

Organisational Learning and Monitoring and Evaluation in Project-Based Organisations

by

Ngonidzashe Chipato

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Supervisor: Prof J Kinghorn

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DECLARATION:

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Date: March 2016

OPSOMMING

Hierdie tesis handel oor roetines in projekgebaseerde organisasies.

Die vraag is hoe sodanige organisasies kan leer ten spyte van die gebrek aan kontinuiteit wat hulle kenmerk.

Die tesis ondersoek die konsepte van ‘dynamic capabilities’, organisatoriese leer en monitering en evaluasie.

Dit sluit af met die voorlegging van ’n teoretiese raamwerk vir projekgebaseerde organisasies.

SUMMARY

Organisation routines are central to performance and, if organised and done in a non-imitable way, allow for an organisation to gain competitive advantage. The objective of the thesis is to identify ways in which Project-Based Organisations (PBOs) can learn and ultimately gain the competitive advantage. PBOs, unlike other organisations, have their work and tasks organised in a different way, which may allow for or make learning difficult if no effort to support learning is in place. To answer the question of learning in PBOs and propose a model that can be adapted by PBOs, this thesis is organised as follows:

Chapter 1 provides an introduction to the research, providing the research design and question in which this thesis is based on. Further, the study methodology and limitations are provided.

Chapter 2 deals with the importance of dynamic capabilities in a firm and how firms can gain a competitive advantage through routines and processes that support the development of dynamic capabilities.

Chapter 3 provides an overview of monitoring and evaluation (M&E), the advantages of the routines and how this can support PBO learning. A lot of information and knowledge is created during M&E activities and such knowledge could be useful in supporting learning in projects.

Chapter 4 covers a literature analysis on Organisational Learning with specific emphasis on how this can be achieved in PBOs is the focus of the chapter. Single loop learning, double loop and triple loop learning are discussed.

Chapter 5 describes a working theoretical framework of how PBOs can learn utilising M&E is provided. The theoretical framework is based on concepts presented in the previous chapters, taking cognisance of the structure of PBOs.

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Abbreviations and Acronyms

CoP: Communities of Practice

KM: Knowledge Management

LO: Learning Organisation

LL: Lessons Learnt

M&E: Monitoring and Evaluation

MELPS: Monitoring Evaluation Learning People and Structure

OM: Organisation Memory

PBO: Project Based Organisation

PME: Participatory Monitoring and Evaluation

RBV: Resource Based View

SECI: Socialization Externalization Combination and Internalization

Chapter 1

The Question of Learning in Project-Based Organisations

1.1 Project-Based Organisations

In recent years, Project-Based Organisations (PBOs) have received increased attention as an emerging organizational form to integrate diverse and specialized intellectual resources and expertise in organisations¹. In the knowledge economy, PBOs may be particularly appropriate as a fast and flexible mode of organizing knowledge resources. Organisations tend to operate through projects, as these allow for them to perform project-specific tasks; however, these tasks will not necessarily be repeated exactly in different projects by an organisation. Given the structure of PBOs, they need to be learning organisations if they can remain relevant from one project to another. The temporary nature of projects allow them to be able to adapt to change and innovation. However, lack of time and reflection at the level of the project team affects learning processes. The learning that occurs among team members is decentralized: individuals move on to different projects, bringing their new experience and expertise with them and lack of organisational learning is then experienced rather with individual learning in play. In this respect, PBOs are unlike a functional organization that repeatedly performs routine tasks, where new knowledge can be incorporated into processes quickly and efficiently. When project teams disband, much learning get lost. When a new project begins, there is always a tendency to “reinvent the wheel”.. Rather than identifying specific processes for organisational and group reflection, there is a tendency to point to information systems and documents as the ‘end

¹ DeFillippi R J, Arthur M B.1998. Paradox in project-based enterprise; Hobday M.2000. The project-based organisation

products' of learning initiatives.

To understand the special features of a PBO, the following aspects must be taken into consideration: (a) project managers can supervise more than one project at any time; (b) projects that share common organizational resources and with the same management; (c) projects can have different areas of interests; (d) organizational products and services are accomplished only through projects; (e) project managers hold the power over the implementation of the activities; and (f) employees can be assigned to several projects at the same time.²

PBOs comprise of temporary project staff that is employed to work on a certain project and leave upon project completion, and permanent staff who coordinate various projects for the organisation. Often, learning is embedded in the organisation and in the routines of the organisation. Who, then, should be engaged in learning in a project, if PBOs are for the purposes of learning? Should learning only be restricted to the project staff or to the permanent staff members of the organisation? Learning needs to take place at all levels of the project and feed into the main structures of the organisation to allow for competitive advantage. Learning in PBOs becomes a challenge given the complexity of structures, therefore managing connections among people with the same area of expertise and people with different area of expertise (generally collected around a project) are crucial³.

The following are the main problems of managing knowledge and improving learning processes in project-based organization⁴:

1. lack of time and reflection at the level of the project team. The project-time pressures can inhibit learning processes. Besides, project teams are temporary and therefore much learning may be lost when they disband (tendency to “reinvent the wheel”, rather than learning from the experiences of previous projects);
2. the trade-off between centralized vs. decentralized approaches in knowledge creation, validation and dissemination processes. There is, in fact, the tendency to centralize learning (senior managers or specialized departments collect and validate the “lessons learned” elaborated by the team members) and to defer learning to future points in time (significant time passes among the identification of the possible

² Landaeta R E.2008: 30. Evaluating Benefits and Challenges of Knowledge Transfer Across Projects

³ Migliarese P ,Verteramo, S. 2005. Knowledge Creation and Sharing in a Project Team

⁴ Keegan A et al., 2000. Learning By Experience In The Project-Based Organization

improvements, their explicitation, their dissemination to the organization, the effective emergence of a similar problem, the idea of someone to reuse this knowledge); and

3. the reduced interactions with colleagues with similar competencies to exploit specialized knowledge domains. Besides, people are too engaged in their projects to share knowledge or help other people cope with similar problems.

