

link

LINK Working Paper Series

WP 02-05

Identifying Management Needs in a Time of Flux: A New Model for Human Resource Manager Education

**Finian Buckley
Kathy Monks
Conor McKeivitt**

The Learning, Innovation and Knowledge Research Centre
DCU Business School
Dublin City University
Glasnevin
Dublin 9
Ireland

link.dcu.ie

THE LEARNING, INNOVATION AND KNOWLEDGE (LINK) RESEARCH CENTRE WORKING PAPER SERIES
<http://www.link.dcu.ie/publications/workingpaperseries/>

© 2005, Identifying Management Needs in a Time of Flux: A New Model for Human Resource Manager Education,
Finian Buckley, Kathy Monks and Conor McKeivitt

Authors are responsible for the accuracy of citations, quotations, diagrams, tables and maps.

The views expressed here do not necessarily reflect those of Learning, Innovation and Knowledge (LInK) Research Centre.

All or part of this work may be reproduced for the purposes of study, research, criticism or review provided that the author and the Learning, Innovation and Knowledge (LInK) Research Centre are fully acknowledged.

THE LEARNING, INNOVATION AND KNOWLEDGE (LINK) RESEARCH CENTRE WORKING PAPER SERIES
WP 02-05

<http://www.link.dcu.ie/publications/workingpaperseries/>
© 2005, LInK, Finian Buckley, Kathy Monks and Conor McKeivitt
Contact: Finian.Buckley@dcu.ie, Kathy.Monks@dcu.ie or Conor.McKeivitt@dcu.ie

Management Needs in a Time of Flux: A New Model for Human Resource Manager Education



FINIAN BUCKLEY
KATHY MONKS
CONOR MCKEVITT

ABSTRACT

The objective of much of contemporary management education is to transform middle managers from strategy implementers to strategic thinkers who can help guide their organisations through the relatively chaotic environment in which they currently reside. This requires the development of a vast range of skills and abilities to face the conflicting demands of the modern work environment. The current study tracks the development of deep learning and meta-competency development of 58 Human Resource (HR) managers pursuing a part-time postgraduate masters programme. The evidence collated from participant learning review logs (350 pages of written personal reviews) is presented. The shape and level of their learning and developmental experiences are depicted along a developmental continuum model reflecting the evolution of the process. The results indicate the levels of learning/change experienced by participants and how this is reflected in their work practices.

Key Words: Competency Development; Graduate Education; Managerial Development

INTRODUCTION

There has been a justified questioning of the ability of universities and business schools to deliver on the development of the appropriate competencies and abilities required of contemporary managers working in rapid change environments (see, Clarke, 1999; French & Grey, 1996). Evidence is accumulating to suggest that the traditional MBA type model of manager education, lecturer led delivery of discreet modules of self-contained knowledge to students, is flawed and results in rudimentary surface level learning which transfers well in low complexity environments but not in rapid change environments (Willmott, 1994).

It could be argued that the changes experienced by the Irish economy and the Irish business environment in the last 10 years have been seismic in nature and unprecedented in historical terms. For example, despite high levels of emigration, the unemployment statistics in the 1980s remained solidly double digit well ahead of the EU norm. By the mid 1990s emigration had been replaced by immigration and unemployment had dropped below as low as 3.7% in the first quarter of 2001 (CSO, 2001). The growth in the national economy and productivity led to a plethora of new challenges for Irish organisation, not least that of how to develop traditional middle managers to become more flexible and proactive in such a chaotic environment. Clarke (1998) suggests that such change has moved the role of contemporary middle managers from that of functional specialist to that of a generalist with an increased responsibility for a wider variety of tasks and with broader based goals. He suggests that central to this evolution in role is the requirement of the managers to become more participative in orientation, to become more team oriented and flexible in the face of uncertainty.

This description of the role of the contemporary middle manager in a rapidly changing organisational milieu echoes the description and requirements of the J-form Organisation outlined by Mintzberg in his classic typology of organisational forms (Mintzberg, 1979). Lam (2000) further develops Mintzberg's model (incorporating the work of Aoki, 1988 and Nonaka & Takeuchi, 1995) when discussing the differential requirements of knowledge management in each of the organisational forms. Figure 1 below develops Lam's idea but replaces her transposition of knowledge requirements with how each organisational form might be placed in differential change environments.

