; and
- be able to harness talent development.

To develop leadership talent requires the creation of a pool or conduit of talent available to meet leadership requirements. Many organisations believe that their competitive advantage resides in leadership development activities that build from within, rather than from buying talent (Tichy

& Cohen, 1997; Fulmer & Wagner, 1999; Zenger, Ulrich & Smallgood, 2000). If acquiring leadership talent is left to chance in the complex, ever-changing commercial world, a leader may not be immediately available and also may be unable to operate at the level of operational complexity required (Bourdreau & Ramstad, 2002:17; Tichy & Cohen, 1997).

Talent also encompasses the total potential an individual brings to an organisation; not just their current capabilities, but also their future potential. A leader with talent is not just of value for what they can 'do' today, but for their potential to contribute to the organisation in the longer term.

Individuals with leadership talent are human resource assets with an ever-increasing value in the marketplace; so valuable that organisations compete to 'buy' talented leaders. As more organisations recognise the value of leadership talent, the pool of available talent from which to recruit shrinks. Hence, there is an urgency to not just identify and acquire talent, but to develop and retain such talent within an organisation using new approaches to leadership development (Michaels, et al., 2001) (see Table 10).

Table 10 Comparative evolution of leadership development

Old development approach	Increasing development trends
Structured face-to-face training sessions	Collaborative and often unstructured learning experiences
External academic workshops/ university lectures	In house; integrating individual learning into work-based systems and processes
Theory and case study analysis focused on 'industries'	Action learning or challenges based on real-world situations
General educational approaches oriented to soft skill (e.g. interpersonal skills) development role and traits	Experiential, self-reflective and cognitive learning
Functional and competency-based training specific to technical and strategic aspects of jobs or product/services	Contextually focused knowledge
Exclusive, select 'anointed' few	Inclusive; discover and promote talent where it emerges
Groups based on level of employment	Multi-level learning
Group 'events' based on career functional or operational need	Continuous and on-demand lifelong learning
End in itself	Means to strategic ends
Focused on culture of learning and individual career future	Focused on building culture and shared vision (individual and organisational)
Industry focused	Supply chain and multi-player focused (within and across industries)

Performance focused	Individual capability and enterprise capacity (future agility) focused

(Bowles, 1999:107; & Kuhn, 2001:9)

A plethora of new and emerging leadership development paradigms can be either part of unstructured learning, or used to augment structured learning and development interventions. As outlined in Table 11, all exemplify how the knowledge intrinsic to the individual can be developed through interchanges and experiences beyond structured interventions that only focus on the development of codified or explicit skills and knowledge.

Table 11 Emerging leadership development typologies

Type	Description	Key benefits (✓) and weaknesses (✗)
Senior mentor	The most basic form of mentoring leaders under development is to provide a senior leader as a personal mentor. This provides the mentee with access to a counsellor and advisor able to offer real insights.	✓ Support can be highly contextual to that organisation and what the mentee can expect to experience ✗ Mentor may be new to the organisation ✗ Ability of mentor to free time to offer support may not occur unless process is formalised
Peer mentoring	This form of mentoring recognises that the value of adult learning often lies in working with others to promote learning or convey knowledge. Leaders at the same stage of development may mentor each other.	✓ Formation of leadership team identity and mutual responsibility ✗ Competitiveness may hinder positive collaboration
Reverse/ 'Removed' mentoring	A mentor is provided who falls outside the mentee's level of employment and core technical skills. Expertise from the mentor will most often be more operationally attuned (technical or professional) than the leader's. The mentor may come from a very junior position and be customer-facing, so giving the leader a sense of the customer's needs. The key aim is to provide the leader with additional insight.	✓ Strong sense of mutual obligation across organisation and levels of employment ✗ May be seen to erode authority structures
Leadership team mentoring	The team approach to mentoring may see a leadership talent pool being given collective access to very senior leaders, external experts or mentors hired specifically to enhance their experience and skills.	✓ Collective sense of worth created by being able to access 'the best' advice and support ✗ May not be tailored to individual mentee needs
Strategic programs	Leaders are placed on specific projects or programs to gain exposure to alternative experiences. Such programs are usually based on immediate and real challenges facing a company/set of companies or the market.	✓ Exposure to high level strategic issues ✓ Cross-disciplinary team ✗ Structured 'event', but fluid learning process can be lost to strategic imperatives ✗ Incorporates action but reflection must be built in
Action learning	Action learning projects structure learning to tie	✓ Individuals can share and compare

	back to real work problems. Usually such processes are conducted in small teams. The teams may be formed in multiple ways. Leaders may come from diverse areas, operationally related areas, or from across a 'supply chain' that is affected by the 'problem'.	responses and actions related to real work problems. ✓ Individuals increase their range and capacity to deal with problems. ✗ It can be difficult to structure learning to reflect real-world situations, so reflection should be used to ensure behaviours adopted during the learning process are acceptable in the workplace.
Situated learning and development	Knowledge is acquired through situated learning interventions. This exposes the learning process to environmental constraints. Interaction between the learners and the problem at hand can be constructed to promote cultural and interpersonal as much as skills acquisition.	✓ Perspectives can change as physical skills are acquired, transferred and deployed. ✗ Learning can often be a sanitised version of workplace settings and applications
Scenario-based learning and development	Scenario-based learning integrates the features of action and situated learning approaches. This is today's replacement for case study analysis. Scenarios are established to help leaders understand real-world contexts and situations. However, scenarios are formed to elicit specific competency and behavioural development.	✓ Able to be targeted specifically to group interactions. ✓ Able to be highly refined to elicit specific psychological events and perspectives from individual participants. ✗ Needs to be well orchestrated and pedagogically sound for learning to be realised and knowledge captured
'White space' learning and development	Often leadership learning is about solving problems or satisfying specific learning outcomes. White space learning is where the process of collaborating and learning together is more important than the actual outcome. Typically, this may involve collaboration in physical or electronic environments where leaders are asked to 'fill in the blanks', solve specific problems, or come to a mutual conclusion concerning an issue being presented.	✓ Encourages collaboration and interaction ✗ Challenges many learning styles and approaches that traditional learning may have reinforced.
Serendipitous learning and development	Serendipitous learning acknowledges that the human search for knowledge may occur as a by-product of the main task, or by luck. Often it is the structure of learning and development programs that impose boundaries and delimit what learning can occur. Serendipitous learning and development activities remove boundaries and actively reinforce self-reflection, self-efficacy and self-discovery. They can be individual or team-based.	✓ Outcomes made by individuals and teams can often be quite profound as they have been 'discovered'. ✓ Maximises individual interpretation and meaning creation. ✗ Requires educational expertise and strong executive leadership commitment to set up. ✗ Where motivation is low or really challenges current learning styles, retention of knowledge can be very low. ✗ Can dilute creation of collective meaning and sense-making during the learning process.
Simulations	This is becoming a very popular form of learning, especially online. Simulations offer opportunities to encounter real world situations that could not be structured in the workplace, for instance emergencies, product recalls, service difficulties, systems failures, etc. Simulations can also be a means to encourage groups to 'play roles' and test reporting relationships. Instructional design of	✓ Encourages rapid knowledge exchange without the need for constant central mediation. ✓ In the electronic environment, such learning can be repeatable and able to be saved and compared. ✗ Simulations are not the real world, but all too often individual and group behaviours

	simulations can also encompass group activities in a manner that enables individual or group 'learning attributes' to be factored into the activity	are extracted from the interventions and held up as 'reliable' guides as to what would occur in the real world.

Individual competence and human capital

This section follows on from the competence versus competency analysis completed earlier in Chapter 4. It needs to be restated this section is not intended to be a treatise in defence of any one school of thought on how individual skills are defined and developed. There are many texts on this issue. Our focus in this short section is to examine how individual competence is related to human capital. A core linkage is through our definition of capability.

Individual competence and capabilities

As examined earlier in chapter 3 the definitions of human capital tend to focus on knowledge (defined in its widest sense) as a capital asset vested in the individual that can be deployed by an organisation or cluster of organisations (supply chain, industry, region, etc.) to enhance competitiveness.

In chapter 4 we 'navigated' the two prevailing competence/competency movements. Both dealt with skills and knowledge. However, the occupation approach (technical and functional competency) were 'silent' on the person and position while very much focussed on the explicit, physical aspects of doing things (technical, process, professional and task related aspects of a job). Behavioural based descriptors (human competence), by way of contrast, dealt with the person, position, and context. Aspects such as motivation, values and other attributes that enabled efficiency and success often sought to make tacit knowledge more explicit and measurable. This was done to define and assess an individuals performs while interacting with others in a given context.

Even with the two prevailing definitional approaches competence was defined as a component, with Identity, of capability. This definition of capability (competence + identity), encompasses

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many different approaches to defining human skills while spanning individual, group, organisational and cross-organisational capabilities.

Removing the blinkers

Organisations often truncating their capabilities by defining and planning for skills in a manner whereby:

1. The complexity of the individuals is not identified or is underrated; and
2. The complexity of interpersonal relationships is not identified or is underrated.

Within organisations, there is a tendency to describe people competence in mechanical terms. We are somehow seen as less than perfect machines. Since the early 1900s, analysis of working life has broken down work into processes and these are perfected, jobs are designed and managers are given supervision criteria. In the early days of scientific management, it was identified that people were less perfect than machines and that there were certain 'behavioural' principles that inhibit efficiencies.

Are people then no more than flawed machines? If we turn this argument around as we have identified in Part 1 of this book we need to recognise humans possess attributes machines cannon replicate easily. The greatest assets individuals have is their intelligence, adaptability and their creativity. These capabilities have been largely ignored when organisational roles are developed for individuals. Instead a sole focus has dominated. This focus is on routine, repetitive skills that can be clustered into core to all positions, common to many positions and function,s or is specific to a job or tasks. Many view such approaches to atomising tasks, clustering and classifying competencies into positions and job families (occupations) as a reductionist, narrow, inflexible, and effectively a 'one size fits all' approach (Chappell, 1996)[6]. Worse still, the number and complexity of national competency descriptions render them too granular to:

- promote integrated assessment and learning activities

- integrate with performance systems
- easily manage assessment and reporting
- keep up-to-date.
- Encompass behaviour aspects instead promoting the view that humans can be made to perform as efficiently as machines.