Learning in PBOs should not be viewed as learning among individuals, as this may not support the organisation when the project staff disband on project completion. In addition, the lack of time and reflection at the level of the project team affects learning processes. Another deterrent for learning in PBOs is the lack of a set structure to assist the collection of the knowledge. PBO structure can “lose” knowledge and learning opportunities: there is no “repository” or defined sub-structure aimed at collecting and developing functional and specialized knowledge. When the team’s members lose touch with their peers, they can have trouble keeping up with developments in their field⁵. A pure project organizational structure can lose knowledge and learning opportunities as there is no defined sub-structure aimed at collecting and developing functional and specialized knowledge as well as building the memory from various projects.

Often projects are organised differently and this is mainly dependent on the size and complexity of the projects.⁶ PBOs are organised differently, with some that have various projects being implemented at the same time in different places or one project implemented at a time that exclusively focus on executing the task and disband on completion of the project. In PBOs, learning among the team members is decentralized: the individuals move on to different projects, taking their new experience and expertise with them. In this respect, it is unlike a functional organization that repeatedly performs routine tasks and where new knowledge can be incorporated into processes quickly and efficiently. Given the range and unique nature of projects, most learning from any single project comes with caveats and qualifiers about the context in which it took place. The structure of the PBO is of less relevance when it comes to learning. However, the framework proposed in this thesis can be adapted by all PBOs working with projects and it takes cognisance of the varying structures that exist in these organisations. It is clear that learning in PBOs requires effort and being able to strategically focus in order to allow for learning to take place in such dynamic environments. With limited time in projects,

⁵ McDermott R. 1999. Learning Across Teams

⁶ Meredith J R, Mantel S J. 1995. Project Management.

learning is viewed as of less importance than achieving the project results. However, learning need not to be taken as a separate process from the normal routines undertaken for the project.

It is unclear whether organisations can be in a better position to learn through the different project implemented. Researchers have argued that projects are the best place for organisational learning.⁷ On the other hand, there is just as much evidence that projects often fail because there is little learning within the project⁸ and, as has been noted, PBOs often fail to learn from projects, as attested to by the tendency to ‘reinvent the wheel’, repeat mistakes and failure to transfer lessons from one project to another⁹. Interestingly, a study by Swan J., et al¹⁰ showed that project work generated much learning amongst project participants. This, however, poses a challenge to how the organisation can utilise learning obtained by project participants to support the PBO learning.

Deadlines and milestones of projects also have an implication in project learning. The emphasis on milestones and deadlines triggered constant dialogue and compromise among project members between what is sufficient or good enough and what is optimal to achieve performance¹¹. Deadlines, therefore, induced learning within projects by encouraging individuals, faced with non-negotiable goals, to rethink problems and perform quick ‘mean-ends’ analyses before acting¹². The learning within the projects, therefore, sometimes involved ‘corner cutting’, compromise and limited learning, even while at other times it led to creative improvisation and significant learning¹³. An interesting finding by Swan et.al showed that embeddedness of projects within their organizational context is an important influence both on the level and form of learning that is achieved within the project and the extent of learning that is transferred across projects¹⁴. This is very relevant to PBOs, as, for example, they could stimulate much learning among two different projects implemented at the same time. Thus, learning across projects will be mostly expected from projects that work to address the same mandate.

⁷ Zeniuk N, Ayas K.2001. Project-based learning

⁸ Newell S. et al. 2006. Sharing knowledge across projects

⁹ Prusak L, 1997. Knowledge in Organizations

¹⁰ Swan J ,et al.2010. Why Don't (Or Do) Organizations Learn From Projects

¹¹ Swan J ,et al.2010. Why Don't (Or Do) Organizations Learn From Projects

¹² Lindkvist L, et al. 1998. Managing Product Development Projects

¹³ Swan J ,et al. 2010. Why Don't (Or Do) Organizations Learn From Projects

¹⁴ Swan J ,et al. 2010. Why Don't (Or Do) Organizations Learn From Projects

1.2 The Research Objective

This thesis investigates PBOs from the perspective of the ideal for them to operate as learning organisations. There are two aims:

- The first aim is to gain a sophisticated conceptual insight into the problem of and opportunities for learning in a PBO; and
- The second aim is to construct a framework that PBOs may find useful to guide them in the process of developing a learning culture and praxis.

1.3 The Research Focus

Given the nature of a PBO as discussed above, it has become quite common practice to enforce practices of ‘lessons learnt’. This is not confined to PBOs, but seem to be more important to them than might be the case in other organisations.

In recent times another method to counter the problems in organisations, and in particular to improve efficiency of product delivery, has become virtually ubiquitous. This is the function of Monitoring and Evaluation (M&E).

In striving to achieve the objective as set out in the previous point, this thesis focuses, in the context of PBO’s, on an investigation of ‘lessons learnt’ practices (LL) and monitoring and evaluation functions in relation to the objective of organisational learning (OL).

The thesis assumes that a positive relationship is, in principle, possible, although some adjustments to both LL and M&E would be necessary if the aim of real learning in and by the organisation is to be realised.

1.3 The Significance of the Study

PBOs are in many ways a proxy for the need for agility as the knowledge economy expands. But as the need for agility grows organisations experience more and more the features that make PBO’s particularly brittle and sometimes very inefficient.

By investigating the problems and possibilities of learning in and by organisations as they come to light in PBOs, we gain not only theoretical and practical insight into PBOs, but we improve our theoretical understanding of learning in all organisations. After all, most conventional organisations today use project-based strategies internally quite regularly. Such strategies are not far removed from project-based organisations as such.

1.5 Methodological Considerations

The methodological approach in this thesis is entirely conceptual. The thesis draws on selected literature for conceptual support in the areas of organisational learning, dynamic capabilities and monitoring and evaluation.

The thesis uses the conceptual insights derived from the literature analysis to explore implications for PBOs. This, too, is exclusively a conceptual enterprise. In fact, there is an experimental dimension in this step, as there is in the final step of the research process, i.e. in formulating a conceptual framework for learning in and by PBOs. The conceptual exploration and the proposition of a conceptual framework is deeply rooted in generally-acknowledged learning, and organisational learning theory.

