The current issue and full text archive of this journal is available on Emerald Insight at:
www.emeraldinsight.com/2205-2062.htm

Received 31 August 2016
Accepted 3 October 2016

Using work-based and work-applied learning to enhance the intellectual capital of organisations

Jonathan Garnett, Selva Abraham and Param Abraham
Australian Institute of Business and GCWAL, Adelaide, Australia

Abstract

Purpose – The purpose of this paper is to show how work-based and work-applied learning (WAL) can enhance the intellectual capital of organisations.
Design/methodology/approach – The paper draws organisational learning- and work-based learning literature and case study illustrations.
Findings – To achieve major strategic change in organisations requires working at senior level within the organisation to develop the capability of the organisation to learn and apply that learning strategically. WAL is explicitly geared to bring about change and enhance the learning capability within the organisation.
Research limitations/implications – There is a need for further longitudinal studies of organisations that have used the work-based and WAL approaches.
Practical implications – The conclusions reached have implications for higher education and non-award bearing executive education.
Social implications – The alignment of individual learning with organisational objectives positions learning as a co-operative part of working life rather than just individual preparation for employment.
Originality/value – The paper positions work-based learning and WAL as appropriate responses to the learning needs of organisations as well as individuals.

Keywords Work-based learning, Intellectual capital, Organizational learning, Structural capital, Work-applied learning

Paper type Research paper

Learning for the knowledge economy

The rise of a post industrial knowledge economy has been widely acknowledged (e.g. Raelin, 2008; Scarborough, 2008). The McKinsey global management survey on knowledge management (Kluge *et al.*, 2001, p. 10) identified a historical transition from the three "concrete" production factors of land, labour and capital to the "intangible" and "pre-eminent production factor of knowledge". Quintas (2002, pp. 2-12) evidences a huge upsurge in knowledge management literature beginning in 1996 and argues that knowledge has come to the top of the management agenda because of the accelerating change of markets, competition and technology leading to a focus on the need for continuous innovation. innovation is the key to competitiveness and that innovation depends upon learning to create and apply knowledge. The linkage of knowledge, learning and work with economic success has led to discussion of the "learning economy".

© Jonathan Garnett, Selva Abraham and Param Abraham. Published in the *Journal of Work-Applied Management*. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at http://creativecommons.org/licences/by/4.0/legalcode

Journal of Work-Applied Management
Vol. 8 No. 1, 2016
pp. 56-64
Emerald Group Publishing Limited
2205-2062
DOI 10.1108/JWAM-08-2016-0013

In the age of the "knowledge economy" the belief is widely expressed that organisations are only as good as their people. If that is the case than a key concern for employers must be the internal facilitation of the creation, recognition, dissemination and application of knowledge and skills. Mayo (2000, p. 523) argues that "all intellectual assets are maintained and governed by people". Individual knowledge forms the basis for communication of information to others who will then make sense of it in the light of their own personal knowledge. It follows that a key concern for managers and leaders in organisations must be the facilitation of the recognition of knowledge (e.g. through reflexive practice) and the reduction of barriers to the socialisation of knowledge. The significance of reflection is widely acknowledged in the work-based literature (e.g. Gray *et al.*, 2004; Boud *et al.*, 2006; Helyer and Price, 2016) but the potential of applying higher education expertise in reflective practice to contribute to the organisation through making tacit knowledge explicit appears very under-developed.

Stewart (1997, 2004) argues that in the new knowledge economy it is intellectual capital which is the true measure of the wealth of an organisation. The importance attached to the concept of intellectual capital is indicative of a revolutionary shift from the company as a place of production to being a "place for thinking". At one level this could be thinking to improve what is already being done or at a deeper level a fundamental change in what is being done. According to Stewart intellectual capital resides in the people, structures and customers of an organisation. Intellectual capital can thus be seen as:

(1) Human capital, derived from the knowledge, skills and capabilities of individuals and groups.