The argument has to be for a balanced consideration of both technical and functional, and behavioural skills and knowledge that acknowledge the complex nature of individuals and the complexity of interpersonal relationships within organisations.

Individual competence has to be placed in a continuum from skills that extends from current productive capability (CPC) to potential productive capability (PPC). In crude terms this can be depicted on two dimensions:

a) The individual view of the current skills required to improve process, practice and perform in a current job; and

b) The organisational view of the current skills required to attain desired productive outcomes and those capabilities individuals posses that contribute to future career potential (leadership and talent) and enable an organisation to achieve the vision and future required for success.

The individual view is very much focussed on the transactional aspects of doing things. The second is very much about the transformation of practice. The first is the solid core of building human capital. It is where the acquisition of skills and knowledge or related qualifications by the workforce represent the capital asset value of an individual where those skills and knowledge can be deployed by the organisation to attain desired outcomes.

Such a view of human capital value vested in individual competence is counterproductive. It truncates the complexity of the future value an individual can bring to an organisation and the

[6] Chappell, C. (1996*). Quality & Competency Based Education and Training, in The Literacy Equation*, pp. 71-79. Red Hill, Australia: Queensland Council for Adult Literacy

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attributes, herein termed 'identity', that contribute to both current and potential productive capability. As we advance our study it will be demonstrated much of this value is captured in the social and structural aspects to knowledge capital.

But skills and knowledge related to task performance are only one aspect of overall organisational performance. Having the skills to perform does not guarantee successful deployment of those skills. Equally, a competency focus tends to emphasise skills and knowledge that are codified or explicit, while ignoring the bulk of a workforce's knowledge, which is uncodified or tacit.

Deploying an integrated competency framework

A competency framework can be used to promote human capital across the HR life cycle. This includes deployment to support:

- Job analysis
- Job design
- Position profiling
- Individual profiling
- Recruitment and selection
- Skills analysis
- Performance management and appraisal
- Talent development
- Succession planning
- Leadership and management development
- Career development and learning plans (individual, occupation, team and organisational)
- Curriculum analysis and development
- Training and assessment

The use of competencies in the design of systems and process is explored in the next chapter on structural capital. The point here is that a single organisation may include human, and technical and functional competencies within a single framework. In this case the behavioural or human competencies relate to descriptions that encompass individual attributes, especially in relation to

leadership. These are used for development of leaders and to underpin management of talent, leadership development and appropriate performance systems.

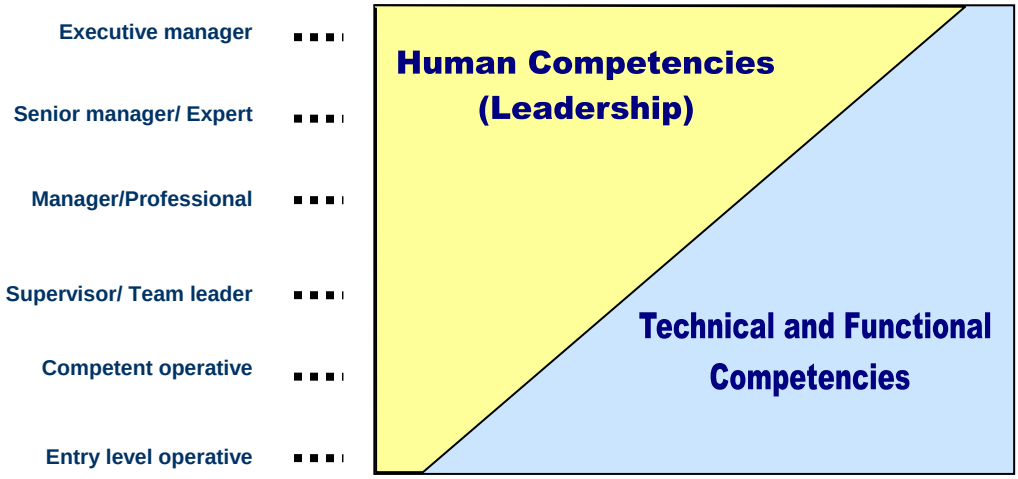

Figure 16 Integrated competency framework

It is also possible to design competencies so they define competencies in a manner whereby skills, knowledge and behaviours are identified within a single description. While more problematic the approaches resides on describing competencies with the technical and functional skills and knowledge and the related behavioural attributes that differentiate individual performance (for a reference point see the workforce skills and qualification system as promoted by the Singapore Workforce Development Agency, www.wda.gov.sg).

The technical and functional competencies are tied to skills and knowledge that define what individual do in a job to achieve current performance and improve current practice. This has to be meshed with identity attributes that focus and motivate individuals to deploy their capabilities. This may be encompassed in behavioural competencies but is likely to be best established by a focus on what we are terming Identity attributes that include behaviours but extend to address tacit knowledge resident in cultural, value and trait-based approaches. As depicted below all need to be considered for an organisation to advance on a spiral of improvement from current performance to attain a shared vision that inspires on-going performance.

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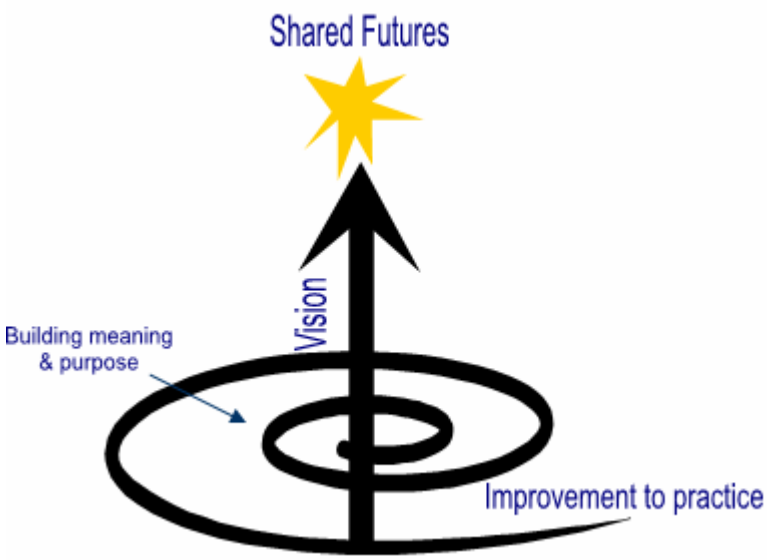

Figure 17 Transformational spiral towards shared futures

Leveraging human capital: Transforming leadership and individual competence

Successful development of individual competency to build human capital requires a focus on both technical and functional, and behavioural competencies. This view then has to be extended further to appreciate the capital value of an individual's contribution to the organisation is not solely resident in the current performance capability (CPC). By placing competency in the wider capability formula that includes 'Identity' attributes more rounded approach to the development of individuals can be achieved. This applies both to leaders and to any individual in the organisation.

As depicted below the aim must be to develop a more mature view of both the complexity of individual attributes and a view of how human capital can underpin current and future performance. Focussing only on skills and ignoring the wider behavioural and associated identity attributes is a truncated approach to the development of capabilities. In turn, a behaviourally oriented approach alone cannot hope to closely align individual motivations with the technical and functional, day-to-day task performance requirements a person has in a job.

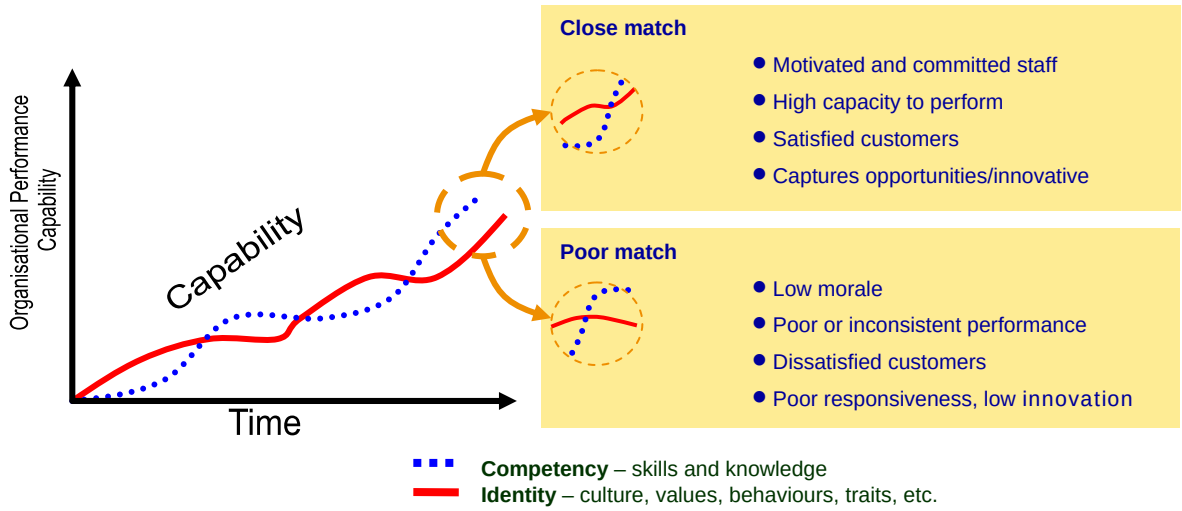

Figure 18 Strategic role of capability development – Beyond competency

Transformational leadership can only be successful where the leader appreciates that all change processes necessitate consideration of the:

- people involved;
- the products and processes required;
- the cultural context; and
- the operational environment that sustains and drivers change.

The transformational leaders will require competent people. This competence is more than just job competence. It is about the individual possessing an array of competencies that would accelerate their ability to perform. The competencies held by an individual will not all be relevant to current job performance or hold equal value to the organisation. As depicted below and examined in chapter 3, value may be tied to the mobility or embedded nature of the skills and knowledge (i.e. the ability for competitors to acquire or replicate the competencies).