1.6 Research Delimitations

This thesis is conceptual in nature and scope. It is acknowledged, therefore, that it cannot claim to provide proof of proposed framework's capacity to serve as a useful guide to organisational learning in PBOs. Such proof is only possible through extensive testing over a very long period of time in multiple PBOs. This falls outside the scope of a Masters research project.

As indicated above, the thesis confines itself to the relationship between learning and 'lessons learnt' and M&E. This is not to deny that there are other factors that have a bearing on learning in the context of organisations. For example, the topic of talent is drawing increasing attention. Other factors of importance include trust, team maturity and technology adoption. The thesis confines itself to the factors mentioned above because not much research has been done to date on the relationship of M&E and learning in general, and in PBO's in particular; and because, despite a plethora of literature on LL, it still remains hugely unpopular in organisational life.

1.7 Thesis Outline

In order to understand OL and to be able to propose a model that can be adapted for PBOs, the chapters of this thesis are organised as follows:

Chapter 1: The Question of Learning in Project-Based Organisations

The chapter introduces the study by providing an overview of what a PBO refers to. It further highlights the main challenges of learning in PBOs. The methodological considerations adopted, objective, focus and research delimitations are provided.

Chapter 2: Dynamic Capabilities

A literature analysis on dynamic capabilities and how it relates to learning forms the basis of Chapter 2.

Chapter 3: Monitoring and Evaluation

Routines form the basis of OL in PBOs. This is articulated in the chapter as M&E in projects and how it can support learning is discussed.

Chapter 4: Organisational Learning

This Chapter provides an outline to the various OL concepts that this thesis is based on. Single loop, double and triple loop learning concepts are thoroughly assessed. The chapter further review OL literature and how it relates to PBOs, which is the basis of this thesis.

Chapter 5: Organisational Learning and Monitoring and Evaluation

The relationship between M&E and OL as it relates to learning in PBOs is unpacked. Here, a theoretical framework is proposed that PBOs can adapt to recognise learning. Overall remarks of the study and findings are presented in this chapter and possible areas of further research provided.

Chapter 2

Dynamic Capabilities

Competitive advantage requires both the exploitation of existing internal and external firm-specific capabilities.

D J Teece

2.1 Introduction

Dynamic Capabilities as a field of study is still in its infancy stage, with most of the scholars having focussed on foundational issues, including the refinement of the definition¹⁵. There has been a significant interest in this field, with increasing literature since the seminal work of Teece et al¹⁶.

This chapter explains what dynamic capabilities refer to and how they relate to organisational learning, particularly in dynamic environments as is the case with PBOs, which operate in extremely dynamic environments.

In order to understand the dynamic capability concept, this chapter will initially look into the definitions provided for both “dynamic” and “capabilities”. Further, dynamic capability as a concept will be looked at and concepts that support dynamic capabilities presented. Following a thorough analysis of the dynamic capability concept, a working definition which this research will adapt will be provided.

2.2 Dynamic

The term 'dynamic' refers to the shifting character of the environment; certain strategic responses are required when time-to-market and timing is critical, the pace of innovation is

¹⁵ Helfat C et al. 2009. Understanding Dynamic Capabilities

¹⁶ Teece D J. et al. 1994. The Dynamic Capabilities of Firms

accelerating, and the nature of future competition and markets is difficult to determine.¹⁷ The term looks at the capacity to renew competences so as to adapt to the changing business environment.¹⁸ Dynamic looks at how an organisation, for example, keeps changing to adapt to the current environment it is operating in.

2.3 Capabilities

'Capabilities' emphasizes the key role of strategic management in appropriately adapting, integrating, and re-configuring internal and external organizational skills, resources, and functional competences toward changing environment¹⁹.

'Capability' implies that the organization (or its constituent parts) has the capacity to perform a particular activity in a reliable and at least minimally satisfactory manner²⁰.

A capability has an intended and specific purpose²¹. For example, the capability 'to manufacture a car' has the specific and intended purpose to produce a functioning automobile and can be measured by performance of an activity, meaning the 'ability to do' the activity, as defined in the dictionary²². A capability enables repeated and reliable performance of an activity, in contrast to ad hoc activity that does not reflect practiced or patterned behaviour²³. The repeated and reliable capacity is a particularly important feature of a capability; otherwise, almost by definition, a firm cannot be said to have a 'capacity' to do something. For Project-Based Organisation, having a capability will allow them to perform different tasks for projects. Capabilities theorists view capabilities as a key dimension of firm heterogeneity²⁴, and, in some cases, of the kind of idiosyncrasy or inimitability that confers competitive advantage. Two yardsticks can be proposed for calibrating capabilities: 'technical' fitness and 'evolutionary' fitness²⁵. Technical fitness is defined by how effectively a capability performs its function, regardless of how well the capability enables a firm to make a living. Evolutionary or external

¹⁷ Teece D J, Pisano G. 1994. The Dynamic Capabilities of Firms

¹⁸ Teece D J et al., 2009. Dynamic Capabilities and Strategic Management

¹⁹ Teece D J, Pisano G. 1994. The Dynamic Capabilities of Firms

²⁰ Helfat C, Finkelstein S, Mitchell W, Peteraf M, Singh H, Teece D J, Winter S, 2007. Dynamic Capabilities

²¹ Winter S G. 2003. Understanding dynamic capabilities and Helfat C, Finkelstein S, Mitchell W, Peteraf M, Singh H, Teece D J, Winter S, 2007. Dynamic Capabilities

²² <http://www.merriam-webster.com/dictionary/capability>

²³ Winter S G. 2000. The satisficing principle in capability learning and Winter S G. 2003. Understanding Dynamic Capabilities

²⁴ Nelson R R, Winter S G. 1982. An Evolutionary Theory of Economic Change.

²⁵ Helfat C. et al., 2007. Dynamic Capabilities

fitness refers to how well the capability enables a firm to make a living. Evolutionary fitness references the selection environment. Helfat et al.²⁶ further note that both technical and evolutionary fitness range from zero to some positive value.