(2) Structural capital, present in the organising and structuring capability of the organisation. Structural capital may be contained and expressed in formal documents such as mission statements, policies, regulations, procedures and formal structures such as functional business units, task groups and committees. Structural capital can also reside in less formal staff networks and the practices and norms of groups of workers.

(3) Customer capital, which is dependent upon being able to leverage the value of an organisations relationships with the people with whom it does business.

While much has been written about "the learning organisation" to date higher education remains largely at the margins of organisational learning. The development of a global knowledge economy challenges the monopoly of the University as provider of new knowledge but also offers new opportunities for higher education to engage with employers in pursuit of knowledge which is primarily generated at, through and for work. In the context of work the value of knowledge is performative and thus the challenge for higher education is to foster performative knowledge which meets the needs not just of individual professionals but also of their professional contexts and organisations.

The higher education curriculum and the knowledge economy

The economic importance attached to knowledge and learning has impacted upon and challenged the role of the University (Barnett, 2000) and the rise of the "Corporate University" signals the extent to which higher education institutions are losing influence (Jarvis, 2001). The role of University courses in the "knowledge age" is still typically seen as developing the individual for employment or continuing employment rather than developing the intellectual capital of organisations.

Boud and Solomon (2001, p. 1) draw upon evidence from Australia and the UK to argue that work-based learning could be seen as "one of the very few innovations related to the teaching and learning aspects of post-secondary education that is attempting to engage seriously with the economic, social and educational demands of our era". Boud and Solomon (2001) identified a range of distinctive features of work-based learning which highlighted the importance of partnership between an external organisation and the educational institution in order to foster learning of employees. Work-based learning programmes are negotiated and derived from the needs of the workplace and the learner rather than the traditional concepts of the subject disciplinary curriculum. The programmes often build upon a structured review and evaluation of current learning and include work-based projects as a significant element. Durrant *et al.* (2009, p. 2) say "Work-Based Learning programmes are designed to promote professional and personal development and intended to benefit both learners and the workplace […]. A major aspect of work-based programmes is the relationship between individual learning and organisational change".

Garnett (2009) has highlighted that University work-based learning has the potential to directly contribute to the intellectual capital of organisations. Stewart (1997, pp. 108-109) outlines the significance of structural capital, which he describes as including not only technologies and inventions but also strategy and culture, structures and systems, organisational routines and procedures. Central to the value of structural capital to the organisation is that it can help individuals develop their personal knowledge, store and transmit the information derived from it and access information provided by others. Garnett (2005) argues that work-based learning programme offers the employer the opportunity not only to develop an individual member of staff but also, through the work-based project to focus University critical thinking upon project work which has the potential to contribute to the intellectual capital of the organisation. The need for the project must be grounded in the real life and real time needs of work and cannot be an artificial device solely to demonstrate the learning achievement of the student. The scale and scope of work-based projects varies depending upon the level of the academic programme ranging from doctoral work at the leading edge of professional practice with the potential to be of strategic significance for a work stakeholder to undergraduate projects with potential to have local operational impact. Examples of high-impact projects from Middlesex University include the improved reporting of construction defects within a transnational construction management company; improved quality management within the European division of a leading manufacturing company and improvements in the effectiveness of rescue training at a national training college.

Work-based and work-applied learning (WAL)

Despite some outstanding examples of work-based learning being used to achieve organisational objectives (e.g. Garnett, 2007; Bravenboer, 2011; Major, 2016) work-based learning at higher education level is still primarily seen as a means for individual development. This is understandable as Universities are geared to teach and accredit individuals rather than organisations. The origins of work-based learning at higher education level are also strongly linked with the learning technologies of independent learning (Osborne *et al.*, 1998). For example, accreditation of prior experiential learning, individual learning agreements and negotiated projects were all originally developed to recognise and enhance individual learning and were subsequently adapted as part of a flexible curriculum offer for customised learning in the workplace (Garnett, 2012).