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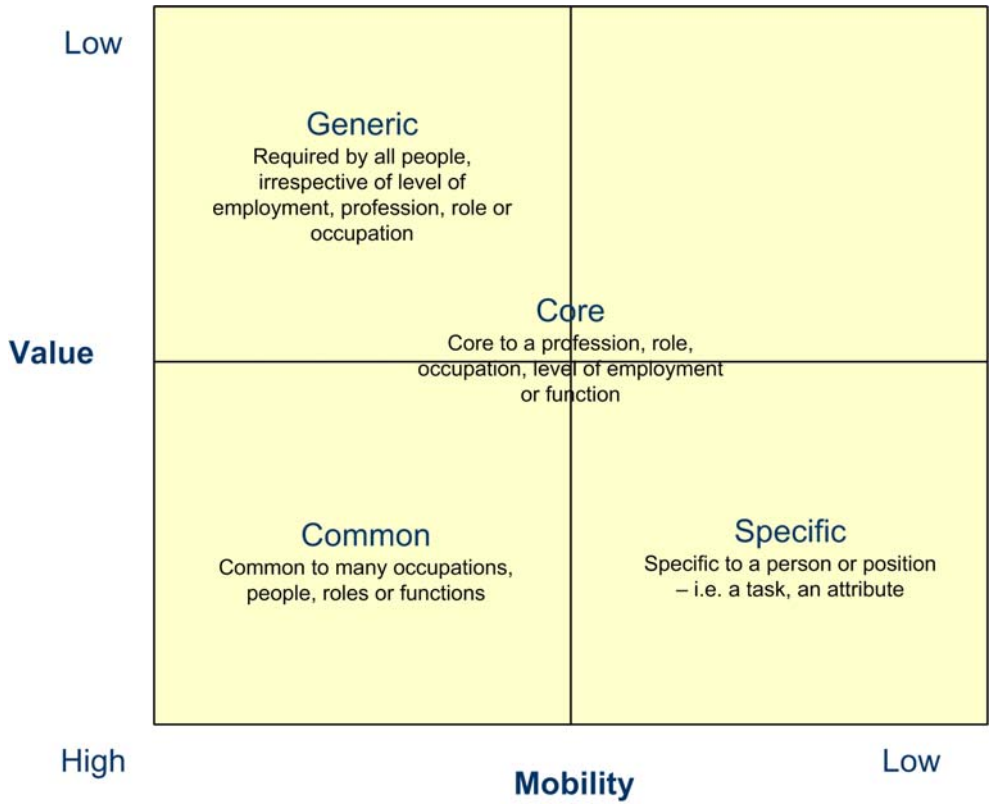

Figure 19 The nature of the competency and value

As depicted above there are four major categories of competence, generic, common, core and specific. Core competencies usually apply to compliance or professional and technical requirements for an individual to hold a position or attain professional or a recognised career status (i.e. to become a certified professional accountant all candidates will have to satisfy a core requirement for competence in aspects of tax law). No everyone can hold this competence but neither is it embedded within one organisation.

Specific competencies relate to the granular skills and knowledge required to performance in a specific context, a specific tasks, or to achieve a specific outcome relating to a defined position.

Contingent on availability of competent recruits, the absence of competencies in the low mobility and low value quadrant confirm the inverse relationship between mobility of competence and value as perceived by an employer.

Many national competency frameworks spawn courses and qualifications that make generic and common competencies widely available in the labour market. Indeed, some would argue the specific competencies and resulting training produce 'competent' people that lack the ability to actually do the tasks in a real workplace. However, specific competencies require application in the workplace to not only contextualise learning, but to embed practices in that workplace into how the competencies are deployed. The more the specific competencies are applied in a workplace, the more they can be embedded.

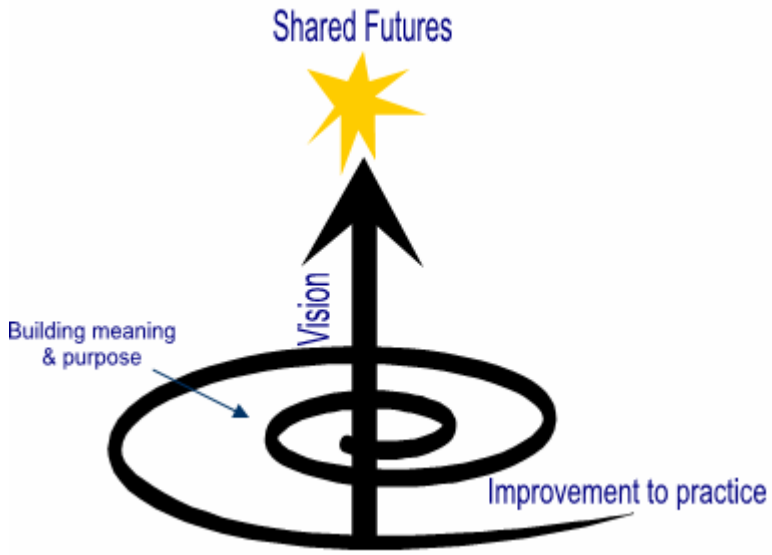

Figure 20 Transformational spiral towards shared futures

Competence has to be harnessed to an organisational purpose. Individual engagement to develop shared futures is one aim of the transformational process. Transformational leaders recognise that vision, values and purpose are not static: that all of the foundations for successful and productive human interactions cannot be 'locked in place' for the duration of a change process. As Figure 20 depicts shared futures result from a shared vision that can be expanded as meaning is developed through individual and collective interaction.

Applications of structural capital to human capability development

> No complex organization can remain healthy and viable for long without the capacity to anticipate, execute and adapt to change (Ellingsworth, 1976:299).

Introduction

Structural capital refers to the knowledge assets possessed by the company that underpins physical infrastructure, business and information systems, processes or philosophies that enable an organisation to orient effort in its own contextual to achieve agreed outcomes.

Table 12 Aligning the role of HRD in HCD with deep organisational capabilities

Role of the structural capital element of HRD	Deep capabilities enhanced by HCD
Increasing individual commitment and organisational responsiveness	• Employee engagement with and alignment to collective outcomes • Work practices and their responsiveness.

As suggested in the table above organisations can systematically orient HCD to enhance capabilities by developing structural capital associated with structures and 'linking processes' (Van der Bent, et al., 1999:379) that address employee culture and engagement (Weick & Westley, 1996:442), and self-designing systems and work practices. Following Purser and Pasmore (1992), organisational structures and systems that act as self-diagnosing devices can give rise to adaptations in the face of changing environmental conditions, and these systems thus act as a storage site for learning in the organisational rather than the individual sense

The structural capital dimensions emphasise HRD's redefined relationship with tacit knowledge components that can assist with the engagement of individuals at team and organisational levels.

Employee engagement and alignment to collective outcomes

Organisations can build structural capital (StC) in the systems and processes used to engage employees and achieve convergence of action. This activity is strongly linked to the 'identity' attributes previously introduced as the second component, with competency, that forge capabilities (See Chapter 5)

Identity, culture and the convergence of action

Fundamentally, identity is the source of meaning for individuals (Castells, 1997:6; Whetten & Godfrey, 1998:163). In the early 1990s, researchers began in earnest to examine identity as a means to provide a meta-approach encompassing many of the human elements required to explain how individuals and organisations perform and gain advantage within an organisational context (Dierickx & Cool, 1989; Dutton & Dukerich, 1991; Giddens, 1991; Dutton, Dukerich & Harquail, 1994; Abbinnett, 2003). These studies highlighted that:

- many resources typically associated with individual or organisational performance were not 'tangible' or easy to transfer;
- many tacit beliefs and attributes of a workforce were not considered as assets, or collectively managed (for example, individuals' identification with an organisation's goals, motivation and commitment otherwise know as engagement);
- people defined themselves through work; and
- organisations were not acknowledging how their identities were being shaped by individuals and their interactions.

In effect, identity was supplying a means to study and isolate the 'meaning of events and even influences' and the 'criteria for deciding the success, failure, effectiveness, or value of actions and outcomes' for staff and organisations (Gioia, 1998:23). Identity has also been viewed as:

> an individual, group and corporate capacity that stimulates the relay of visions, practices and decisions relevant to agreed outcomes. It is an

> essential component of building commitment, internally and externally, and orienting individual actions to collective purpose (Bowles, 1999:66).

Individuals, groups and organisations may hold multiple identities that provide meaning. The components being combined to forge identity and meaning may therefore vary with any organisational or performance context. Organisational, group and self-identity are forged by common components in different ways. Identity at all these levels is forged by the need to 'belong' or possess a sense of not only 'who am I?' or 'who are we?', but also how people differentiate themselves to others. Presented in this manner, identity is both a construct defining the characteristics of the 'self' and a basis for action that affirms and sustains identity (Gioia, 1998:19). 'Meaning', on the other hand, is more about the 'symbolic identification' by the individual with the purpose of the action (Castells, 1997:7).

While the search for meaning and identity may be common, its construction differs. Gioia identified three key factors influencing how individuals form a sense of organisational identity (1998:21):

- the purpose taken by organisational members to be central to the organisation;
- what distinguishes the organisation from others; and
- what is perceived by individuals and teams to be the enduring factors that guide current action, interaction and information, while building on the past and presumably informing future action.

Individual and collective identity may be refined and developed as individuals interact and associate within an organisation. The formative three factors shaping individual and collective organisational identity may occur through:

- subscription to the core visual and symbolic iterations from the organisation (brand, documents, information, etc.);
- individual needs and preferences (personal alignment with the organisation as it offers a pathway to satisfy future requirements);

- expectations alignment (personal wishes and hopes satisfied through organisational actions);
- endorsement (organisational support and validation of individual aspirations and purpose); and
- reinforcement and recognition received as relationship evolves (Castells, 1997:22; Whetten & Godfrey, 1998; Kim, 2000:317–19).

Individual and collective identity influences organisational culture through the shaping of beliefs and values. These can vary depending on the individual's level within the organisation and the types of networks or interpersonal relationships engaged in, and may be simply defined:

> **Beliefs** are shared truths based on tradition, religion, emotion, and provide a common guide for behaviour.
>
> **Values** are shared personal judgments/preferences—about what is considered good/bad, or liked/disliked—that serve as broad guidelines for social life.