Pentland et al.²⁷ state that capabilities change over time. Capabilities are built not just on individual skills, but also on the collective learning derived from how employees have worked together, as well as on special equipment or facilities to which the firm has access. The longer an organization has been around, and the larger it is, the less its capabilities depend on particular individuals.²⁸ The ability to make use of the firm's capabilities will ensure that a firm can remain competitive in different projects.

2.4 Dynamic Capabilities

Teece and Pisano²⁹ define dynamic capabilities as the subset of the competencies/capabilities which allow the firm to create new products and processes and respond to changing market circumstances.

Following Teece³⁰, dynamic capabilities are best understood as “the capacity to sense and seize opportunities, then transform and reconfigure as competitive forces dictate”. Figure 1 below provides the relations of these processes in a detail on how they support business performance. Argote³¹ defines it as a change in the organisation's behaviour that occurs as a function of experience. Dynamic capabilities enable firms to adapt to and shape technological and market change. The term ‘dynamic capabilities’, refers to the capacity of an organization to build, integrate, and reconfigure its assets (tangible and intangible) and operating capabilities. The dynamic capabilities concept clearly relates to an organisation and specifically for PBOs, as they need to make use of the opportunities from every project for them to gain a competitive edge.

As provided by Teece³², dynamic capabilities can be disaggregated into the capacity (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain

²⁶ Helfat C et al., 2007. Dynamic Capabilities

²⁷ Pentland BT, Feldman MS, Becker MC, Liu P. 2012. Dynamics of organizational routines

²⁸ Teece DJ. 2012. Dynamic Capabilities.

²⁹ Teece DJ, Pisano G. 1994. The Dynamic Capabilities of Firms

³⁰ Teece DJ. 2007. Explicating Dynamic Capabilities

³¹ Argote L. 2012. Organisational Learning Research

³² Teece DJ. 2007. Explicating Dynamic Capabilities

competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets.

Dynamic capabilities are higher-level competences that determine the firm's ability to integrate, build, and reconfigure internal and external resources/competences to address, and possibly shape, rapidly changing business environments³³. Dynamic capabilities are processes embedded in firms.³⁴ Eisenhardt and Martin³⁵ further state that dynamic capabilities have greater equifinality, homogeneity, and substitutability across firms than traditional Resource-Based View (RBV) thinking implies.

Dynamic capabilities enable business enterprises to create, deploy, and protect the intangible assets that support superior long-run business performance³⁶. Dynamic capability theory states that some firms thrive in the face of environmental changes because they have the ability to change their resources³⁷. Dynamic capability enables firms not just to invent, but also to innovate profitably³⁸. The concept relates to high-level activities that link to management's ability to sense and then seize opportunities, navigate threats, and combine and reconfigure specialized and co-specialized assets to meet changing customer needs, and to sustain and amplify evolutionary fitness, thereby building long-run value for investors. For PBOs, an evolutionary fitness, is also linked to the firm's ability to succeed in the different projects.

This thesis adopts a combined definition of Teece and Eisenhardt et. al; that view dynamic capabilities as higher-level competences that determine the firm's ability to integrate, build, and reconfigure internal and external resources/competences to address, and possibly shape, rapidly changing business environments³⁹ and as processes embedded in firms⁴⁰. This definition relates to the nature of PBOs that make use of temporary staff that can be referred to as external resources.

³³ Teece D.J. 2007. Explicating Dynamic Capabilities

³⁴ Eisenhardt K M, Martin JA. 2000. Dynamic Capabilities.

³⁵ Eisenhardt KM, Martin JA. 2000. Dynamic Capabilities.

³⁶ Teece D J.2007. Explicating Dynamic Capabilities

³⁷ Teece D J, Pisano G, Shuen A, 1997. Dynamic Capabilities and Strategic Management and Eisenhardt,K.M and Martin J.A, 2000. Dynamic Capabilities.

³⁸ Teece D J. 2006. Reflections on Profiting from Innovation.

³⁹ Teece D J. 2007. Explicating Dynamic Capabilities and Teece D.J, Gary Pisano; Amy Shuen, 1997. Dynamic Capabilities and Strategic Management

⁴⁰ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

2.5 The difference between operational and dynamic capabilities

Operational/ordinary capabilities are those that enable a firm to make a living in the present⁴¹. Thus, an operational capability enables a firm to perform an activity on an on-going basis using more or less the same techniques on the same scale to support existing products and services for the same customer population. Such a capability is ordinary in the sense of maintaining the status quo (that is, not out of the ordinary referred to as zero order capabilities by Winter.⁴²

In contrast, a dynamic capability is one that enables a firm to alter how it currently makes its living. This is the sense in which Teece, Pisano, and Shuen⁴³ introduced the term, and this general usage has continued to this day⁴⁴.

Dynamic capabilities are ‘strategic’ and distinct from ordinary capabilities. Firms can maintain and extend competitive advantage by layering dynamic capabilities on top of ordinary capabilities. A firm’s ordinary capabilities may enable it to perform efficiently its current activities⁴⁵. However, dynamic capabilities, when combined with a good strategy⁴⁶, enable the enterprise to position itself for making the right products and targeting the right markets to address the consumer needs and the technological and competitive opportunities of the future.

When examining competitive advantage, it is therefore critical to distinguish between “ordinary” (and easily replicable) capabilities and dynamic capabilities that are hard to replicate due to their nature. Ordinary capabilities support technical fitness, while dynamic capabilities support evolutionary fitness. The former is about the enterprise “doing things right”; the latter has more to do with “doing the right things”.

Firms can use dynamic capabilities to extend or modify how they make a living in many ways. This can include altering operational capabilities⁴⁷, or what Helfat et al.⁴⁸ call the resource base of the organization (broadly denoting those things on which firms draw to perform activities), or features of the external environment or ecosystem⁴⁹. Examples of dynamic capabilities

⁴¹ Winter S G. 2003. Understanding Dynamic Capabilities

⁴² Winter S G. 2003. Understanding Dynamic Capabilities

⁴³ Teece D J, Pisano G, Shuen A. 1997. Dynamic Capabilities and Strategic Management

⁴⁴ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities and Winter S G. 2003. Understanding dynamic capabilities

⁴⁵ Teece D J. 2012. Dynamic Capabilities: Routines versus Entrepreneurial Action

⁴⁶ Rumelt R. 2011. Good Strategy, Bad Strategy.