[Insert Figure 1 about here]

Professional Bureaucracy

Typically this organisational type is populated by highly trained individuals and experts. This is somewhat reflective of Miner's (1993) idealisation of a professional organisation which he suggest were characterised by loyalty to the profession being as high (perhaps even higher) than to the organisation. Professional competence and adherence to professional guidelines and practices are paramount. Knowledge is

standardised within the organisation and as are many working procedures. However, the source of much of this standardisation lies not within but outside the organisation with the professional body/institute which accredits its existence. Organisations such as law firms or accountancy firms typify the professional bureaucracy form.

In such organisations each professional is regarded as an expert taking authority and respect from the fact that he/she is an accredited member of their profession. Thus while procedures are standardised, each expert is a specialist and has a wide span of individual authority and control in what is often a 'relatively' flat organisational structure. However, there is a tendency to review new problems in terms of old experiences and procedures (Lam, 2000). This leads a consistency of approach throughout the organisation but may be a barrier to real organisation change or evolution.

Machine Bureaucracy

A machine bureaucracy is characterised by standardised and formalised work systems with clear division of labour. Miner (1993) refers to this organisational type as the hierarchic organisation where management 'do the thinking' and employees perform their duties in the prescribed way at the prescribed time. Miner suggests that "such an organization is large enough so that formalized, written communication is necessary, not merely face-to-face interaction." (p.2). Supervision is close and a climate of management control is pervasive in the organisation. There is little freedom of action for employees and organisational knowledge is encoded in the rules, procedures and performance standards and thus exists at an organisational level rather than at the individual level.

Frequently, advanced management information systems become the knowledge management system in itself (Lam, 2000). Large manufacturing firms such as car assembly plants or food processing plants would be typical representatives of the machine bureaucracy organisational type.

Such hierarchic organisations tend not to be designed to adapt to rapid change. The strength of the organisational form is consistency and dependability in a low change environment. The structure of this organisational type discourages flexibility and change tends to involve either slow accretion or fundamental redesign.

Operating Adhocracy

This organisational type is described as being fundamentally organic in its form. Miner's (1993) task organisation represented by the entrepreneurial enterprise reflects this organisational type. While comprising of specialists, in this organisational form all members adopt generalist roles depending on tacit knowledge and intuition as well as past experiences to solve issues that arise. Thus knowledge control is at an individual level with little standardised practices and procedures existing within the organisation. Independent problem-solving consultancies, business start-ups, software

engineering firms might be represented by the operating adhocracy organisational type.

The fluidity and non-standardised operating approaches suggests that this organisational form can be flexible in rapid change environments. In fact speed of learning and reaction are a central strength of this organisational form. However, the fluidic organic nature of this organisational type can be a handicap, as so much important knowledge may leak from the organisation due to the uncoordinated manner in which tasks are approached. Thus individual learning may be at an elevated level but sharing and retention may not occur.

J-Form Organisation

Reflective of the Japanese type organisation described in Nonaka and Takeuchi (1995) 'knowledge creating companies'. These are relatively stable organisations with established structures and procedures but have consciously incorporated flexibility and a culture of mutual learning and collaboration to maintain reflexivity. Central to this flexibility is the persistent use of rotating cross-functional teams on various projects and initiatives. The consequence of this participative approach to organisational functioning is that tacit knowledge is shared and made explicit and a wide variety of experiences and insights are pooled. This frequently leads to the socio-cognitive conflict described by Bogenrieder (2002) and the reflection on practice (Foley, 2000; Hackett, 2001; Schon, 1983) which leads to the evolution of a shared mental model of the organisation and its values. Thus control of knowledge, due the collaborative climate, is not at an individual level but is integrated at an organisational level.

J-type organisations have a capacity to innovate and to adapt as various changes impact on the organisation. However, their essentially formal structure and the importance of the social and relational framework of the organisation implies that firms may find it difficult to change radically. Despite this, the J-form organisation is has the capacity to manage, adapt and grow through most rapid change scenarios. This organisational type and culture would appear to be the optimal form to navigate and prosper in fast change environment characterised in the Celtic Economy flux of the 1990s. Managers become participative decision makers and are constantly learning by doing in a challenging environment where new knowledge is generated and shared in a reflexive fashion.