For many leaders, the prevailing organisational culture is perceived to be directly linked to their own roles and responsibilities. Owner–operators or entrepreneurial leaders most often 'imprint' upon others and develop an organisational culture with the beliefs and values they personally espouse. Some line managers may also feel a close affiliation to the link between organisational culture and individual beliefs and values. For instance, leaders responsible for external customer relationships may be particularly attuned to how individuals internal **and** external to the organisation perceive the organisation's reputation, brand, promise or commitment to the customer. All these are identity factors that reinforce the value of the company and its 'service culture'.

Bormann (1983) argued that organisational culture was built upon the expression of values and beliefs workers shared. He used the term **symbolic convergence** and conceptualised **shared purpose**.

> A public consciousness is a crucial element in a group or an organization's culture. Culture in the communicative context means the sum total ways of living, organizing, and communing built up in a group of human beings and transmitted to newcomers by means of verbal and non-verbal communication. Important elements of an organization's culture include shared norms, reminiscences, stories, rites and rituals that provide the members with unique symbolic common ground (Bormann, 1983:100).

Bormann contends that the symbolic constructs of reality shared within a group evolve new patterns of reality. He argues, for example, that technological change—the revolution in computers and information technology—is *preceded* by symbolic change. According to this argument, the preconditions for change are created symbolically before the technology is introduced. Therefore, the basis for responding to organisational contingencies is built into how an organisation already understands its core purpose and how well individuals can collaborate to achieve these outcomes.

Building communities (groups of individuals) with a culture of commitment that extends beyond the individual to collective outcomes. Identity building is crucial and the formation of shared meaning essential to sustain social interaction in the community.

Establishment of shared meaning occurs over three stages (Bowles, 1999:142):

1 co-orientation

2 convergence

3 shared meaning.

Co-orientation involves individuals bringing their unique orientations together to coordinate their meanings. It is a learning process in which people watch others and develop response patterns that co-orient them towards the practices and procedures used in the workplace (Johnson, 1977:68).

Building visions that create purpose and innovation must address two key factors:

- **alignment:** in which decision makers agree on and affirm a basic direction; and

- **engagement:** involving the team required to move in a particular direction.

Both alignment and engagement are processes involving leadership interaction and co-ordination towards a vision and a purpose. Alignment may involve every organisational member or a particular group of participants. Either way, there is a communicative process to gain agreement. Engagement encompasses all organisational members involved with the implementation of the plan, and involves the management of meaning towards symbolic convergence.

Alignment to purpose is critical. However, without engagement, two different realities may exist within an organisation. One may be the leadership view of what the organisation is and will be, and the other may entail an individual employee's vision of what it is and will be, especially in relation to collaboration with others to achieve this end. Purpose can change, but building visions for the future is a far more powerful tool for orienting individual and collective purpose. To build shared meaning, an organisation must first view itself as a community of individuals with values and beliefs they may hold individually or share. Co-orientation needs to occur across different subsets of the organisation and external contributors to ensure that collective actions can deliver strategic outcomes. Organisations seeking to build shared futures need to promote a holistic approach to the communication of vision and purpose.

Convergence is typified by individuals working towards agreed outcomes while individually they may hold outcomes appropriate for other networks, groups or situations. For instance, a worker may attune with and converge towards outcomes agreed at the place of work, which may differ from other important outcomes sought as a member of the school's parents and friends association or a labour union, or as a coach of the local football team.

The task for leaders is to identify and address the restrictive practices caused by different purposes, values, beliefs or meanings that individuals ascribe to work practices and encourage individuals or teams to communicate holistically across the organisation. Attempts to achieve

this by relocating work units, job rotation and other practices eventually fail, because cliques exist across the functional divides constructed by organisations.

Shared meaning refers to the construction of an agreed purpose that is underpinned by well-established values and beliefs. It has to be more enduring than goals and objectives and it has to reinforce the prevailing organisational culture. For transformational leaders, this may mean determining a comfort zone within which they can operate and develop convergence of purpose. Such a comfort zone is predicated upon conveying meaning to all members that the organisation's desired outcomes may not necessarily be of collective benefit all of the time. However, individuals need to know how to contribute to plans and actions that are important to them and how what is important to them is instilled in the meaning being reinforced by all communication.

Figure 21 models leadership aimed at stimulating co-orientation towards an enduring purpose. Immediate engagement is achieved through convergence of action towards immediate performance outcomes. This not only involves the leader identifying goals and ensuring the competencies and identity attributes[7] required to achieve performance are present in their immediate subordinates, but also suggests that there is a much wider imperative to construct a vision of the future that everyone can share. This vision does not have to replace individual aspirations, but it has to be one that staff can attune to and commit to achieve through purposeful performance.

[7] As discussed in Chapter 4, the cultural values, behaviours, roles and traits

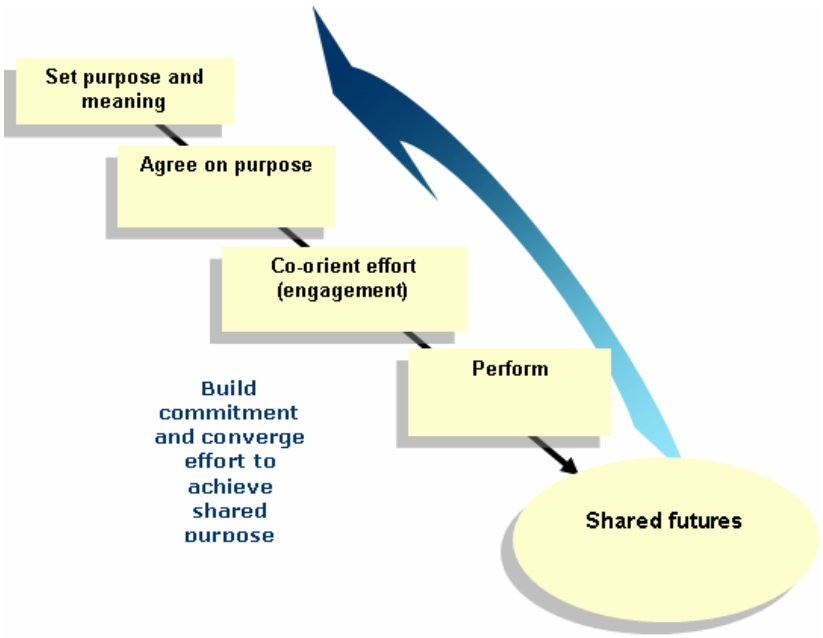

Figure 21 Building identity through convergence towards shared futures
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In many organisations today, establishing Shared Futures encompassing all the steps above is central if HRD work being undertaken is to be harnessed to comprehensively address current and future performance requirements. The terms 'employee engagement' and 'culture' are being used to describe exactly the process outlined above. There is a strong recognition that it is important to provide context as to how all employees can support the delivery of organisational goals. This is particularly true as organisations move from transactional management using strict policies and procedures to leadership approaches empowering employees. It is worthwhile to recognise that this approach is not only restricted to 'softer' views of management but acknowledged as critical in supporting areas such as governance, responsiveness and innovation.

Designed-in capabilities

In an operating environment where the acquisition, development and retention of human capabilities is an important organisational tool to achieving survival and success, traditional notions of organisational design and mechanisms for controlling individual learning must be

discarded. Designed-in practices is where the organisation develops the capability to continually renew the organisations structure and its people processes.

Organisational structures and their impact on job design

Job design and job definition have assumed a 'process' role in organisations: job design has been used as a tool to achieve operational efficiency as opposed to effectiveness. Efficiency focuses on functional activities to achieve process outcomes, while effectiveness focuses on strategic objectives to achieve organisational performance and environmental fit.

Previously, job design has focused on functional roles within the organisation rather than on the development of integrated outcomes towards organisational performance. This division between operational and strategic objectives can be seen in many other aspects of organisational activities.

Changes to organisational structures have led to the integration of strategic and operational activities. The middle management layer which previously separated operational and strategic activities now no longer exists in many organisations and this must be taken into account in they focus on the urgent (operational) and do not have time for the important (strategic).

Job design must identify the level of self-direction and autonomy in a job, and how the knowledge and decision-making networks operate and are directed towards organisational objectives (see Figure 22). These factors can then be built into the job design.

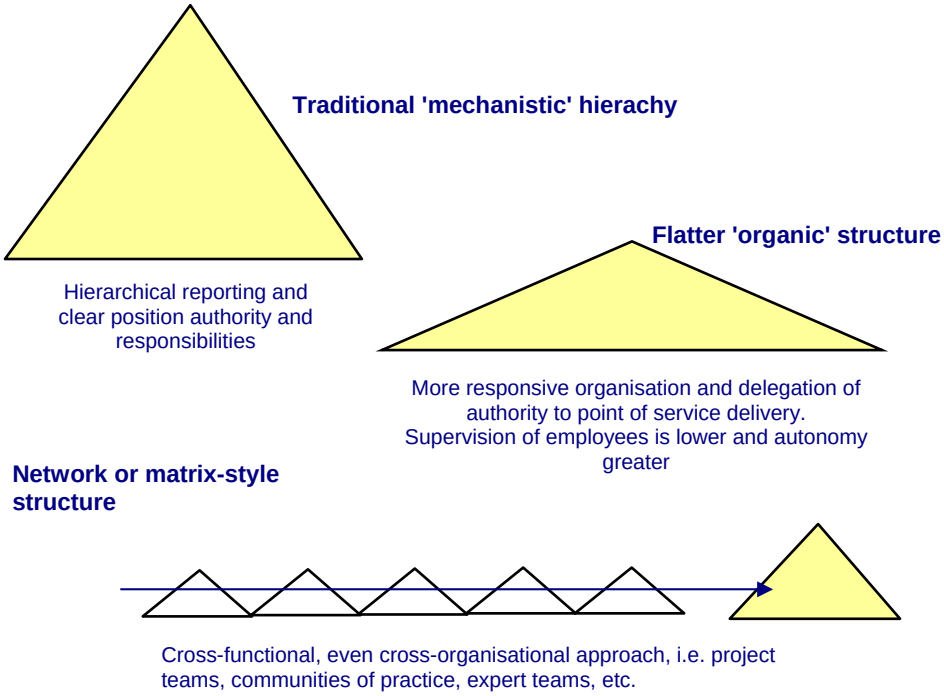

Figure 22 Organisational structure change necessitates change in job design

Organisational structures and job design

Job design increasingly integrates strategic and operational objectives within jobs. The range and scope of job design therefore must relate to the job's complexity and reporting relationships in terms of the organisational structures in place, as outlined below.