⁴⁷ Winter S G. 2003. Understanding Dynamic Capabilities

⁴⁸ Helfat C, Finkelstein S, Mitchell W, Peteraf M, Singh H, Teece D J, Winter S. 2007. Dynamic Capabilities

⁴⁹ Teece D J. 2007. Explicating Dynamic Capabilities

include those for conducting acquisitions, alliances, and new product development, which alter the ways in which firms earn their living⁵⁰.

Dynamic and operational capabilities differ in their purposes and intended outcomes. However, it is impossible to draw a bright line between these two sorts of capabilities because: (1) change is always occurring to at least some extent; (2) cannot distinguish dynamic from operational capabilities based on whether they support what is perceived as radical versus non-radical change, or new versus existing businesses; and (3) some capabilities can be used for both operational and dynamic purposes⁵¹.

Ordinary capabilities permit sufficiency (and occasionally, excellence) in the performance of a well-delineated task. They generally fall into three categories: administration, operations and governance. Ordinary capabilities are embedded in some combination of: (1) skilled personnel, including, under certain circumstances, independent contractors; (2) facilities and equipment; and (3) processes and routines, including any supporting technical manuals and the administrative coordination needed to get the job done. Strong ordinary capabilities indicate that the firm has achieved “best practices,” and owns or has access to skilled people and advanced equipment. Ordinary capabilities are usually in the public domain; hence, they can be “bought.” Best practices are, in this sense, ordinary⁵². Ordinary capabilities enable the firm to perform definable tasks. The level of ordinary capabilities can be measured against a particular task or standard. “Best practice” specifically does that.

The essence of dynamic capabilities is that they cannot generally be bought (apart from acquiring the entire organization); they must be built within the organisation, as Eisenhardt and Martin⁵³ state that they are embedded in a firm. They are often highly context-specific. The growth and potential transformation of the enterprise envisioned when an enterprise has strong dynamic capabilities goes beyond the notion of “strategic fit.” Dynamic capabilities are undergirded by processes (routines) and resources (positions), as explained by Teece.

Dynamic capabilities also help characterize how an enterprise obtains strengths, extends these strengths (for instance by developing new business models), synchronizes business processes

⁵⁰ Helfat C, Finkelstein S, Mitchell W, Peteraf M, Singh, H, Teece, D, Winter S G. 2007. Dynamic Capabilities and Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities and Winter S G 2003. Understanding ynamic Capabilities

⁵¹ Di Stefano G, Peteraf M, Verona G, 2010. Dynamic Capabilities Deconstructed, Easterby-Smith, Lyles, and Peteraf M. 2009. Dynamic Capabilities.

⁵² Shuen A, Paul F. Feiler, Teece D J, 2014. Dynamic capabilities in the Upstream Oil and Gas Sector

⁵³ Eisenhardt K M, Martin J A, 2000. Dynamic Capabilities

and models with the business environment, and/or shapes the business environment in its favor⁵⁴. In other words, dynamic capabilities are higher-order, difficult-to-replicate capabilities.

Dynamic capabilities differ from ordinary capabilities in that they orchestrate clusters of ordinary capabilities, best practices and competencies to gain competitive and performance advantages capturing opportunities and managing strategic risks.⁵⁵

Ordinary capabilities are insufficient for long-term survival and growth; dynamic capabilities enable the firm to have a better chance of establishing and maintaining competitive advantage (and related superior performance) over time. Dynamic capabilities are hard to develop, and difficult to transfer across borders, in part because they are tacit, often embedded in a unique set of relationships and histories, and because of uncertain imitability. Table 1 below provides a concise overview and summary of dynamic versus ordinary capabilities

Table 1: Dynamic versus Ordinary Capabilities

	Ordinary Capabilities	Dynamic Capabilities
Purpose	Technical efficiency in business functions	Achieving congruence with and with technological and business opportunities and customer needs
Tripartite schema	Operation, administration and governance	Sensing, seeking and transforming
Capability-level goal	Best Practice	Signature Process
Priority	Doing things right	Doing the right things
Imitability	Relatively imitable	Inimitable
Mechanisms of attainability	Buy or build	Innovate and build
Result	Technical fitness	Evolutionary fitness

Source: Shuen Feiler & Teece, 2014

2.6 Routines and Procedures

As noted in section 2.4 above, dynamic capabilities are undergirded by processes (routines) and resources (positions). However, Teece states that ordinary capabilities are rooted more

⁵⁴ Teece D J, Pisano G; Shuen A. 1997:7. Dynamic Capabilities and Strategic Management

⁵⁵ Shuen A, Feiler P, Teece D J. 2014. Dynamic capabilities in the Upstream Oil and Gas Sector

firmly in routines than are dynamic capabilities⁵⁶. Teece further states that a routine is a repeated action sequence, which may have its roots in algorithms and heuristics about how the enterprise is to get things done. Organizational routines, including those related to organizational transformation, transcend the individuals involved, although the routines can, for some purposes, be usefully studied as developed and embedded in the minds of multiple employees.

A particular set of routines can lose their value if they support a competence which no longer matters in the marketplace, or if they can be readily replicated or emulated by competitors⁵⁷. Imitation takes place when firms discover and copy a firm's organizational routines and procedures.⁵⁸ Nelson and Winter have argued that some sources of competitive advantage are so complex that the firm itself, let alone its competitors, does not understand them. Many organizational routines are quite tacit in nature⁵⁹. Imitation can be hindered by routines that are 'stand-alone'; in such cases, coherence may require that a change in one set of routines in one department of the firm (e.g. production) requires changes in another part (e.g. Research and Development).