EDUCATING THE MANAGER FOR THE J-FORM ORGANISATION

The four organisational types outlined display differing abilities in terms of employee input, structural and managerial design, knowledge management and adaptability when facing change scenarios. It follows that management development requirements for each of these organisational forms would differ in terms of content and process.

It could be argued that management education in the Professional Bureaucracy is actually professional development seen in terms of the acquisition of new formal knowledge and procedures. Typically this training is viewed as being functional in nature and dedicated to professional advancement as against having an explicit organisational objective. Such an individualised approach to development dedicated to tangible and explicit formal knowledge acquisition can result in real problems with innovation (Mintzberg, 1979). In summary increased formal knowledge would be the primary learning goal.

Management education for the Machine Bureaucracy would have the objective of enhancing managers supervisory and control skills. Knowledge management within this organisational type resides with advanced management information systems and there is little requirement for either declarative information nor for advanced strategic review approaches. Management education tends to be focused on the training of new functional procedures or on traditional supervisory skills. In summary while some formal knowledge may be desired the primary learning goal would be the acquisition of new managerial skills.

The Operating Adhocracy type typically does not engage in strategic formal management education or development. Rather most management development is through experience and on the job in what are frequently knowledge intensive firms. If formal management development is to take place it would typically be directed at generalist and advanced management competencies rather than specialist skills or approaches. In summary the goal is not necessarily new knowledge of skills but new ways of perceiving and solving diverse problems.

Management education requirements of the J-Form organisation would lie somewhere between those of the operating adhocracy and the machine bureaucracy. The development of advanced managerial skills and competencies are required but there is a very real need for advanced learning approaches to organisational change and development. While management development in this situation has the goal of effecting long term organisational change, much of the content actually impacts on the individual learners personal awareness and development.

Supporting the requirement for more advanced approach to educating managers who work in organisations facing rapid change, Aram and Noble (1999) call on management educators to recognise that learning is not purely a rational intellectual process but is a complex and sophisticated process which is dependent and participative as well as being both a social and emotional experience. To be effective they believe that contemporary management education requires the participant to be actively involved in the process, using techniques such as reflective learning and participative sense-making with others in the learning situation. These sentiments are supported by Bogenrieder (2002) who recognises the importance of the social-relational aspect of organisational learning, highlighting the importance of socio-cognitive conflict involved in such person to person review of the issue to hand. Such

a grounded, shared and integrated approach to learning can participants evolve to a double-loop levels of sense-making and learning (Argyris & Schon, 1978). This double-loop process is the essence of ‘deep learning’ which encourages the learner to make sense of what is being learnt and not alone to integrate this with pre-existing assumptions but to create new structures and frames in which this knowledge may evolve (Ramsden, 1992). The design of educational experiences which promote such deep learning have been shown to lead to higher order competency development such as critical and creative thinking, often referred to as meta competencies (Biggs & Rihn, 1984; Pedler, Burgoyne, and Boydell, 1994).

FROM BASIC FACTS TO META-COMPETENCIES –THE NEEDS OF DIFFERENT ORGANISATIONAL TYPES

Various researchers have attempted to classify the levels of knowledge, skills and abilities required in certain occupations (Boyatzis, 1981; Cheetham & Chivers, 1998; Jessup, 1991; Spencer & Spencer, 1993). These attempts at classification are of use to management educators as they help identify the appropriate level, scope and depth of the education experience for different cohorts of learners.

Among those who have developed competency framework and classifications, Pedler, Burgoyne and Boydell (1994) developed a competency classification system reflecting the successful manager. Their research indicated that there were three levels of competencies and qualities an effective manager possessed.

In order these are:

1. Basic Knowledge and Information
2. Skills and Attribute
3. Meta-Competencies

The constituent sub-competencies of each of the three levels are displayed in Figure 2 below.

[Insert Figure 2 about here]

Pedler et al (1994) model offers a useful template upon which to project the potential knowledge skills and competencies which might be required of managers in different organisational types. One might assume from the earlier review of organisational forms that the Professional Bureaucracy would have little need for Level 3 meta-competencies while the emphasis would be on Level 1 knowledge and facts supplemented by some Level2 development of skill and abilities (see Figure 3).

[Insert Figure 3 about here]

The requirements of the Machine Bureaucracy would focus more on the development of specific skills and abilities which have a proximal and tangible impact on work procedures. These might include new procedures for increasing production efficiency or skills directed at dealing with employees more effectively. Reflecting these needs on the Pedler et al framework it might be suggested that Level 2 Skills and Abilities would be the major requirement with some input on Level 1 Basic Facts and a lesser requirement for Level 3 Metacompetencies (see Figure 4).

[Insert Figure 4 about here]

The Operating Adhocracies, although least likely to part-take in formal management education, have needs that are qualitatively different from the two bureaucracy types. The highly fluidic nature of their structure and design indicates that specialised information and skills are not of value but high level reframing and double-loop problem-solving metacompetencies are a premium. Thus Level 1 and Level 2 competencies are not likely to be a central need, but the higher order Level 3 competencies would be critical (Figure 5).

[Insert Figure 5 about here]

The J-type organisational form would have educational requirements which would have the goal of developing continued best practice in operational skills and abilities and a special need for more advanced meta-competency development taking traditional specialists and helping them develop into proactive generalists with a more holistic view of the organisation. Figure 6 suggests the conceivable degree of input from each of the three levels of competence development to meet the requirements of this organisational form.

[Insert Figure 6 about here]

THEORY INTO PRACTICE

A survey of IPD members in 1996 conducted by the authors revealed that 50% of survey respondents felt they required immediate re-education which would equip them with the skills and competencies required to manage the rapid change facing their organisation. Informed by this need and guided by the understanding that the re-education required was reflective of the form outlined in Figure 6. This educational goal by definition involved the movement away from the reliance on the delivery of basic facts and declarative information and a movement toward the provision of opportunities to develop a series of advanced skills and most importantly to facilitate metacompetencies development.

A new masters level programme was developed for HR managers and a dedicated team developed a series of educational experiences which it was hoped would provide

the fora for the development of the required variety and levels of competencies. Table 1 outlines some of the tools employed throughout the programme to develop a variety of competencies and metacompetencies.

[Insert Table 1 about here]

Many of the tools employed were chosen and/or developed because of their direct relevance to participants working roles and the immediate issues facing them as their organisations faced change. Year1 of the programme (the programme runs over two years on a part-time basis one day per week) is directed at individual and personal level development with Year2 progressing toward a more systems and strategic approaches to their understanding of their organisation.

DATA COLLECTION

Participants are encouraged to keep learning diaries at various stages throughout the programme to help develop the reflective practitioner orientation. The present study involved the review of participants post programme completion of a learning review log (on average circa 2,000 words).

These reviews were typically chronological in nature with participants beginning with their earliest memories on the programme and following their development at a personal, social and professional level over the two years.

RESULTS

Data Analysis and Findings

Reviews of 58 participants (constituting nearly four years of the programme throughput) were content analysed by two independent organisational psychologists with no input on the programme. Their analysis was guided by the Pedler et al competency framework and each review was analysed sentence by sentence for allusions to any of the 11 competency sets over the three levels of the model.

In the 350 pages of reviews analysed, 981 clear and discernible mentions or allusions to the 11 competency sets were recorded. Figure 7 below displays the frequency of occurrence of references to competency development across the three levels for the 58 participant reviews analysed.

[Insert Figure 7 about here]

The breakdown of these three levels into the eleven component competencies is displayed in Table 2 below. Among the individual competencies developed which participants mentioned most were Self-Knowledge (228 mentions), Balanced

Learning Habits and Skills (212 mentions) and Social Skills and Abilities (108 mentions).

This distribution of reported competency development reflect that hypothesised as the optimum for the J-form organisational type. There is a high prevalence of the overarching metacompetency development supported by significant development of skills and abilities. There was little reportage of level 1 competency development (basic facts and professional knowledge) with a frequency of just 12%.

[Insert Table 2 about here]

Examples of Participants Comments

Reviewing the actual comments of participants gives very real insight into the life altering effect that some of the developmental experiences. This section presents a selection of the actual comments of participants under the competency labels attributed by the independent assessors.

Level 2 Skills and Abilities - Proactivity

“I would challenge senior management in looking at the problems from a different angle. I have tried to solve problems rather than ‘blame the system’. Examples that come to mind consist of speaking out to buyers in drapery range review meetings or on last season’s sales post-mortems meetings” (Participant # 37)

“Because I have begun to become more actively involved in various (strategic review bodies with his organisation group) bodies, I see I can help convey information on these developments to my organisations management and staff in terms that they find meaningful and relevant. This has been a major positive outcome for me and my organisations” [text inside brackets added by authors to contextualise comment and maintain anonymity of participants organisation] (Participant # 16)

Both comments indicate a change in both thinking and in behaviour of these participants. Clearly they now take a more holistic approach to the change and issues facing their organisation and are proactive in their behaviour rather than being passive observers. Intrinsic to these comments is a subtle elevation in participants self-confidence to express and lead discussions on new ways of working and approaching problems.

Level 2 – Skills & Abilities - Problem-Solving and Decision-making

“My problem solving skill have definitely improved. For instance I now tend to use the systems approach, looking at the bigger picture” (Participant # 42)

“The approach he takes to problem-solving now is ‘a complex action learning exercise, factoring in a systems perspective... getting feedback on the impact in one area from something one did in another, reviewing delays between cause and effect and differences in personal needs and aspirations’” (Participant # 11)

These examples again reflect a more holistic approach to analysing and reviewing problems and issues within the participants organisations. The comments reflect a development of both thinking skills and in actual behaviour in terms of how participants approach framing organisational scenarios.

Level 3 – Meta-competencies – Self-knowledge

“The programme has forced me out of my comfort zone into situations that I would previously have avoided. An example of this is my facilitation skills. I would have been quite comfortable facilitating any group up to middle management...the programme forced me to facilitate a number of meeting with these people and each time I do it the more confident I become – I have learnt a lot about myself”. (Participant # 22)

“There have been some specific areas of personal improvement. These include the ability to establish priorities and meet them to the best of my ability, and the willingness to take criticism without being internalised or demotivating and taking due cognisance of its meaning and intent. In addition, I consider that I now have a greater level of ability to change and adapt to change at a much faster rate, and am better able to take on difficult problems and/or conflict as appropriate and deal with them. I am also more likely to disagree and debate issues with superiors”. (Participant # 19)

These extracts indicate that self-awareness and self-confidence are two particular metacompetencies which elevate participants to utilise their level 1 and level 2 competencies in a more impacting fashion. It also indicates that participants have become reflective practitioners, not behaving in a reflexive fashion but able to reconsider their abilities and their approach to work issues and choose from a portfolio of possible behaviours.

Level 3 – Meta-competencies – Creativity

Participant # 54 (shows how a new insight led to creating a new approach in his organisation):

“Involvement and providing ownership have proven to be huge challenges for management. There is one potential organisational device which would allow the development of a reasonably high level of involvement while at the same

time, maintaining the strong line management control needed to run a disciplined policing organisation. This provides for the development of a 'simultaneous loose-tight culture' of where the what is to be done could be decided centrally and how it is to be done could be decided locally".

This participant's extract gives a concrete example of how his experience on the programme has altered her view of his organisation and identifying a new and creative approach to managing problem issues in quite a traditional and static organisational form.

CONCLUSION

This paper sought to position the development needs of contemporary Irish managers facing rapid change in the traditional Mintzberg organisational type continuum. The paper suggests that given the change occurring in the Irish economy, managers need to cognisant of the competencies to manage traditional organisational form effectively but importantly suggests that managers need to develop advanced meta-competencies. These managerial meta-competencies reflect the requirements of the J-Form organisational type which is most suitably adapted to advance effectively through periods of rapid change.

The J-Form organisational type encompasses a series of organisational processes which require managers (and employees) to step beyond their functional specialism and share their views and experiences in cross-functional project teams. The requirement is to create a Learning Organisation type culture (Senge, 1990), using collaborative techniques including a systems approach to framing organisational problems and avoidance of the reflexive inactivity which dogs so many traditional organisations when facing rapid change. In essence the J-Form organisation requires managers with advanced managerial skills and abilities (Pedler et al, 1994) and with a range of Level3 meta-competencies.

The paper further elaborates on how a programme reflecting these educational goals was established to meet the needs of HR managers in Ireland. The goals of the programme reflected the objective of facilitating the development of advanced managerial skills, abilities and metacompetencies.