Functional organisational structures are based around roles within organisations. Occupationally specialised groups are arranged together to achieve a great degree of efficiency in resource usage. Grouping functional specialties together minimises duplication and provides efficiencies through economies of scale. The major problems associated with functional organisational structures are that they limit individuals' perspectives to functionally specific areas, and expertise is developed along functional lines rather than on ability to produce outcomes. Outcomes in organisations are not limited to one function in the organisation.

Jobs in this form of organisation will be based around functionally specific tasks and the level to which these have to be performed. Definition will be based around function within the organisation.

Divisional organisational structures attempt to build organisational units based upon areas of results, which will operate independently, each having their own functionally specific areas. Divisional structures are common within automotive companies, for example, there may be separate divisions for trucks, components, cars, etc. This structure provides managers with generalist strategic knowledge, thereby providing a constant approach to management development. The major problems experienced with divisional structures are duplication of effort, and competition within the company, which may be debilitating.

Functional job definition will still be the guiding principle for job design, but a wider range of influences on job design will exist.

The simple organisational structure or centralised-flat organisational structures is primarily seen in small businesses. Centralisation of decision-making and the organic nature of the organisation tends toward information overload at the top, and limits strategic analytical capacity.

In many organisations structured in this way, role and job definition is not solidified, and work is project- and outcomes-based.

Matrix organisational structures have a dual chain of command. A functional structure is used to achieve economies of scale but overlying this are managers responsible for specific products, projects and programs. The benefit of matrix organisations is that they can facilitate coordination of a multiple set of complex and interdependent projects. The major disadvantage is that they create confusion in reporting that can promote power struggles.

Network organisational structures have a small core that relies on relationships both internal and external that provide skills and resources for particular projects. Because of the flexibility of network organisations, and the limited need for functional structures, start-up costs for projects are low. The major problem associated with network organisations is the low level of commitment developed to the core organisation by participants.

Developments in job and work design

The basis of job design is the identification of the components of a job through analysis of existing jobs. In the traditional view of job design, the focus was on the process and function. This changed as the importance of the human factor was recognised, and this change has been complemented by the changes in HRD. Job design today incorporates not only process, function and the human factor, but also the individual's capacities. Job content, role content and industrial democracy all play a part.

The basis for identification of jobs must be the identification of required functional components of jobs. Scientific management principles provide us with the idea that analysis of job tasks can be linked to more effective work towards outcomes.

To combat lack of motivation, inclusion of behavioural competencies were identified and an attempt was made to integrate them into job design. People doing repetitive job tasks isolated from real product outcomes did not achieve their productive potential. Job content, job roles and job enrichment all recognise the behaviours of individuals at work.

Identification of job content and structure recognises that people in organisations are not machines but that individual behaviours affect individual job performances. Job design requires an understanding of behavioural principles to ensure that individuals are committed to organisational performance. Improved performance was achieved by including a range of tasks within a job role.

Role content is the identification of individual jobs within organisational contexts. Relationships of individuals to groups within the organisation are as important to performance as the job content or the job definition. Job content describes the individual attributes of a particular job, whereas role content describes the relationships between participants within the organisation.

Industrial democracy provides some individual control over work practices and procedures. Alienation from jobs and tasks arises from two sources: when individuals are separated from the satisfaction achieved in completing a product, and when they have little control over their work.

Incorporating greater self-direction in job design satisfies two purposes: increased job satisfaction, and reduced organisational resources needed to manage staff. Quality management systems provide the best example of self-directed work for teams.

Structuring work within organisations

The structuring of work reflects organisational structures in the balance between specialisation and generalised integrated work tasks. Factors that influence work structure are job specialisation, job rotation, job enlargement, job enrichment, and work teams.

Arising from manufacturing processes, making jobs as simple as possible meant that workers could be used to perform individual tasks in a process. Finding the most effective way to complete these tasks and having workers replicate these was identified as the best way to achieve productive efficiency.

Job specialisation is an effective way of performing routinised tasks. All jobs contain a component of routinised tasks. However, where job specialisation does not recognise the human component of labour, alienation occurs.

Job rotation is an attempt to reduce the detrimental effects of specialisation by moving employees between a number of jobs, usually on at the same level within the organisation. Job rotation broadens the employee's experiences, and reduces the likelihood of boredom with jobs. In addition, job rotation has been used for management development to give managers an understanding of business by rotating them through operational jobs and developing executive managers by rotating them through operational management roles.

Problems associated with job rotation include increased training costs, waste of individuals' achievements of efficiency, the number of employees learning new tasks at any one time, and possibly lower commitment to the work group and the organisation because of constant changes in working relationships.

Job enlargement is the reintegration of tasks in jobs in an attempt to provide meaning for individuals. Job enlargement involves performing the whole process instead of specialising in

completing just parts of a process. It recognises the alienation caused by isolating individuals from the final product or service.

Job enrichment gives employees greater control over their work. Greater control of work processes produces greater commitment from workers to work. As part of the process, employees assess and correct their own performance, increasing engagement with both task and organisation.

Teams are an attempt to reintegrate work while retaining the efficiencies produced by specialisation. Two basic types of teams exist: integrated work teams and autonomous work teams. Integrated work teams are assigned tasks and they can delegate and arrange task completion. Generally, all team members will be on the same level and will have an appointed supervisor. Autonomous work teams are more vertically integrated and have greater discretion to act.

Job design

Job design is a process of defining a range of organisational tasks for an individual to perform. Because in most cases it is not possible to match individuals with job roles within organisations, jobs in the past have been designed around generic skills; knowledge and abilities to deliver specified results for organisations.

Job design may be based around processes, completion of specific tasks, more generalised competencies and traits identified as generic to the job level and function, or a list of performance criteria may be listed for the job or key results that the incumbent has to achieve. The diverse ways of analysing job content and job outcomes has in the past made it difficult to achieve any consistency in cross-organisational or cross-functional HRD activities.

In the design of new jobs and the analysis and redesign of existing jobs, understanding the above principles helps to develop jobs consistent with organisational structures and the generic traits previously identified in these types of jobs.

Profiling individuals within organisations

Capability profiling requires the identification of the skills, knowledge and identity factors that support the ability of the organisation, team and individual to attain required outcomes. The outcomes indicate the necessary standards for learning, performance and capabilities when responding to current and future customer and market demands.

Functional job profiling

Profiling of individuals within organisations has reflected traditional management principles; that is, jobs and components of jobs have been seen as functionally specific. Jobs therefore have been described in terms of the functions or tasks they fill without reference to the cultural or communications environment of the organisation.

While treating jobs as cogs in the machine does produce structural efficiencies, it does not recognise the truly productive aspects of individuals; that is, the ability to adapt to changing circumstances and the individual ability to innovate and find solutions to problems. Having individuals fit into clearly defined roles reduces capabilities for performance and inhibits innovation.

Profiling human capability

Business profiling as it is currently undertaken within an organisation identifies any skills gap in the performance of jobs. Skills-based needs analyses identify the functional expectations of positions. These analyses are most successful where specific functional positions are based on job activities within processes that achieve defined process outcomes. A skills-based profiling of jobs has limited effect in identifying the knowledge components of jobs.

Skills-based descriptions of outcomes and jobs echo more mechanistic forms of organisational design and tend to lock-in structural relationships and many different forms of central authority and control.

Psychological testing of the knowledge or non-skills components of a job has been limited to general traits gauged against existing, 'proficient' office holders. It has not focused on an individual's capability or capacity to perform.

Traits have been measured to determine behavioural compatibly between individuals and job roles; these have been retrospective judgments by researchers and managers in terms of individual traits that have been seen to relate to performance in particular jobs.

The identification and delivery of knowledge components of jobs, at least at the management level, have been provided through educational streams; universities have provided functional job-related vocational education through post-graduate study. Management competencies have at least indirectly been identified in relation to general educational qualifications.

Capability inventories are a dynamic business tool: they are the embodiment of the competencies, cognitive factors and experience required to achieve competitiveness as well as the basis for framing training and development, career development and organisational development.

Table 13 identifies some of the differences between the techniques and outcomes of skills profiling (through a skills-based audit) and capabilities profiling (through a capability inventory) within organisations.

Table 13 Comparison between skills-based audits and capability inventories

Skills-based audit	Capability inventory
Tasks can be described using a single descriptor	Tasks vary with time and situations and interpretation of data must consider these variables
Information is based on current performance data and projections	People's perceptions are an important variable to measure
Reality can be quantified	Actions define current reality
Logic-based	Value-based
Performance is real and can be quantified if the correct instruments are used	Individuals can adapt to context to complete task
Training-embedded behaviour	Training continually redefines culture
Tasks define jobs	Tasks may define multiple purposes and futures
Individuals need job descriptions to define performance expectations	Job descriptions rarely reflect current performance reality but help to describe expectations and career pathways

Skills-based audit	Capability inventory
Skills analyses define the portability of individual competencies between jobs	Capabilities define multiple futures
Defines current job roles within organisations	Identifies organisational performance needs
Provides efficiency	Provides adaptability
Focus is on job performance	Focus is on organisational outcomes

Skills-based profiling focuses on functional processes and produces task efficiencies that are, however, one step removed from organisational outcomes. The focus is on the processes involved and not the outcomes needed, which reduces the ability of the organisation to adapt to changes in the operating environment.

Capability profiling, on the other hand, is linked to strategic outcomes for the organisation and readiness to continually change and meet new challenges. Participants' roles are directly related to the organisation's key result areas. Functional efficiency is reduced but innovation and agility are increased.

Linking individual and organisational capabilities

Within the organisation, individual and organisational performance must be aligned to ensure that energy and effort are not wasted. The key to the process of aligning individual performance to shared outcomes is the ability to develop a 'shared mental model' or 'shared frame of reference' that can drive activity within groups or within the organisation to provide a focus for individual efforts. Table 14 identifies the types of alignments necessary between organisational and individual capability management to ensure a shared focus. This is where a leader plays a critical role. They are responsible for ensuring the alignment of capability, at all levels of individual application, to the performance variables. This is detailed below.

Table 14 Capability alignment with performance outcomes across all levels in the organisation

Performance variables	Organisational level	Group/Team/Process level	Individual level
Strategic goals/	Is the organisational purpose known and are strategic goals 'in tune' with the reality of	Do the process goals enable people to work together to achieve both organisational and	Are the professional and personal goals of individuals consistent with that of the

Performance variables	Organisational level	Group/Team/Process level	Individual level
Purpose	economic, political and cultural forces?	individual ends?	organisation?
Performance	Does the enterprise system provide structure, policy and creative frameworks that support improved ways of attaining performance?	Are processes designed to permit individuals and groups to modify systems to ensure that they meet anticipated contingencies?	Are individual styles of learning and creative processes respected?
Expertise	Does the organisation select for capabilities (e.g. for cultural 'fit' as much as 'skills')?	Are processes and teams developing expertise to respond to change and new customer demands?	Do individuals have the applied competencies to master both task performance and work in a specific context?
Future capacity	Does the enterprise manage human, infrastructure and social capital to achieve its mission/goals?	Are management systems and processes designed to encourage learning that improves current and future capacity?	Does the individual want to perform, learn and respond to customer demands?
Cultural identity	Is there a sense of shared identity and convergence of values, beliefs and norms to support desired performance?	Are interrelationships identified and managed to encourage diversity, creativity and innovation while achieving team and process outcomes?	Is the individual committed to work and innovation while respecting divergent views and ideas?

(See also Ruona & Lyford-Nojima, 1997:791)

Designing jobs for individual performance

The chart in Figure 23, below, simplifies the process of job design within an organisation. Job design identifies performance measures that focus individual efforts towards objectives that lead to organisational and individual development.

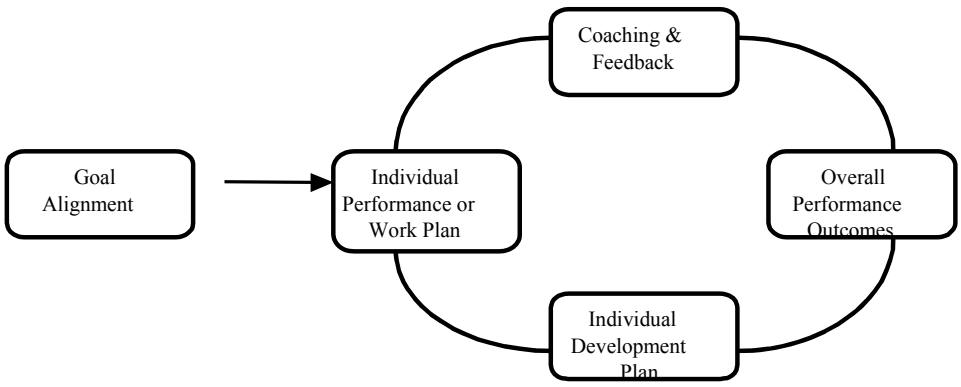

Figure 23 An integrated job design and performance cycle

The HRD function within many organisations enables the provision of skills and knowledge, socialises people, and underpins how individuals and groups can become more effective. There may be poor linkages between recruitment, job design and desired organisational results. HRD professionals draw on a range of options—training and individual development strategies, and redefinition of jobs—then close the gap between these three variables. A primary concern for HRD professionals in matching individual and organisational development is correlating the relationship between individual capabilities and the way they can contribute towards organisational performance.

Needs analysis and organisational performance

The primary skills identification exercise carried out by HRD professionals within an organisation is a skill analysis. This identifies existing skills and how these skills relate to generic job definitions. Conducting a needs analysis in an organisation provides critical strategic information for executive management; it provides a snapshot of the current skills base along with indicators of how this skill base can be advanced to promote process improvements. The traditional needs analysis can provide HRD professionals with significant indications of skills gaps, and the subsequent development of training to provide these skills can facilitate organisational performance.

Building on core competencies and capacities

HRD professionals have been successful in determining the core skills required in jobs at all levels. Competency identification in countries such as United Kingdom, New Zealand and Australia as three examples, is substantial, and profiles of skills required in functional jobs at all levels of the organisation are easily accessed. Applying descriptions of skills or competencies to meet organisational specific needs can bring about process improvement for existing employees and this will continue to be an important part of HRD activity within an organisation.

The radical changes taking place in organisations are not about process improvement but relate to the options between development of workplace communities and network organisations. If organisations are to retain control of knowledge within the organisation, then HRD

professionals need to map individual capabilities against organisational key result areas. What do individuals contribute to core business and how can they extend organisational capabilities?

Changing needs of the workplace: Innovations in work design

The changing nature of organisations reduces the former importance of defining job roles and of job design. Defining jobs in terms of functional roles that will change in a short period of time is less useful than defining individual contributions to organisational performance. Developing capability sets may replace job design as the defining activity for individual action within organisations.

Capability sets will be developed around flatter, less hierarchical structures. Activities will be devolved to a specially blended team with the individual competencies, traits knowledge and experience to achieve the desired result. These changes point to the development of networks of knowledge both within and outside the organisation.

Definitions of an organisation's departments and functional areas are affected by the development of capability sets. These areas are represented by well-guarded budgets and physical resources, but knowledge capital cannot be captured in this way and it is difficult to stop an individual from sharing knowledge. If individuals can work towards core business results with one team or group in the enterprise and add value to work with an entirely different knowledge network, a functional job description will be an inhibitor.

As the building blocks translating organisational strategic imperatives into operational reality position descriptions have to design-in capabilities that extend beyond what people do in the job (competencies). Critical skills and knowledge relating just to task performance are essential but can be far more able to deal with collaboration, responsiveness or transformational practices are addressed; or what the next chapter will examine as social capital.

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Application of Social Capital to human capability development

Introduction

Social capital has previously been defined as the social dimension —shared values, networks and trust—intrinsic to human activity and relationships that enable knowledge creation, transfer and generation processes.

Human Capability Development can target deep capabilities that span all domains where knowledge capital can reside and be built. Social capital—an element of human resource development/knowledge capital—enhances learning capabilities for agility and absorption. As organisations change and adapt, they must improve agility and absorptive capacity.

Table 15 Aligning the role of HRD in HCD with deep organisational capabilities

Role of the social capital element of HRD	Deep capabilities enhanced by HCD
Accelerating the accumulation and integration of knowledge	• Learning for agility capabilities • Learning for absorptive capabilities

The human capital of an organisation is strongly connected with agility in learning and the capacity of individuals to learn. Agility capabilities are defined as:

> the capacity of an individual—and, therefore, an organisation—to acquire, integrate, and assimilate knowledge.

Absorptive capabilities are:

> the capacity of an individual and, therefore, an organisation, to learn, and the preparedness to acquire, hold and then exploit the resulting knowledge.

Critically, to be successful, an organisation must not merely acquire knowledge but must establish the preconditions for the successful assimilation of knowledge (Cohen & Levinthal, 1990; McGill, Slocum & Lei, 1992). Speed of the process from capture and acquisition of new knowledge through to effective exploitation ensures that individuals can perform their jobs better and sooner (This speed is known as the cycle time to performance proficiency). In

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addition, more rapid translation of new knowledge into performance adds to the organisation's responsiveness. Absorptive capacity can, therefore, directly add value to agility and contribute to performance, overall knowledge capital generation and the bottom-line value of the organisation.

An organisation's study of agility and absorptive capacity falls into an organisation's social capital. Social capital suggests that value lies in the networks of interaction and the ability to hold a relationship with an individual (that is, the customer). Agility and absorptive capabilities are entwined with individuals' relationships and networks, which organisations can only 'tap into' through their human resources.

The boundaries between aspects of social capital and structural capital often are blurred. Internal structures, information technology systems and architecture, and policies and procedures, especially in human resources, all 'could give additional evidence on the potential to assimilate external ideas, further characterizing what could generate absorptive capacity' (Veugelers, 1997:314). This aspect will be explored further when we examine how absorptive capabilities relate to generative organisational learning and overcoming 'learning disadvantage'.

Organising social capital to enhance agility

Organisations using HCD will harness Social Capital (SC) to enhance agility.

What is organisational agility?

Agility in organisations centres on the capabilities resident at individual and organisational levels to adapt or to change (Dove, 1996, Kidd, 1995). According to Agility International (2002)—a professional body advancing the study of agility—organisational agility was developed in the US under the aegis of a Federal program intent upon addressing the declining profitability of American industry. The program spawned international interest that was advanced in the academic literature by the work of Goldman, Nagel and Preiss (1995).

Agility International suggested that agile organisations strategically address a range of activities and processes, including:

- Adaptive infrastructures
- Business intelligence
- Business process management
- Collaborative working
- Customer relationship management
- Data mobility
- E-learning
- Employee empowerment
- Enterprise integration
- Enterprise modelling
- Flexible working
- Information management
- Intellectual property (IP) convergence
- Knowledge management
- Mobile working
- Outsourcing
- Organisational resilience
- Rapid application development
- Supply chain integration
- System security
- Unified messaging
- Web services and eXtensible Markup Language.

Organisational agility and the art of rapid change

Organisational agility was not a new concept to international theorists. Stalk and Hout (1990) first advanced the concept of time and responsiveness being at the forefront of any organisation's quest for competitiveness. However, the adoption of systems and practices reflecting the need for organisational responsiveness has been slow:

> Unfortunately, most organizations, and their management, control and strategic planning systems seem relevant to the passing era which rewarded efficiency-driven optimization and prediction of a future based on the past trends . . . As the traditional paradigms of concepts such as organizations, industry, and product/service definitions become increasingly blurred, one would see new models of business that defy traditional boundaries of organization structure, industry structure and product/service definitions. Characteristics such as innovation and creativity will be at a premium. There will be increasing realization that sustainable organizational competence depends upon the organization's capacity for creating new knowledge through an ongoing and continuous process of learning and unlearning.
> Dr Yogesh Malhotra, [Chairman of @Brint.com], L.L.C. (October 1997)

Agility and environmental attunement

Environmental attunement refers to the fit between the organisation and the environment. For an organisation to survive it must be compatible with its environment. Environmental factors such as increased competitiveness, interdependence both within organisations and externally, and increasing complexity of products and services, means that organisations must have the ability to change.