In the context of work-based learning as part of a higher education programme there is an emphasis on the individual learner as a student of the higher education institution and this can detract from the work context and work priorities. For example, when reporting on the workplace as a learning environment for early childhood teacher education (Kaarby and Lindboe, 2015, p. 27) concludes that there is a requirement for a " stronger focus on the collective level and the community of practice". Work-based learning programmes co-delivered with employers can be very demanding for higher education staff and institutions (Meakin and Wall, 2013). Ions and Minton (2012) used a case study approach to examine the link between a University work-based learning programme and organisational learning and concluded that "the results suggest that consideration should be given to embedding organisational learning principles into the design of work-based learning programmes at higher education level" (p. 30).

Abraham (2012, p. 4) identifies key features of University-level work-based learning and observes that "Work-Based Learning appears to focus on learning in the workplace by individuals or as teams for the purpose of application". Abraham introduces the concept of "work-applied learning" which is designed to bring about organisational change through a fusion of action research and action learning. Action research and action learning are similar in using group dynamics to shed light on problems with a view to action. Abraham (2012, p. 10) maintains that action learning is a subset of action research and that it is the addition of the researcher and the cyclical nature of the action research as systematic enquiry which is critical to bring about change in an organisation.

The structure of a typical WAL programme

A typical WAL programme comprises a number of action research cycles. Each action research cycle consists of action research group meetings, knowledge workshops, work-based application and testing of knowledge, joint observations and reflections and monitoring and evaluation. The action research group is facilitated by a consultant who has expertise in WAL and change management. The first meeting of the action research group is used to clarify the organisational problem to be addressed and to identify a change project to be undertaken by the action research group. Members of the action research group are normally leaders or managers within the organisation and part of their role is to lead change projects within their own teams which in turn contribute to the overall action research group project. The consultant facilitates the action research group to critically reflect upon and evaluate the work-applied programme and the projects against the performance indicators agreed for the change projects.

Conceptual knowledge to support the change process is provided through a range of "knowledge workshops" which can be face to face or supported at distance. The focus of the first knowledge workshop is facilitative leadership and how to use action learning in order to facilitate team-based projects. The workshops are supplemented by distance learning materials. Participants in each workshop are required to think critically about how to apply the knowledge to their change project. Each member of the action research group then puts this new knowledge into practice during the work-based learning phase between each knowledge workshop. As the action research group members and their teams plan and implement their local projects their understanding of WAL is enhanced and they contribute to the organisational-level change project.

Normally validation of the WAL programme takes place after two full action research cycles have been completed. The validation process is carried out at a meeting

of the action research group with top-level stakeholders within the organisation (often CEO, human resource director, board members and possibly senior external stakeholders when applicable). At the validation meeting members of the action research group present reports on their current progress and any other issues related to the WAL programme for formative feedback and where necessary changes are made to the programme and the agreed targets.

A WAL programme for a major private construction company

The owner and CEO of a major private construction company was concerned that the style of leadership in his company was too directive and that as a consequence communication and organisational performance suffered. A major change initiative was planned to introduce a facilitative leadership approach across the senior levels of the organisation and to involve all senior managers in the strategic planning process. This was constructed as a WAL programme with five action research cycles.

The action research group was made up of the CEO of the company, an external facilitative consultant and the six senior managers of the organisation with responsibility for construction, sub-trade contracting, marketing, finance, major project development and accounting. The objectives of the programme as agreed by the first meeting of the action research group were:

(1) to bring about major change in the leadership style of the organisation by introducing and embedding facilitative leadership;

(2) to engage the senior managers and their team leaders in the strategic planning process for the organisation;

(3) to equip the senior managers and their team leaders with an understanding of the concepts and practice of action research and action learning so that these could be used to drive change in the organisation; and

(4) to equip senior managers and their team leaders with management knowledge to underpin their participation in the strategic planning process.

The action research group had a facilitated meeting every two months. Each meeting was for three to five days and included:

(1) a review of progress towards agreed objectives since the previous meeting;

(2) knowledge input (workshop and recommended reading); and

(3) planning of the implementation of the strategic plan, supported by new knowledge gained, in a series of linked departmental plans led by each of the six senior managers.