Tools and techniques for the achievement of these goals are also outlined. The results of an analysis of a reflective review of the programme experience, completed by 58 participants, are delivered. The findings suggest that the programme met its stated goals with appreciable positive increments in a series of advanced managerial skills and abilities as well as a clear evolution in meta-competencies. Some of the extracts detailed indicate that the development of various skills and abilities have not alone impacted on the participants personal style but the developments have had significant impact on the organisations in which they work.

Preliminary research pursuing the level of these impacts on the organisations is currently under way. An interesting sub-finding is that some managers who came to

the programme from Professional Bureaucracy and Machine Bureaucracy type organisations have found that their new-found competencies were not valued in their organisation or did not receive scope for expression, have left their organisations in search for more J-Form type organisations.

REFERENCES

- Aoki, M. (1988). *Information, incentives and bargaining in the Japanese economy*. Cambridge: Cambridge University Press.
- Aram, E., and Noble, D. (1999). Educating prospective managers in the complexity of organizational life. *Management Learning*, 30(3), 321-342.
- Argyris, C., and Schon, D. (1978). *Organizational Learning: A theory of action perspective*. Reading MA: Addison-Wesley.
- Biggs, J., and Rihn, B. (1984). The effects of intervention on deep and surface approaches to learning. In J. Kirby (ed.) *Cognitive Strategies and Educational Performance*, New York: Academic Press.
- Boyatzis, R. E. (1981). *The Competent Manager: A model for effective performance*. Wiley: New York.
- Cheetham, G. and Chivers, G. (1998). The reflective (and competent) practitioner: a model of professional competence which seeks to harmonise the reflective practitioner and competence based approaches. *Journal of European Industrial Training*, 22(7), 267-276.
- Clarke, M. (1998). Can specialists be general managers? Developing paradoxical thinking in middle managers. *Journal of Management Development*, 17 (3), 191-206.
- Clarke, M. (1999). Management development as a game of meaningless outcomes. *Human Resources Management Journal*, 9(2), 38-49.
- CSO (Central Statistics Office, Ireland), (2001). *Quarterly National Household Survey: Labour Force Estimates*. CSO:Cork.
- Foley, G. (2000) *Understanding Adult Education and Training* (2nd Ed.). Sydney: Allen & Unwin.
- French, R., and Grey, C. (1996). *Rethinking Management Education*. London: Sage
- Hackett, S. (2001). Educating for Competency and Reflective Practice: Fostering a conjoint approach in education and training. *Journal of Workplace Learning*, 13(3), 103-112.
- Jessup, G. (1991). *Outcomes: NVQs and the Emerging Model of Education and Training*. London : Falmer Press.
- Miner, R. (1993). *Role Motivation Theories*. London: Routledge.
- Mintzberg, H. (1979). *The structure of organizations*. Englewood Cliffs, NJ : Prentice Hall
- Nonaka, I, and Takeuchi, H. (1995). *The Knowledge Creating Company*. New York: Oxford University Press.

- Pedler, M., Burgoyne, J., & Boydell, T. (1994) *A Manager's Guide to Self Development* (3rd. ed.), London : McGraw-Hill.
- Ramsden, P. (1992). *Learning to teach in Higher Education*. London: Routledge.
- Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organisation*. New York NY : Doubleday.
- Schon, D. (1983). *The Reflective Practitioner*. New York, NY: Basic Books.
- Spencer, L.M. and Spencer, S.M. (1993). *Competence at Work: Models for superior performance*. New York : Wiley.
- Willmott, H. (1994). Management Education: Provocations to a debate. *Management Learning*, 25(1), 105-136.

TABLES AND FIGURES

Table 1: Tools Employed and Competencies and Metacompetencies Developed

Tool	Level 1	Level 2	Level 3
Personal Learning Journals/Logs (across 2 modules)	<ul style="list-style-type: none"> • Command of Basic Facts • Professional Understanding 	<ul style="list-style-type: none"> • Sensitivity to Events 	<ul style="list-style-type: none"> • Self-knowledge • Balanced Learning habits and Skills • Creativity
Team-working Weekend (residential)	<ul style="list-style-type: none"> • Professional Understanding 	<ul style="list-style-type: none"> • Social Skills • Emotional resilience • Problem-solving • Proactivity 	<ul style="list-style-type: none"> • Mental Agility • Self-knowledge • Creativity
Team Reviews		<ul style="list-style-type: none"> • Problem-solving • Proactivity • Emotional resilience 	<ul style="list-style-type: none"> • Self-knowledge • Balanced Learning Habits and Skills
Team Projects	<ul style="list-style-type: none"> • Command of Basic Facts 	<ul style="list-style-type: none"> • Social Skills • Emotional resilience • Problem-solving 	<ul style="list-style-type: none"> • Mental Agility • Self-knowledge • Creativity • Balanced Learning Habits and Skills
Creative Thinking workshops (DeBono)		<ul style="list-style-type: none"> • Social Skills • Emotional resilience • Problem-solving • Proactivity 	<ul style="list-style-type: none"> • Mental Agility • Self-knowledge • Creativity • Balanced Learning Habits and Skills
Leadership Computer Simulation	<ul style="list-style-type: none"> • Professional Understanding 	<ul style="list-style-type: none"> • Sensitivity to Events • Social Skills • Problem-solving • Proactivity 	<ul style="list-style-type: none"> • Mental Agility • Self-knowledge • Creativity
Professional Styles Profiling	<ul style="list-style-type: none"> • Professional Understanding 	<ul style="list-style-type: none"> • Problem-solving • Proactivity • Sensitivity to Events 	<ul style="list-style-type: none"> • Self-knowledge • Mental Agility • Balanced Learning Habits and Skills
Learning Styles Development	<ul style="list-style-type: none"> • Professional Understanding 	<ul style="list-style-type: none"> • Sensitivity to Events • Problem-solving • Proactivity 	<ul style="list-style-type: none"> • Self-knowledge • Mental Agility • Balanced Learning Habits and Skills • Creativity
Systems Thinking development	<ul style="list-style-type: none"> • Professional Understanding 	<ul style="list-style-type: none"> • Sensitivity to Events • Problem-solving • Proactivity 	<ul style="list-style-type: none"> • Mental Agility • Creativity • Balanced Learning Habits and Skills
Team Development Diary		<ul style="list-style-type: none"> • Sensitivity to Events • Problem-solving • Social Skills • Proactivity 	<ul style="list-style-type: none"> • Mental Agility • Self-knowledge • Balanced Learning Habits and Skills
Reflective review	<ul style="list-style-type: none"> • Professional Understanding 	<ul style="list-style-type: none"> • Sensitivity to Events • Problem-solving • Proactivity 	<ul style="list-style-type: none"> • Self-knowledge • Balanced Learning Habits and Skills • Mental Agility

Table 2: Frequency and percentages of references of competency development

Pedler et al Competency Framework	Mentions (Percentage of total)
1. Command of Basic Facts	5 (0.5)
2. Relevant Professional Knowledge	113 (11.5)
3. Sensitivity to Events	22 (2.3)
4. Problem-solving and decision making	90 (9.2)
5. Social Skills and Abilities	108 (11.0)
6. Emotional Resilience	69 (7.0)
7. Proactivity	69 (7.0)
8. Creativity	13 (1.3)
9. Mental Agility	92 (9.4)
10. Balanced Learning Habits and Skills	212 (21.6)
11. Self-Knowledge	228 (23.4)

Figure 1: Organisational Type: Optimum Level Of Knowledge Control And Pace Of Change

		Knowledge Control and Autonomy	
		Individual	Organisational
Pace of Change	Slow	Professional Bureaucracy	Machine Bureaucracy
	Fast	Operating Adhocracy	J-Form Organization

Figure 2: Pedler et al (1994) Eleven qualities of a successful manager

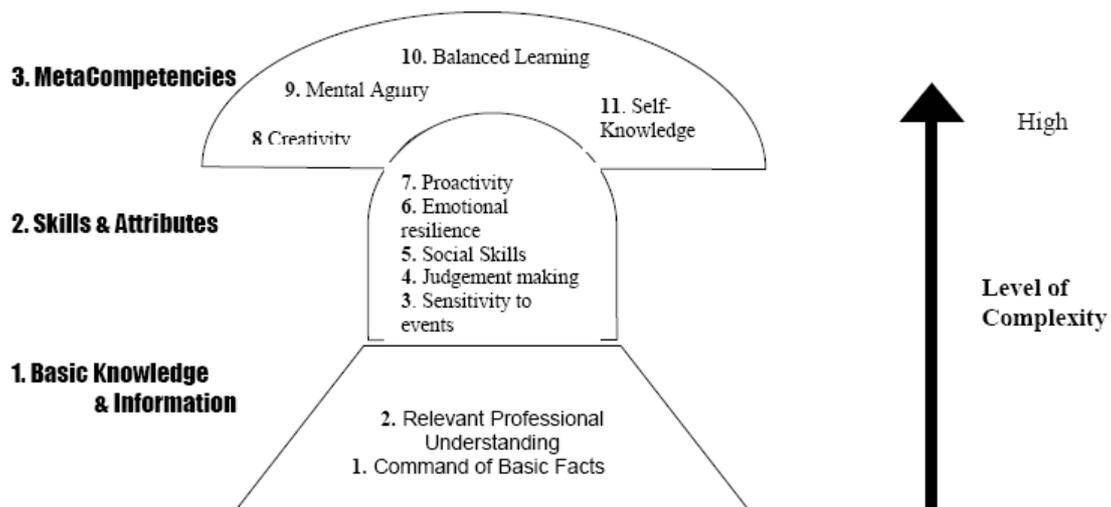


Figure 3: Professional Bureaucracy levels of Competency Development Required

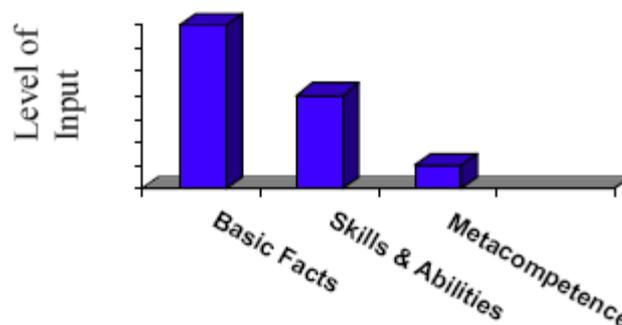


Figure 4: Machine Bureaucracy Levels of Competency Development Required

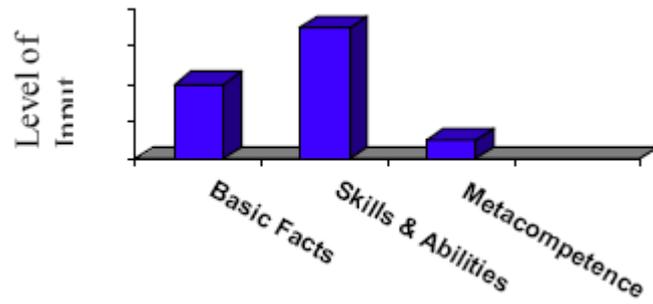


Figure 5: Operating Adhocracy Levels of Competency Development required

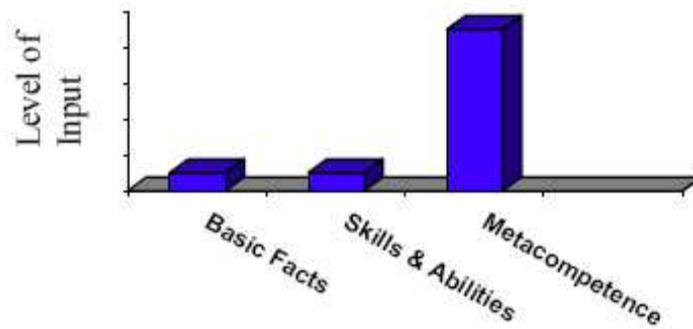


Figure 6: J-Form Organisation Level of Competency Development required

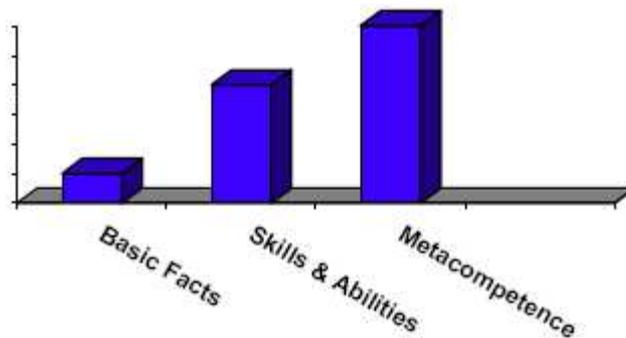


Figure 7: Frequency of mentions of three levels of competency