Changes in the operating environment require realignment of the organisation's structure and functions, and organisational agility enhances this capacity to adapt and realign. The extent of agility development depends on the level of change in the environment and the speed at which it takes place.

The implications of a changing organisational environment, where knowledge, complexity and speed of change have increased, do not apply solely to organisations with inflexible, solidified organisational structures or procedures. Environmental turbulence argues for the development of individual and organisational capabilities that permit most, if not all, organisations to have some capacity for re-alignment while maintaining performance.

For organisations to achieve environmental fit through alignment with the environment, their values, norms, processes, reward systems and performance must inculcate the importance of people. Agility is achieved through capability development in the individual. Agile processes are denoted by individuals able to acquire new frames of reference while still achieving current performance outcomes. Agility requires rapid knowledge transfer. This leads organisations invariably to adopt innovative organisational structures. Two commonly used structures are:

- network organisations promote a changed frame of reference whereby changing environmental needs can be met through enhancing staff capabilities or sourcing knowledge outside the organisation; or
- a community approach whereby the holistic concept of an organisation is disaggregated, and community are formed based on cross-functional, purpose or professional relationships that can be reconfigured to meet organisational needs (Bowles, 2001:161).

A balance between these two options is achieved where knowledge networks are created. The knowledge networked is sourced using strategies that acknowledge the importance of knowledge development within individual employees, or individuals outside the organisation.

Learning, strategic readiness and agility

Transformation in any organisation, whether a simple change process or a major re-engineering of core purpose, requires learning. Learning must encompass all levels of the organisation to enhance overall learning capacity. This capacity is not just about acquiring the competence to perform in new ways. It is also about changing organisational culture or identity factors that have to be unlearnt, changed or acquired before the new behaviours and roles can be effectively deployed (Schon, 1983).

Learning capacity and agility

The capacity of organisations to learn varies. This means learning and agility are inextricably linked. The aim for an organisation is to increase its capacity to learn. Therefore agility can result from the development of human capital that delivers current productive capacity as well as potential productive capacity.

An organisation can no longer be considered a collection of homogeneous groups or individuals all sharing a common identity, and in possession of all the competencies required to meaningfully perform jobs. Every organisation has a different mix of variables which influence learning. Nevertheless, the largest influence on the learning capacity is the evolution of the organisation's business systems and its own progress (comparative to its benchmarked competitors) on what may be termed a change continuum.

People learn by doing and by interacting in a social context. Humans do not have to be conscious of learning to learn. For instance, a child may fall off a bicycle many times before 'learning' how to ride the bike. Falling off is an experience that accumulates into a mental model and applies capacity to ride the bike. This does not mean the child has learnt about gravity or bike mechanics. Such learning can, however, have both a positive and a negative affect on the learner. Some may fall off and not wish to ride again. Or they may perceive other unknown tasks similar to learning to riding a bike as best avoided (for example, learning to drive). Others may build on the experience and use it to positively inform later activities.

Figure 24 suggests that mental models and capabilities relating to competency and identity influence the individual's capacity to learn. Some learners will avoid a task which is unknown or unproven. Most will seek to use existing knowledge and experience to undertake a similar task. The aim for an organisation seeking to encourage agility is to promote mental models where even new (unproven) situations or contexts draw positively on past applied capabilities. In these circumstances, people want to learn and increase their repertoire of experience and cognitive skills.

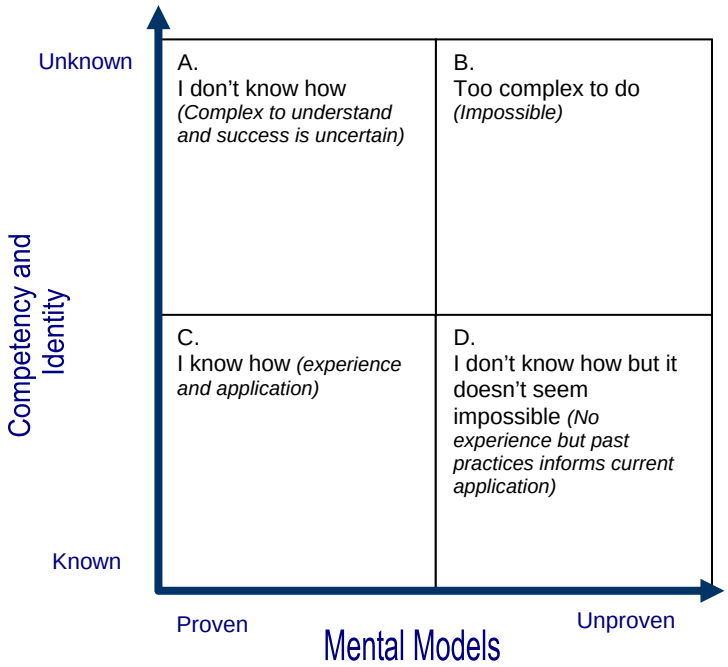

Figure 24 How mental models and experience inform current actions and learning

Learning, agility and competitiveness

To embed agility, active up-front investment in capability development ensures that people can respond to new activities and situations. Waiting until a critical situation arises and then developing specific skills and knowledge is probably too slow in an organisational context, and it is likely to lock-in reactive rather than responsive cognitions and mental modes at the human level.

The capacity to learn in order to meet immediate performance deficiencies is no longer a sufficient base on which to build unique competitive advantage. Transferring information into

knowledge to improve productive outcomes is a critical organisational endeavour. To transfer knowledge and manage knowledge acquisition requires that knowledge management be integrated with learning. This is at the heart of Human Capability Development.

Learning can be conducted in a manner that reinforces meaning. This results in an accelerated capacity to transfer knowledge (Slocum & Lei, 1993:18–21). How well and how quickly companies can translate learning into outcomes influences their strategic success. This requires a strategic solution able to engender capabilities at individual and group levels, within and outside the organisation. This solution must be framed in terms of both current and future requirements.

In his influential text *The Fifth Disclipline,* Senge (1992) linked the capacity of an enterprise to become a 'learning organisation' with its ability to obtain and hold competitive advantage. This publication consolidates earlier work on the learning company and exploration by educators and management theorists on the link between the ability to learn and competitive advantage. Senge depicted an organisation in which individuals continually seek to expand their capacity to create desired results, new patterns of thinking are nurtured, and people are continually 'learning how to learn' together.

This perspective and subsequent research reinforced the need for generative learning to translate individual learning into organisational learning —as encapsulated in Argyris's 'double-loop learning', where the first loop may detect and remove errors the second will affect the overall competencies and practices relating to how learning occurs (Argyris & Schon, 1978).

Generative learning emphasises continuous, double-loop experimentation and feedback. Double-loop learning enhances the continual search for solutions while instilling behaviours and a culture where learning is embraced beyond the individual physical activity, to a level that shapes how an organisation sets values, procedures and practices. Unlike adaptive learning, generative learning requires a new mindset and the capacity to create new visions for future realities. Senge (1992) suggested that generative learning is composed of:

- systemic thinking;
- shared vision;
- personal mastery;
- team learning; and
- creative tension between the vision and changing the current reality.

Generative learning, characterised by 'double-loop learning', requires capabilities beyond what management theorists have described and categorised as competencies: capabilities associated with identity and tacit knowledge that support innovation, openness, responsiveness to new contingencies and creativity (McGill et al., 1992). Put simply, agile organisations learn in a generative manner.

Essentially, generative learning builds-in a redesign process based on optimal problem solving. This is in contrast to adaptive learning or single-loop learning, where the focus is on solving current problems without examining the root causes of the problem or the learning behaviours that underpin the problem-solving process. Adaptive learning reinforces improvement by incremental steps more common to the managerial approach to leadership and problem solving. Given the need for rapid change or the ability to respond to new operational realities, adaptive organisations are viewed as much less able to use learning to sustain and generate competitive processes, structures, people or systems.

The learning organisation and organisational learning have at their core the translation of information (or data) into business success through individual, team, organisational and wider learning processes.[8]

One of the more influential approaches to learning cycles as part of organisational learning have been advanced by Redding and Catalanello (1994).

[8] The cycle of learning is addressed by a number of authors for example, see Argyris & Schon's double-loop learning, 1978:18–23; Kolb, 1984; Garrat, 1987; Revans, 1982, Dixon, 1994

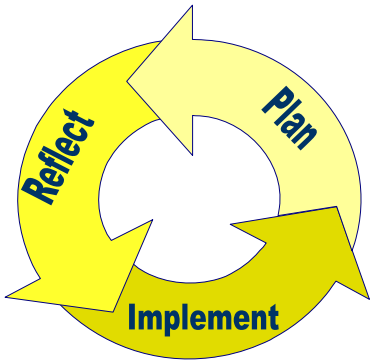

Figure 25 Learning cycle
(Redding & Catalanello, 1994:36)

The learning cycles of Redding and Catalanello (see Figure 25), or other variations, depict learning as a continuum that extends beyond the benign absorption of information for applied purposes. This process is never static: It varies with context, the individual and the content of the learning.

Enhancing an organisation's learning capability entails accelerating both individual and collective learning cycles. Learning must be much more than a contrived response to immediate needs: it must be managed as part of the long-term imperative to be competitive and responsive to changing social and market demands. McGill, Slocum and Lei (1992:5–17) suggest the importance of understanding the difference between the organisation's ability to adapt (adaptive learning) and the organisation's ability to learn (generative learning). The ability to learn gives the generative organisation a competitive advantage over the adaptive organisation, which is said to be 'learning disadvantaged', because while adaptive organisations may be able to transfer skills they cannot do so in a manner that enhances their sustainable capacity to change.

Generative organisational learning can enhance the depth, speed and breadth of learning (Redding, 1997:485). Adaptive learning (McGill et al., 1992), however, provides opportunities for greater focus on process improvement. While McGill, Slocum and Lei illustrate how quality management systems provide for individual, group and organisational learning, they also argue that such organisations are still learning disadvantaged when responding to environmental factors.

Generative learning can be used to enhance strategic organisational readiness. In more stable environments, organisations might promote adaptive learning in areas where they undertake a 'controlled' change process or need to fill skills gaps across multiple people or jobs. Either of these approaches to learning can promote continuous process improvement and meet incremental changes. However, this type of learning is more appropriate to change interventions than transformation.

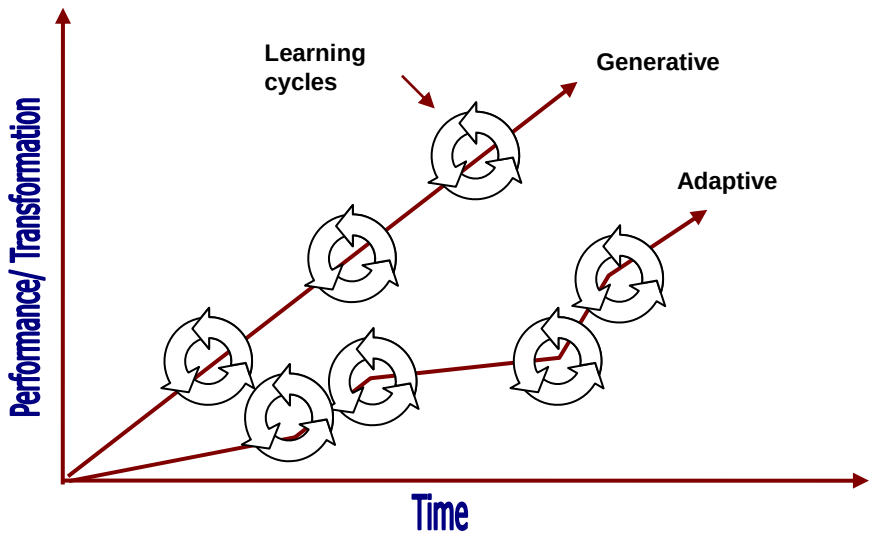

Figure 26 Managing learning to promote generative or adaptive change (After Redding, 1997; and Bowles, 2004)

As represented in Figure 26, adaptive learning causes 'spurts of improvement' or targeted change. In this approach learning, in all its forms, does not transform the capabilities and identity resources required to respond to rapid and sustained change. It does not progress into a second loop whereby it affects organisation's practices, processes or values.

Capabilities of individuals, groups and the organisation that enhance not only adaptive learning but also generative learning must be identified and reinforced. Greater competitive advantage can then be built by agile and responsive organisations.

Transformation is not achieved through interventions that cause spurts of improvement; rather, it is embedded in how people think, act and view their contribution to the organisation. Generative learning is cross-process and strategic and addresses not just how 'things are done',

but how people and systems can adapt to change and improve the speed, depth and breadth of learning.

Maximising human absorptive capacity

Cohen and Leventhal (1990) suggested that the absorptive capacity of organisations centres on the 'ability to exploit knowledge'. Pre-conditions affecting absorptive capacity included such factors as the relationships held by the organisation, characteristics (experience and expertise) of the individual involved and the relationship the new knowledge has with pre-existing knowledge. Hong et al. suggested that absorptive capacity is the ability to:

> recognise the value of new, external information, assimilate it, and apply it to commercial ends. The ability is critical to its innovative capabilities, and is largely a function of the firm's level of prior related knowledge (Hong et al., 2004:9)

Learning across levels within the organisation can not only increase the stock and flow of capabilities in the pools of knowledge capital (structural, social and human), but in so doing, directly enhance business performance (Bontis, Crossan & Hulland, 2002; Toiviainen, 2003).

Overcoming learning disadvantage

A major advantage of promoting organisational learning strategies is the resulting capabilities associated with adapting to changing environmental conditions. Organisations and managers utilise a range of strategies to achieve performance. Some organisations are operating in stable developed markets with little threat of new competition. It seems, therefore, they have everything to loose and little to gain by implementing new structures or practices. In such an environment, routines dominate tasks, job design, processes, skills and knowledge descriptions, and therefore learning strategies.

However, while knowledge organisations or those organisations competing in the New Economy know they cannot stay static for long, traditional organisational structures have given

little reward for challenging the order of things. This paradox has seen the more structured, routinised organisations classified as learning disadvantaged. (McGill, et al., 1992:6)

Absorptive capacity is linked with organisational agility. Absorption centres on assimilation of knowledge and capabilities necessary to move the organisation from being adaptive where the organisation's ability to learn generatively becomes a competitive advantage (see previous Figure 26 Managing learning to promote generative or adaptive change). The ability to learn ensures the generative organisation sustains improvement. The adaptive approach is typically associated with the learning disadvantaged.

Organisations whose core business relates to information technology and those operating across a range of environmental conditions and marketplaces have had to become more adaptive than those in traditional manufacturing and closed markets.

Adaptive learning provides opportunities for process control. Quality management systems provide for individual, group and organisational learning, however, they may develop a learning-disadvantaged response to environmental conditions. In more stable environments, this type of organisational learning might be appropriate and will provide process improvements and adaptive strategies for incremental changes to the environment. But this type of organisational learning is insufficient to cope with rapid and sustained change.

Generative learning, characterised by double-loop learning, utilises the more behavioural- and knowledge-based traits. These include aspects central to a learning organisation including innovation, openness, responsiveness to new contingencies, and creativity. These factors all are influenced by the capacity of people and organisations to assimilate and use knowledge and capabilities: that is, by absorptive capacity.

Warner (2003:399) reported that

> lack of investment in absorptive capacity in prior periods makes it 'more costly to develop a given level of it in a subsequent period' (Cohen & Levinthal, 1990). While firms can overcome this to some extent through accelerated investment (Kim, 1997), 'compression diseconomies' can restrict the return to investment in learning (Dierickx & Cool, 1989). This is exacerbated by the fact that the less firms know about a particular technology at the outset, the more difficult it is to add relevant knowledge

due to inadequate knowledge stocks and context specificity (Cohen & Levinthal, 1990; Dierickx & Cool, 1989; Zahra & George, 2002).

Networks, relationships, communities and absorptive capacity

To operate and survive, organisations need to enter into relationships which may be forged internal or external to the organisation's structure. Just as organisational structures reflect the logic and purpose of business (that is, you don't create rigid structures if you want to be responsive because it is too hard to change the structures to achieve a response) (Greenwood & Hinings, 1993), so relationships can be structured to better achieve business outcomes. Organisational structure and job design assist knowledge flow and the deployment of capabilities. One form of organisational structure—the more organic, network structure—features making jobs and processes more dynamic and less locked-into highly routinised processes with very specific competencies (skills and knowledge). Implicit in the network style of organisation is the role that knowledge creation plays in individual, team and organisational performance (Nonaka & Takeuchi, 1995). Network design is therefore particularly attractive to organisations competing in creative, innovative, or dynamic marketplaces (Robertson, Swan, & Newell 1996).

The characteristics of network structures can be present beyond the organisation. Cohen and Levinthal (1990) argued that identifying absorptive capacity meant examining structures of communication both within the organisation and also between the organisation and its environment. Developing collaborative networks that extend across a number of organisations is a very effective strategy by which businesses can extend their access to new knowledge and capabilities. Assimilation of knowledge and capabilities can also be accelerated as evidence of use by collaborating partners removes some of the 'unknown' or 'unproven' elements that may inhibit acceptance.

The implicit tension in networks or communities is the fear of sharing knowledge with organisations that may become competitors (von Hippel, 1987).

Why absorptive capacity and knowledge networks matter

The rate of change and the progress of organisational transformation in the late 20th and early 21st centuries means that absorption and agility, and building networked communities accessing stocks of capabilities aligned to pools of knowledge capital is essential.

From research and the literature, we can articulate 18 characteristics of profound change shaping business relationships and supply chains of the future:[9]

- Costs will crash.
- Systems will be customer-centres and personalised.
- Anywhere, anytime access, 24–7 will be the reality not the variation.
- Convenience will be a high-value commodity.
- Purchasing power will increase as converged technologies expand capabilities and lower distribution costs.
- Processes will be expert-systems and empower the user.
- Distribution systems will move away from business-to-business to business-to-consumer (direct, without the middleperson).
- Change will come from everywhere (chaotic, not targeted).
- Resources will shift rapidly to new opportunities.
- Rapid introduction of better, less expensive products will lead to continual replacement.
- The focus will be on success as entrepreneurs, venture capitalists and early adopters seek innovations based on the known.
- Tolerance for failure will be embraced in innovation and thinking, but not customer satisfaction.
- Real breakthroughs will create new products and new expectations.
- Speed matters—including responding to market needs with great agility and moving new products and services from inspiration to sale with great rapidity.

[9] These concepts are explored in Boulding's works from four decades earlier (1964), Drucker on discontinuities (1969), Nolan on development of IT (Gibson & Nolan 1974) and more recent works such as that of Gingrich (June, 2002:48–52).

- Start small but think big (Convey visions others can understand and engage in).
- Business-to-business and improvement of existing business processes is the first profit opportunity.
- Applying quality to existing lean thinking and process efficiency: be profitable and secure sustainable competitive advantage.
- Partnering with others and embracing collaboration between individuals is essential.

Agile organisations require agile learners. Given wider trends listed above the key principles for constructing deep capabilities relating to agility seem to be:

- As with human capital, the capabilities for organisational agility reside in the individual.
- Organisational agility and the deployment of individual capabilities is most often enabled by networks and systems developed by the organisation.
- Organisational agility is a strategy aimed at developing the capabilities that organisations require to succeed in the New Economy.
- As a strategy, organisational agility is concerned with HRD and the development of human capital activities that build future potential capacity, not just job-specific or point-in-time solutions focused solely on current performance capacity.
- Organisational agility suggests that some value inheres in some current systems, processes, and technologies because of their role in enabling human capital and overall knowledge capital to be deployed to meet future contingencies.
- Organisational agility emphasises the networks, physical or electronic, to support jobs and processes deliberately designed to package capabilities related to current and future job performance needs.

Building human capability and organisational capital value

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