The six senior managers were responsible for engaging appropriate team leaders within their departments to take part in the workshop programme and to contribute to the planning and implementation of departmental projects. The organisational strategic plan and the related departmental projects were implemented during the work-based learning phase between each of the six action research group meetings. The review of progress which took place as part of each action research group meeting provided each of the senior managers with the opportunity to report on progress, share experiences and where appropriate seek help from their colleagues.

The action research cycle comprised planning and knowledge input at the action research group meeting, work-based implementation and observation and

reflection and further planning at the following action research group meeting. There was a mid programme and end of programme validation meeting where external industry and academic experts questioned the action research group members about the progress and outcomes of their projects and their relationship to the overall strategic plan.

The programme evaluation found that there was a change in leadership style to one which was more facilitative and that management behaviours had also shifted as a consequence of this. All the senior managers had played a role in shaping the strategic plan for the company and had an enhanced understanding of how this related to their own departments.

Promoting the use of work-based and WAL to enhance the intellectual capital of organisations

The Global Centre for Work-Applied Learning (GCWAL) is an independent research and consultancy centre that works with organisations and communities to build continuing positive change and effectiveness. GCWAL aims to bring together practitioners, scholars and organisations committed to WAL and related areas both in Australia and around the world. A key activity of GCWAL is the certification of individuals and organisations in the use of work-based learning and WAL. This paper has highlighted the importance of drawing from and adding to the structural capital of organisations in order to achieve impact that goes beyond the individual to organisation. GCWAL works to reinforce the productive learning capability within organisations by explicitly addressing the issue of organisational accreditation which can be achieved at department or divisional level as well as across the whole organisation.

This process has been piloted within the Australian Institute of Business (AIB). In responding to the regulatory requirements of the Australian higher education regulator, the Tertiary Education Quality and Standards Agency. AIB used the fused Action Research and Action Learning approach (Abraham, 2012) for the development of a Work-Applied Quality and Risk Implementation model, as shown in Appendix, for the purpose of implementing its accreditation renewal and continuous improvement processes.

The quality and risk implementation model is summarised as follows.

Planning

The Quality and Risk Committee (QRC) is the action research group in this model as the AIB Board of Directors has given this Committee the mandate to monitor the quality assurance processes at AIB. The QRC monitored the Quality and Risk Implementation Plan. As seen in Appendix, the Quality and Risk Implementation Plan comprised three tranches: tranche A – course review and accreditation; tranche B – registration; and tranche C – continuous improvement, with three major cycles.

Acting

The facilitator for each Tranche was responsible for the implementation of the planned activities. This involved working with their team to delegate tasks to the appropriate people, including internal staff or contractors, monitor results, report on results at team meetings, reflect on the process and keep accurate records of the processes and minutes of all team meetings.

Observation/reflection
At each team meeting, there was ongoing observation of and reflection on the implementation process, and often, there would be discussions on whether any changes were necessary.

Evaluation
Reports of progress against the Quality and Risk Implementation Plan were presented at each QRC meeting and then advised to the Board of Directors.

Validation
Evidence of progress in the various Tranches was reviewed and validated by Academic Board and the Board of Directors, as appropriate.

The AIB Quality and Risk Implementation model developed through the WAL approach is designed to ensure that both the AIB strategic goals and the regulatory standards are continually addressed.

Conclusions

The learning imperative of the knowledge economy requires a paradigm shift to place learning at the core of successful organisations. Traditional forms of higher education and class room-based training are ill-suited to meet this requirement. In the first instance what is required for most individuals and organisations is the planning and development of their work-based learning capability. This will involve developing an understanding of key work-based learning concepts and practices and the ability to use a facilitative leadership style to embed these within the organisation using action learning and reflective practice.

The WAL experience to date suggests that to achieve major strategic change in organisations requires working at senior level within the organisation to develop the capability of the organisation to learn and apply that learning strategically. This requires the development of a senior leadership cadre in Action Research and Action Learning, Organisational Learning and Knowledge Management, Action Learning, Reflective Practice, and Facilitative Leadership. This knowledge base is applied to the organisational strategic planning process and embedded within the organisation using interlocking action research projects carried out by real life work teams. WAL thus draws upon extends not only the learning of individuals but also the intellectual capital of organisations.

References

Abraham, S. (2012), *Work-Applied Learning for Change*, AIB, Adelaide.

Barnett, R. (2000), *Realizing the University in an Age of Complexity*, SRHE and OU Press, Buckingham.

Boud, D. and Solomon, N. (Eds) (2001), *Work-Based Learning: A New Higher Education*, SRHE and OU Press, Buckingham.

Boud, D., Cressy, P. and Docherty, P. (2006), *Productive Reflection at Work*, Routledge, London.

Bravenboer, D. (2011), "Maximising employer-responsive progression through organisational development", in Tallantyre, F. and Kettle, J. (Eds), *Learning from Experience in Employer Engagement*, Higher Education Academy, pp. 34-44.

Durrant, A., Rhodes, G. and Young, D. (2009), *University Level Work Based Learning*, Middlesex University Press, London.

Garnett, J. (2005), "University work based learning and the knowledge driven project", in Rounce, K. and Workman, B. (Eds), *Work Based Learning in Health Care*, Kingsham, Chichester, pp. 79-86.

Garnett, J. (2007), "Employers and university partnerships", in Roodhouse, S. and Swailes, S. (Eds), *Employers, Skills and Higher Education*, Kingsham, Chichester, pp. 81-92.

Garnett, J. (2009), "Contributing to the intellectual capital of organizations", in Garnett, Costley and Workman (Eds), *Work Based Learning: Journeys to the Core of Higher Education*, Middlesex University Press, London, pp. 226-237.

Garnett, J. (2012), "Authentic work integrated learning", in Hunt, L. and Chalmers, D. (Eds), *University Teaching in Focus: A Learning Centered Approach*, ACER Press, Melbourne, pp. 164-179.

Gray, D., Cundell, S., Hay, D. and O'Neill, J. (2004), *Learning through the Workplace*, Nelson Thornes, Cheltenham.

Helyer, R. and Price, A. (2016), "Learning to learn", in Helyer, R. (Ed.), *Facilitating Work-Based Learning*, Palgrave, London, pp. 207-226.

Ions, K. and Minton, A. (2012), "Can work based learning programmes help companies to become learning organizations?", *Higher Education, Skills and Work Based Learning*, Vol. 2 No. 1, pp. 22-32.

Jarvis, P. (2001), *Universities and Corporate Universities*, Kogan Page, London.

Kaarby, K. and Lindboe, I. (2015), "The workplace as a learning environment in early childhood teacher education: an investigation of work-based education", *Journal of Widening Participation and Lifelong Learning*, Vol. 17, UALL Special Issue, pp. 8-29.

Kluge, J., Wolfram, S. and Licht, T. (2001), *Knowledge Unplugged – The McKinsey and Company Global Survey on Knowledge Management*, Palgrave, Basingstoke.

Major, D. (2016), "Models of work-based learning, examples and reflections", *Journal of Work-Applied Management*, Vol. 8 No. 1, pp. 17-28.

Mayo, A. (2000), "The role of employee development in the growth of intellectual capital", *Personnel Review*, Vol. 29 No. 4, pp. 521-533.

Meakin, D. and Wall, T. (2013), "Co-delivered work based learning: contested ownership and responsibility", *Higher Education, Skills and Work Based Learning*, Vol. 3 No. 1, pp. 73-81.

Osborne, C., Davies, J. and Garnett, J. (1998), "Guiding the learner to the centre of the stakeholder curriculum: independent and work based learning at Middlesex University", in Stephenson, J. and Yorke, M. (Eds), *Capability and Quality in Higher Education*, Kogan Page, London.

Quintas, P. (2002), "Managing knowledge in a new century", in Little, S., Quintas, P. and Ray, T. (Eds), *Managing Knowledge*, Sage, London.

Raelin, J. (2008), *Work-Based Learning*, Josey Bass, San Francisco, CA.

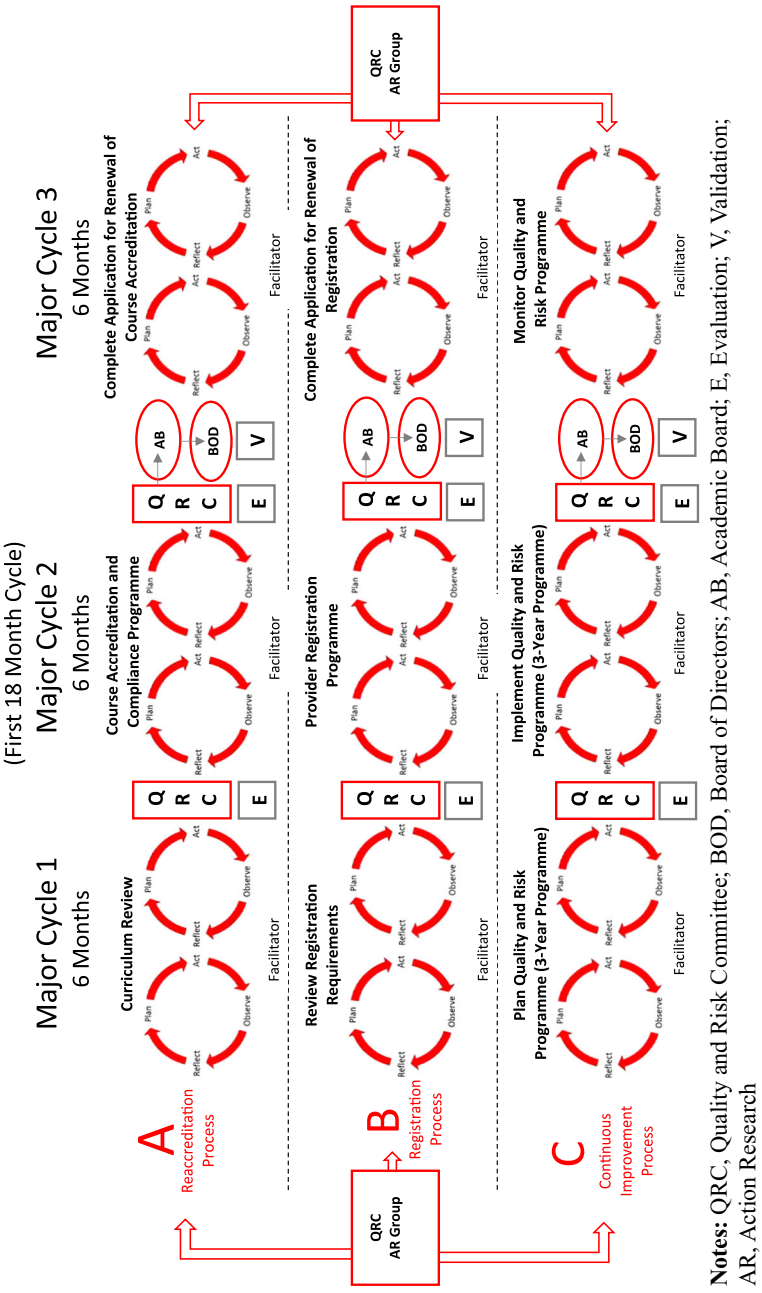
Scarborough, H. (Ed.) (2008), *The Evolution of Business Knowledge*, Oxford University Press, Oxford.

Stewart, T. (1997), *Intellectual Capital*, Nicholas Brearley, London.

Stewart, T. (2004), *The Wealth of Knowledge*, Nicholas Brearley, London.

Corresponding author
Jonathan Garnett can be contacted at: jonathanrguk@yahoo.com

Appendix



Notes: QRC, Quality and Risk Committee; BOD, Board of Directors; AB, Academic Board; E, Evaluation; V, Validation; AR, Action Research

Figure A1.
AIB WAL quality and risk implementation model