Routines identify how projects are run, but not necessarily how projects are identified, prioritized, and selected.⁶⁰ Rules and procedures will need to be constantly revised if superior performance is to be sustained; this is applicable to less volatile environments too. It is often difficult to routinize such activities partially, let alone in their entirety. To explain this, Teece provided an example stating that strategizing and asset orchestration (identifying complementarities, buying or building missing assets and then aligning them) can only be routinized in a limited sense⁶¹. Many strategic actions and transformations require actions that one may never replicate.

The available literature shows how processes and routines can be essential in providing certain micro foundations for dynamic capabilities. Eisenhardt and Martin identify cross-functional R&D teams, new product development routines, quality control routines, and technology

⁵⁶ Teece D J. 2012. Dynamic Capabilities: Routines versus Entrepreneurial Action

⁵⁷ Teece D J, Pisano G, 1994. The Dynamic Capabilities of Firms

⁵⁸ Lippman S A, Rumelt R P. 1982. Uncertain Imitability.

⁵⁹ Nelson R R, Winter S G. 1982. An evolutionary theory.

⁶⁰ Teece D J. 2012. Dynamic Capabilities: Routines versus Entrepreneurial Action

⁶¹ Teece D J. 2012. Dynamic Capabilities: Routines versus Entrepreneurial Action

transfer and/or knowledge transfer routines, and certain performance measurement systems as important elements (micro foundations) of dynamic capabilities⁶².

The importance of routines in organisational growth and its dynamic capability can be supported through Apple's work, with former Chief Executive Officer, Steve Jobs', statement in an interview⁶³ about product development at Apple. Jobs described it as a mixture of creativity and routines:

“ . . . there is no system. That doesn't mean we don't have process. Apple is a very disciplined company, and we have great processes. But that's not what it's about. Process makes you more efficient. But innovation comes from people meeting up in the hallways or calling each other at 10:30 at night with a new idea, or because they realized something that shoots holes in how we've been thinking about a problem. It's ad hoc meetings of six people called by someone who thinks he has figured out the coolest new thing ever and who wants to know what other people think of his idea. And it comes from saying no to 1000 things to make sure we don't get on the wrong track or try to do too much. We're always thinking about new markets we could enter, but it's only by saying no that you can concentrate on the things that are really important.”

When managers have an understanding of the underlying processes and how they lead to dynamic capabilities, they have the potential to enhance their firm's ability for innovation⁶⁴. Capabilities themselves comprise high-level routines oriented towards specific objectives⁶⁵, where a routine is a repeatable, recognisable pattern of action involving multiple participants and interdependent actions⁶⁶

2.7 Competitive Advantage

The notion that competitive advantage requires both the exploitation of existing internal and external firm-specific capabilities and of developing new ones is partially developed by Teece⁶⁷. It is also how this research defines dynamic capability. To explain competitive

⁶² Eisenhardt K M ,Martin J A. 2000. Dynamic Capabilities

⁶³ Burrows P. 2004. A Rising iPod Lifts all Boats

⁶⁴ Harris D, Kaefer F, Salchenberger L.2009. A Framework for Organizational Learning

⁶⁵ Winter S G.2003. Understanding Dynamic Capabilities.

⁶⁶ Feldman M S, Pentland B T. 2003. Reconceptualising organisational routines

⁶⁷ Teece D J. 1982. Toward an Economic Theory.

advantage, researchers have begun to focus on the specifics of how some Organisations first develop firm-specific capabilities and how they renew competences to respond to shifts in the business environment. Distinctive organizational capabilities can provide competitive advantage and generate rents if they are based on a collection of routines, skills, and complementary assets that are difficult to imitate. Competitive advantage of firms stems from dynamic capabilities rooted in high-performance routines operating inside the firm, embedded in the firm's processes, and conditioned by its history. Helfat et. al. states that the competitive advantage of a firm lies in its managerial and organizational processes that lead to the development and deployment of dynamic capabilities⁶⁸.

In these dynamically changing markets, firms need to go beyond 'resource-based strategy' in an attempt to accumulate valuable technology assets and employ an aggressive intellectual property position. Successful firms in these environments are those demonstrating timely responsiveness, rapid and flexible product innovation, with management's capability to effectively coordinate and redeploy internal and external competences. This approach to competitive advantage is what is known as, 'dynamic capabilities', emphasizing two aspects. First, it refers to the shifting character of the environment; second, it emphasizes the key role of strategic management in appropriately adapting, integrating, and re-configuring internal and external organizational skills, resources, and functional competences toward changing environment.⁶⁹

Teece and Garypsano⁷⁰ further argued that the competitive advantage of firms stems from dynamic capabilities rooted in high-performance routines operating inside the firm, embedded in the firm's processes, and conditioned by its history. Not surprisingly, industry observers have remarked that companies can accumulate a large stock of valuable technology assets and still not have many useful capabilities.

Eisenhardt and Martin⁷¹ argue that best practices form the basis of competitive advantage; however, this has been disputed by scholars, who view best practices as being able to provide a small competitive advantage. It has also been argued that the equifinality of resource substitutes blunts not only their potential for sustainable advantage, but their contribution to

⁶⁸ Helfat C, Finkelstein S, Mitchell W, Peteraf M, Singh H, Teece D J, Winter S G. 2007. Dynamic Capabilities:

⁶⁹ Teece D J, Pisano G. 1994. The Dynamic Capabilities of Firms

⁷⁰ Teece D J, Pisano G. 1994. The Dynamic Capabilities of Firms

⁷¹ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities.

competitive advantage⁷². The reason for this is that resources that have the same functionality as a unique or rare resource can achieve the same end, thus eliminating the advantage that scarcity would otherwise confer. Thus, best practices that have equifinal outcomes cannot contribute meaningfully to competitive advantage, even if they have relatively few process elements in common. Teece supports that best practices alone cannot allow for a firm to have a competitive advantage stating that “best practices cannot by themselves in a competitive market situation enable an enterprise to outperform its competitors.”⁷³

Further, strong dynamic capabilities are unlikely, on their own, to result in sustainable competitive advantage as argued by Eisenhardt and Martin⁷⁴, who state that they can support competitive advantage for a short time. Strategy must be matched to capabilities in order to predict when and how dynamic capabilities will impact the firm’s performance. Strong dynamic capabilities and good strategy have combined to sustain competitive advantage in firms that have endured for decades, even as they shifted the focus of their activities⁷⁵.

Whilst according to Porter⁷⁶, the essence of strategy formulation is ‘coping with competition’, in the dynamic capabilities tradition the essence of strategy involves selecting and developing technologies and business models that build competitive advantage through assembling and orchestrating difficult-to-replicate assets, thereby shaping competition itself.

Operations management tools themselves cannot be the basis for competitive advantage. However, the presence of tacit, non-inimitable components of an enterprise’s superior operational competence has the potential for a time to support superior performance. It is therefore important to note that superior operational efficiency, while valuable, is not a dynamic capability.

2.8 Dynamic Capabilities and Learning

The concept of dynamic capabilities as a coordinative management process opens the door to the potential for inter-organizational learning. Researchers have pointed out that collaborations and partnerships can be vehicles for new organizational learning, helping firms to recognize dysfunctional routines, and preventing strategic blind spots.

⁷² Peteraf M A, Bergen M E. 2003. Scanning Dynamic Competitive Landscapes

⁷³ Teece D J. 2007. Explicating dynamic capabilities: 1321

⁷⁴ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities.

⁷⁵ Shuen A, Feiler P F, Teece D J. 2014. Dynamic capabilities in the upstream oil and gas sector

⁷⁶ Porter M E. 1991. Towards a Dynamic Theory of Strategy.

Learning plays a significant role in the creation and development of dynamic capabilities as illustrated, by Eisenhardt and Martin⁷⁷ and Zollo and Winter⁷⁸ who explain that learning is at the base of dynamic capabilities, and guides their evolution. Learning is also considered as a dynamic capability itself, rather than an antecedent of it. Learning as a dynamic capability has been identified as “a process by which repetition and experimentation enable tasks to be performed better and quicker”⁷⁹. In their effort to mix the two concepts, Zollo and Winter⁸⁰ explained that “dynamic capabilities are shaped by the co-evolution of learning mechanisms”. This research will use this notion of learning being a dynamic capability as was provided by Teece.

As seen above, capabilities are built not just on individual skills, but through collective learning dependent upon how employees have worked together, and on special equipment or facilities to which the firm has access. Based on this, if organisations have been in existence for a long period and have grown, their capabilities they are less likely to be dependent on individuals within the firm.

Dynamic capability development involves learning how to learn and requires creating variation in learning and selecting appropriate ways to learn, where learning itself is a technology⁸¹. Theoretical work argues that dynamic capabilities evolve through a knowledge evolution cycle where knowledge articulation and codification practices help to make knowledge explicit and facilitate the selection stage in the cycle; in particular, the creative processes, more than the outputs, may help the causal understanding of managers⁸². More recently, in a simulation study, it was found that in a highly-dynamic environment, knowledge articulation was useful but that knowledge codification had limited use, which they argue to be due to inertial effects⁸³. They also noted that the question of how dynamic capabilities develop remains open to debate.

Given a research consensus that organisational learning can manifest in cognitive or

⁷⁷ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities.

⁷⁸ Zollo M, Winter S G. 2002. Deliberate Learning.

⁷⁹ Teece D J, Pisano G; Shuen A. 1997:520. Dynamic Capabilities and Strategic Management

⁸⁰ Zollo M, Winter S G. 2002: 339. Deliberate Learning.

⁸¹ Levitt B, March J G. 1988. Organizational Learning.

⁸² Zollo M, Winter S G. 2002. Deliberate Learning.

⁸³ Romme A GL, Zollo M, Berends P 2010. Dynamic capabilities, deliberate learning and environmental dynamism.

behavioural change⁸⁴, higher-level learning involves more extensive cognitive development⁸⁵ evident in capabilities. Learning is one of the three processes identified as essential for dynamic capabilities, along with coordinating/integrating, and reconfiguration (explained in detail in section 2.12 below). Integration and coordination routines involve combining resources, such as with the new product development process. Learning is an outcome of practice and experimentation and allows tasks to be performed effectively. Reconfiguration, on the other hand, is the transformation, which requires recombination of existing resources.

In an environment of increasing competition and dynamism, Levitt and March⁸⁶ argue that organisations learn to learn because competence in learning tends to accumulate and drive slower learners to other procedures thus OL becomes vital in supporting individual learning. PBOs in particular should be able to learn to learn, given that learning may not happen if no effort is put into it. Learning how to learn is argued to require creating variation in learning and selecting appropriate ways to learn, where learning is itself a technology. They argue that learning to learn requires experimentation in the learning process, which is likely to benefit from low adaptation, imprecise response to experience and abrupt change. Learning to learn requires exploration in learning technologies which may also suffer from limitations due to myopia.⁸⁷

2.9 Dynamic Capabilities Evolution

Early contributions to dynamic capabilities came from the discipline of economics. David Teece is one of the scholars that first conceived dynamic capabilities in the mid-1980s and later publishing a book in 1997. The concept of dynamic capabilities has evolved from the resource-based view (RBV) of the firm. Researchers of RBV argue that simultaneously valuable, rare, inimitable and non-substitutable resources can be a source of superior performance, and may enable the firm to achieve sustained competitive advantage⁸⁸. Dynamic capabilities have lent value to the RBV arguments as they transform what is essentially a static view into one that can encompass competitive advantage in a dynamic context⁸⁹.

⁸⁴ Argote L. 2011. Organizational Learning Research; Easterby-Smith, Crossan, Nicolini. 2000. Organizational Learning.

⁸⁵ Fiol M C, Lyles M A. 1985. Organizational learning

⁸⁶ Levitt B, March J G. 1988. Organizational Learning

⁸⁷ Levinthal D A, March J G. 1993. The Myopia of Learning.

⁸⁸ Barney J B. 1991. Firm resources and sustained competitive advantage

⁸⁹ Barney J B. 2001. Is the resource-based “view”

Teece et. al.⁹⁰ originally defined dynamic capabilities as those enabling adaptation to external environments characterized by rapid or discontinuous change. Given that change can alternatively be made by means of ad-hoc problem-solving, the development of higher order capabilities is only warranted in changing environments because investment is required to sustain the patterned activity⁹¹. An evolutionary perspective on dynamic capability learning is borne out of evolutionary economics⁹² and concerns a firm's adaptive ability. It directs attention to routines and path dependence.⁹³ The focus of dynamic capabilities to support organisations in dynamic environments is what Eisenhardt and Martin identify as what makes dynamic capabilities different from the traditional approach to dynamic capabilities, table 2 provides these differences in detail.

Table 2: Contrasting conceptions of dynamic capabilities

	Traditional view of dynamic capabilities	Reconceptualization of dynamic capabilities
Definition	Routines to learn routines	Specific organizational and strategic processes (e.g., product innovation, strategic decision making, alliancing) by which managers alter their resource base
Heterogeneity	Idiosyncratic (i.e., firm specific)	Commonalities (i.e., best practice) with some idiosyncratic details
Pattern	Detailed, analytic routines	Depending on market dynamism, ranging from detailed, analytic routines to simple, experiential, ones
Outcome	Predictable	Depending on market dynamism, predictable or unpredictable
Competitive Advantage	Sustained competitive advantage from VRIN dynamic capabilities	Competitive advantage from valuable, somewhat rare, equifinal, substitutable, and fungible dynamic capabilities
Evolution	Unique path	Unique path shaped by learning mechanisms such as practice, codification, mistakes, and pacing

Source: Eisenhardt & Martin, 2000

⁹⁰ Teece D J, Pisano G; Shuen A. 1997. Dynamic Capabilities and Strategic Management

⁹¹ Winter S G. 2003. Understanding Dynamic Capabilities.

⁹² Nelson R R, Winter S G. 1982. An Evolutionary Theory.

⁹³ Helfat C E, Peteraf M A. 2009 Understanding Dynamic Capabilities.

Although Eisenhardt and Martin⁹⁴ subsequently noted the importance of dynamic capabilities in ‘moderately dynamic’ environments, it is more noticeable that unless an organizational capability promotes a seemingly radical change in how a company makes a living, it is not dynamic.

A second perspective on the evolution of dynamic capabilities contrasts the way they are developed through learning and hence, their nature, in moderately and highly dynamic markets. Eisenhardt and Martin⁹⁵ argue that as environmental change becomes increasingly non-linear and less predictable, dynamic capabilities rely more on creating situation-specific knowledge than on existing knowledge. Taken together, these insights open the ‘black box’ of path dependence to reveal that the evolution of dynamic capabilities is guided by well-known learning mechanisms.

Winter⁹⁶ approaches dynamic capabilities as being rooted in higher-level change routines that require investment and must be maintained. He differentiates dynamic capabilities from ad-hoc problem solving.

2.10 Two Clusters of Dynamic Capability

Dynamic Capability is sharply divided into two clusters of authorship, separated from one another but linked in the minds of citing scholars to either Teece’s work or Eisenhardt’s, but not to both. This thesis is mainly aligned to the work of Teece, though it acknowledges some of the concepts from Eisenhardt and Martin. According to Burt⁹⁷, Teece represents a “closed world”, making it difficult for new ideas to enter, whilst the work of Eisenhardt in the knowledge network suggests that it may play the role of a gatekeeper⁹⁸, selectively admitting ideas from the Teece side of the divide, acting as a lens through which they are viewed, and shaping their interpretation to more closely match the worldview represented by the community of scholarship more closely tied to Eisenhardt’s work⁹⁹.

⁹⁴ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

⁹⁵ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

⁹⁶ Winter S G. 2003. Understanding dynamic capabilities.

⁹⁷ Burt R S. 2005. Brokerage and Closure

⁹⁸ Burt R S. 1992. Structural Holes

⁹⁹ Peteraf M, Di Stefano G, Gianmario. 2013. The Elephant in the Room of Dynamic Capabilities

According to Eisenhardt and Martin¹⁰⁰, dynamic capabilities take the form of best practices or simple rules, whilst Teece et al.¹⁰¹ states that dynamic capabilities ensure the firm's sustainable competitive advantage under certain conditions. The dynamic capabilities construct was designed originally to answer the question of how firms can achieve and maintain competitive advantage in contexts of rapid technological change¹⁰². Whilst Eisenhardt and Martin¹⁰³ agree that dynamic capabilities are necessary for competitive advantage, they argue that they are not sufficient conditions for competitive advantage, and they can be used to enhance existing resource configurations in the pursuit of long-term competitive advantage (RBV's logic of leverage).

Eisenhardt and Martin¹⁰⁴ has been regarded as a second seminal contribution, in large part because it reconceptualized dynamic capabilities, challenging the purpose and mechanisms of Teece et al.'s framework and delimiting its boundary conditions¹⁰⁵. Overall, the two treatments of dynamic capabilities in Teece et al. and Eisenhardt and Martin are in agreement; both focus on the role of organizational routines, concern managerial as well as organizational processes, and portray the dynamic capabilities framework as an extension of the RBV. The recognition of organizational routines and processes in dynamic capabilities is what this thesis is based on in identifying possible learning structures for PBOs. It is argued that though they offer different views on dynamic capability, they do complement each other somehow. However, they also differ in ways that are not so easily reconciled. The difference is on whether or not dynamic capabilities have the potential to explain sustainable competitive advantage in rapidly changing environments, which is the central element of the framework, according to the concept's originators¹⁰⁶.

As conceived by Teece et al.,¹⁰⁷ the dynamic capabilities construct was designed to answer the question of "how firms achieve and sustain competitive advantage" when "operating in environments of rapid technological change". This can then further be broken down into three component questions: (1) how a firm can achieve a competitive advantage, (2) how it can

¹⁰⁰ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

¹⁰¹ Teece D J, Pisano G; Shuen A. 1997. Dynamic Capabilities and Strategic Management

¹⁰² Teece D J, Pisano G; Shuen A. 1997. Dynamic Capabilities and Strategic Management

¹⁰³ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

¹⁰⁴ Eisenhardt K M, Martin, J A. 2000. Dynamic Capabilities

¹⁰⁵ Peteraf M, