

Mobilising Resources for Lifelong Learning. International Developments in Measuring and Reporting Intellectual Capital

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Background

As we move toward a wider acceptance and implementation of lifelong learning, a challenge we face as a community is working out how it should be funded. The problem is put particularly well in the background information for a forthcoming OECD conference on ‘Lifelong learning as a affordable investment’:

...the mandate adopted by OECD Education Ministers in 1996 to make lifelong learning for all a reality, poses a particularly complex resource challenge because it changes so many parameters at once. It implies quantitative expansion of learning opportunities; qualitative changes in the content of existing learning activities; qualitatively and quantitatively different learning activities and new settings and changes in the timing of learning in the lifecycle of individuals. *These developments imply, in turn, a strong likelihood of changes in the costs of providing and participating in education, training and learning activities, and increases in the total outlays by society for such activities* (OECD 2000, my italics).

One option that policy makers have been pursuing around the world is to encourage both individuals and employers to increase their investments in education and training. For instance, the same OECD paper states:

Constraints on and competition for public resources combined with the presence of substantial private returns to certain aspects of lifelong learning imply a need to increase the private share of the overall finance burden.

Though there are some notable exceptions, in general employers have often been reluctant to invest in education, training and other forms of human resource development. Among the reasons for this is that they fear that the employees they have invested in may be poached by other enterprises, which will gain the benefits that they have paid for. They are aware that they don’t ‘own’ their employees, who may ‘walk out the door’ at any time, taking with them the knowledge and skills they have gained at the employer’s expense. In addition, most employers have not had access to sufficient information to be able to judge definitively if, and how much, their investments in education and training contribute to the success of their enterprise. Many factors contribute to business improvements and distinguishing those directly attributable to training can be difficult.

In the face of this employer reluctance, policy makers face a difficult task in persuading enterprises to increase their investments in the lifelong learning of their employees. Nevertheless, around the world we can see a number of different ways in which they are attempting to achieve this goal. Several countries impose minimum training requirements on firms above a certain size and/or use tax incentives to promote HRD investment. In the UK, the government has developed the *Investors in People* program to reward employers who demonstrate a commitment to training. In Australia, the Federal government experimented with and rejected the *Training Guarantee*, but increasing enterprise investment remains one of ANTA's highest priorities and has prompted the funding of several related projects, including CEET's work on 'intellectual capital' and investigations of different aspects of enterprise returns to training investment.

About two years ago, the Education division of the OECD began to look at the potential for using a *Human Resource Accounting* framework to demonstrate the economic benefits to enterprises of education and training investments. HRA was first developed in the 1960s to document human resource costs in the financial statements of an enterprise. A number of problems and drawbacks of the framework had emerged over time, so that it had achieved only mixed success. However, the concept was taken up particularly in the Scandinavian countries and gradually refined and further developed. A major part of this work was to expand the original framework to complement financial information with some non-financial indicators.

The work of the OECD's Education division was supported by the organisation's industry, science and technology division, which was interested in accounting frameworks from another perspective. As the 'knowledge economy' has grown, service industries have expanded and 'intangible assets' including the skills and knowledge of people have become more important in business success. Consequently, the traditional financial statements of enterprises, which report on 'tangible assets', have become increasingly less representative of what's really going on in firms.

This inadequacy of financial statements was creating several types of difficulties. Outside the enterprise, it meant that people such as governments, investment managers and shareholders were unable to get a realistic view of the firm's resources and activities. Thus they were unable, for instance, to make fully informed decisions about the level of their investment in the enterprise, to judge its efficiency, or to determine whether forming a collaborative partnership would be worthwhile. Within enterprises it meant that many management decisions, including decisions about investing in human resource development, were also being made on inadequate information. Based on the business strategy managers might be able to estimate what resources they would need to achieve goals, but they were not able to tell whether they had these resources. They also had insufficient information to judge the impact of many of the decisions they made or to demonstrate this impact to others in the firm, such as the governing Board. As a result of these difficulties, out in the 'real world' an increasing number of enterprises were confronting the challenge of going beyond the boundaries of traditional accounting. Among firms relying more on the skills and knowledge of their staff than on machinery

or land for their success it was becoming particularly important to find effective ways of reporting the true nature of their assets and activities.

During 1999 the two OECD divisions joined to sponsor an international symposium to investigate progress on the development of indicators for measuring the things left off traditional financial statements, including the validity and reliability of the indicators and their potential uses. The symposium called these things ‘intellectual capital’ – a term that had been used several years earlier by Skandia, a Swedish financial services company which had developed and implemented a framework for reporting its ‘intangible assets’ that had been emulated elsewhere in Scandinavia.

Material presented at the symposium demonstrated that the need for developing valid and reliable intellectual capital indicators was supported in all the participating nations. Progress toward developing these indicators was moving steadily and was much further advanced in some places (eg Scandinavia) than in others (eg Australia) and in relation to human resources than other types of intangible assets. Contributing to the ongoing work was a diverse group of governments and bureaucrats, accountants, academics, statisticians, international agencies, industry associations and individual employers. Theory was being developed, much empirical research was being done, and many case studies were beginning to provide useful information and some examples of good practice. While enterprises were generally happy about internal reporting of their intellectual capital, there were some anxieties about external reporting that was based on concerns about how the information would be used and whether it could be of value to competitors.

Supported by ANTA funding, CEET participated in this symposium as a member of the Australian research team.¹ The team investigated the ways in which Australian companies were measuring and reporting their intellectual capital by examining the annual reports of the top 19 companies, as measured by market capitalization, and another company which was identified as a ‘best practice’ example. The team also undertook a small number of case studies in enterprises identified as ‘best practice’ to investigate the factors driving them toward improved reporting of their intellectual capital, as well as the nature of the reporting systems being implemented. These case studies focused on the reporting of human resources and were also interested in its impact on decisions about HRD investments.

The major conclusions of the Australian team’s research were that:

- Few Australian enterprises had implemented systems for measuring and reporting their intellectual capital. However the case studies showed that the need for improved reporting was recognized and there was some movement in this direction.
- The need for reporting was recognized for reasons both internal and external to the enterprise. Internally the information was seen as a potential source of

¹ The team was led by Professor James Guthrie of the Graduate School of Management at Macquarie University and included Richard Petty of the University of Hong Kong and Rob Wells an expert in knowledge management. The CEET member was Fran Ferrier, with Phillip McKenzie also contributing.

information to guide decision-making by Managers and Board members. It was also seen as having a potential to support a culture in which staff were valued and encouraged to stay with the employer. Externally it was seen as playing a role in projecting a positive image of the company, including as an investment, and as a potential employer.

- ✓ The case studies showed that where intellectual capital was reported, even on a preliminary level, some support for investment in HRD was increased, because the information helped to demonstrate the links between economic results and education and training activities (Guthrie et al 1999, Ferrier and Wells, 1999).

CEET also presented to the symposium a proposal for an 'enterprise information and self-evaluation kit' to assist enterprises to measure and report their intellectual capital, particularly their human resources (Ferrier and McKenzie 1999). The proposal sought feedback on the usefulness of a kit, its best form and content and the process by which it could be developed, trialed and distributed. It noted that the case studies supported the need for support of the kind that a kit might be able to provide.

What work has been done since the symposium? What progress has been made in the development of systems and indicators for reporting intellectual capital? And are there any indications of an impact on employer investments in HRD?

Recent Work

The CEET Project

Following our work for the OECD symposium, CEET has continued its interest and work in the measurement and reporting of intellectual capital. The focus of this work has remained the preparation of an enterprise investment and self-evaluation kit. During 2000 and 2001 our project, *Supporting Lifelong Learning Through the Measurement and Reporting of Intellectual Capital*, supported by ANTA, is working toward preparing a prototype kit for trialing in 2002, funding permitting.

The idea of a kit has gained some significant support, if not yet the full level of funding its development requires. A participant in the OECD symposium, Niamh Brennan from University College, Dublin, Ireland, with colleague Brenda Connell of Ernst and Young, Ireland state in a recent international article:

The purpose of the kit is to help formalize and speed up the dissemination process by creating an accessible bank of information which companies can draw on. If successful, its benefits would include reduced costs for enterprises and best practice approaches would become quickly and widely used. This would increase comparability between firms. If used successfully it is hoped that the kit can provide the opportunity for organizations to learn from each other about the measuring and reporting of intellectual capital (Brennan and Connell 2000).

In Australia the concept of the kit was taken up at the *National Innovations Summit*, held in Melbourne in March under the sponsorship of the Department of Industry, Science and Resources. The summit's Human Dimension's Working Group strongly supported the concept in its recommendations:

As a first step, the Working Group proposes the development of the capacity of enterprises to conduct a self-evaluation of their attitude/approach to intellectual capital. This could take the form of an information and self-evaluation kit about intellectual capital. The kit could be piloted within selected enterprises over a six-month period under the auspices of peak industry bodies...

The recommendations were accepted by the summit, and have gone to DISR for implementation.

A resource bank

Our work toward the kit has concentrated initially on collecting information for a 'resource bank' from which material for the kit will be drawn. As the relevant research and literature continues to expand this work will need to continue throughout the project – and beyond - to support refinement and updating of the kit.

Much of the openly accessible material we have located is very general and therefore of limited use. It re-iterates the need for and the importance of new systems for measuring and reporting intellectual capital, but gives little information about how this might be done. This reflects the fact that many business consultants are beginning to see the need for firms to measure and report their intellectual capital as an opportunity to provide a new service. So a web or business journal search turns up a lot of 'advertorial', but little information to help those who don't want to engage the consultant.

However, alongside this we have now found a growing pool of work that offers ideas for classifying intangibles, and some examples of specific intellectual capital indicators either in use or proposed. More material is also becoming available from case studies and this offers some interesting and useful examples. A substantial proportion of the material emanates from overseas. In particular much useful material has come (and much more is expected) from Europe where academic research into the development of frameworks and indicators has been strongly supported and the US, where academics and the major business community have also done considerable work..

Though many different systems for classifying intellectual capital have been proposed, Sveiby (1998) considered that many have in common a recognition of three categories of intangibles: those external to the organization, those internal to the organization and those internal to individual employees. Some examples in each of these categories are indicated below:

Internal	External	Individual
Patents, concepts, models, computer and	Relationships with customers and suppliers,	Skills, education, experience, values, and

administrative systems.	brand names, trademarks, reputation, image.	social skills.
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Source: Sveiby 1998.

Given the tendency for different classification systems to have at least these three categories in common, Sveiby suggests there may be ‘an emerging first standard’ for measuring intellectual capital. However, Brennan and Connell (2000) note that although many of the new frameworks classify intellectual capital into the three broad categories of human, customer, and structural capital, they developed independently from each other and from different perspectives. Considerable differences between them become apparent, particularly when they are depicted diagrammatically. Brennan and Connell note for instance, the following differences between the ideas underlying two of the three most dominant frameworks, the *intangible asset monitor* (Sveiby 1997) and the *balanced scorecard* (Kaplan and Norton 1992, despite some similarities between the classification categories of the two:

Intangible Asset Monitor	Balanced Scorecard
Assumes only people generate profit in an enterprise.	Makes no such assumption.
Supports the use of indicators of the growth, renewal, stability and efficiency of intangible assets to see how they are developing.	Aims to balance the traditional perspective by adding the customer, process and learning and growth perspectives.
Looks at the firm from a ‘knowledge perspective’.	Does not question “what constitutes a firm”.

Source: Brennan and Connell 2000.

The material collected provides evidence that the development of specific indicators faces a number of challenges, including that:

- Many intangible assets cannot be quantified in monetary form, so that more innovative steps are required to evaluate them (Brennan and Connell 2000).
- The indicators must be linked in some way to the business strategy of the enterprise, perhaps through the application of weightings. Absolute values are meaningless. Rather, variations over the course of time are required to enable conclusions to be drawn concerning the firm’s strategy (Joia 2000).
- The choice of assets to measure and the design of the indicators depend on the company, its strategy and the most important value creating processes. The problem is not to design indicators, but how to interpret them. Measurement systems can be used for control or for dialogue (Sveiby 1998).

Sveiby (1998) points to the need for indicators of the growth, renewal, efficiency and stability/risk of intangible assets. The Danish Trade and Industry Development Council (1997) also identifies a need for different types of intellectual capital indicators: what is there, what is done, and what happens:

- **What is there:** the company’s resources, e.g. human resources, customer process and technology, usually measured in a descriptive, non-financial statement.

- **What is done:** how the intellectual capital management system works, e.g. human resource development, customer care, access to technology.
- **What happens:** whether the use of intellectual capital is leading to efficient products and services, e.g. customer satisfaction, IT literacy in the company, business process efficiency.
(Brennan and Connell 2000).

Some examples of each type of indicator for human resources are shown below.

What is there	What is done	What happens
Seniority	Share of employees with a development plan	Employee satisfaction
Education	No of development days per employee	Human resource turnover
Education costs	Education costs per employee	Increase in value per employee

Source: Brennan and Connell (2000).

Drawing on several research studies Brennan and Connell (2000) note that managers find some indicators more useful than others and that this might depend on the nature of the business. Some human capital indicators gain a high ranking of importance, particularly leadership skills, employee satisfaction, employee motivation and the ability to attract and retain employees. All have implications for human resource development.

Case studies

As indicated above, more material is now available from many case studies being conducted in different parts of the world. This material provides a picture of emerging practice and also often shows how different systems for classifying and measuring intellectual capital are working. However, the material does not generally address the existence, or the nature, of links between intellectual capital measurement and reporting and investment in education and training.

To fill this gap, and to gain information about the Australian context that may affect the usefulness of particular classification systems and indicators, CEET is conducting its own case studies in enterprises as part of its work towards the information and self-evaluation kit. These studies aim also to uncover some useful local examples of intellectual capital measurement and reporting and to gather views about what the kit should include and the form it should take. This work is now being integrated with CEET's research on the training practices of 'leading edge' enterprises. It builds on the material gathered in the case studies conducted for the OECD symposium in 1999. The case studies are continuing into 2001.

Consultations

Consultations, such as with business and industry groups, will also be an important element in work toward the development of the kit. We hope that the kit will be useful in the public as well as the private sector, and may also assist training providers to determine if they have the intellectual capital they need to achieve their goals. Thus a wide range of consultations will be undertaken about the content and form of the kit.

The MERITUM Project

In Europe, considerable progress is being made in intellectual capital measurement through a project in which six nations (Spain, Denmark, France, Finland, Norway and Sweden) are collaborating. Called *Measuring intangibles to understand and improve innovation management* (MERITUM), the project began in 1998 and is now approaching completion.

The primary goal of the project is to produce guidelines for the measurement and disclosure of intangibles. The guidelines have been drafted and are now being trialed. They will be revised and released early in 2001, which is very timely for CEET's work in developing the information and self-evaluation kit for enterprises. In addition, the project has included three other types of activities:

- Establishing a classification scheme for intangibles.
- Documenting company management and control systems for identifying European best practices in measuring intangibles.
- Assessing the relevance of intangibles in the functioning of capital markets by means of market data analysis

Papers from the project are gradually being released and will soon be available on its web site: <http://www.fek.su.se/home/bic/meritum>, including a paper outlining the classification scheme that has been developed and which has been found to work across different industries and nations.

A paper based on the second of the project activities, the documenting of company management and control systems ('Management of intangibles: an attempt to build a theory', Sanchez, Chaminade and Olea, 2000, forthcoming) draws on case study work to demonstrate that enterprises usually follow a common pattern when developing a system for managing their intellectual capital. This has three different phases:

1. Identification of intangibles: in this phase firms whose main purpose is to manage their intangibles to create value try to identify those intangibles most strongly related to their strategic objectives (short and long term).

2. Measurement: once the 'critical intangibles' have been identified the firm starts to define specific indicators that serve as a proxy measure for each intangible. A set of indicators may be defined and developed for each intangible.

3. Monitoring: firms analyse their results internally and take appropriate action to increase, maintain, or decrease their intellectual capital resources.

In following this system, enterprises are concerned not only about whether they have sufficient resources, but also about which resources they need and what they can do to increase them. There is a focus on the quality, utility and feasibility of indicators and the links between the intangibles. Future strategic objectives will also be considered to link current intangible investments with the enterprise's long term strategy.

The authors propose a measurement system that distinguishes between *intangible resources* and *intangible investments*. *Intangible resources* are assets and skills that can be measured at any given moment in time. Intangible investments are activities the enterprise undertakes to acquire or internally produce intangible resources. The system also distinguishes between indicators that are general (across enterprises and industries), industry specific, and firm specific. However, it is noted that all indicators have to be clear, feasible and useful for the firm. That is, the indicator can be defined without ambiguity, the information it requires can be collected, and it has to be meaningful for the firm.

The proposed measurement system also uses the common three group classification system for intellectual capital (Human, Structural or Internal, and Relational or External). However the authors note that while most firms can clearly distinguish between these three groups in some cases the task is difficult for the groups are not mutually exclusive.

Main features of the measuring system

Level of analysis	Classification of intangibles (variables)	Classification of indicators (measurements)
Intangible Resources	Human Capital	General
	Structural Capital	Industry specific
	Relational Capital	Firm specific

Source: Sanchez et al 2000, forthcoming

An important conclusion the authors draw from their case studies, for investments in education and training, is that the enterprises they studied tended to focus more on their human capital than on their structural or relational capital.

A Developing field

Internationally, recognition of intellectual capital as a distinctive field of study is evident in that the area now has its own journal, *The Journal of Intellectual Capital*, which will soon publish its fourth issue. The papers published in the journal detail the results of many research studies and provide considerable material for CEET's resource bank.

However, within this journal the interests of education policy makers, researchers and practitioners have not yet been represented. Contributors, including academics, largely represent Accounting and Business interests.

Some Conclusions

Around the world, measuring and managing their intellectual capital is becoming a necessity for enterprises, particularly where traditional financial statements fail to give a true picture of the resources and activities of the enterprises. However, intellectual capital measurement and management systems are still in their infancy.

There is some evidence that a strengthening focus on intellectual capital is causing firms to give increased consideration to their human resources and to the questions of whether these resources are enough to meet their needs, and how they might acquire further resources. There are expectations, and some indications, that this may lead to more positive attitudes within enterprises to investments in lifelong learning.

However, it is still too early to draw any firm conclusions. Only when a substantial number of enterprises have implemented intellectual capital measurement systems will it be possible to gauge the impact on HRD investments with any certainty. As progress is accelerating in the development of measurement systems this may not be too far off.

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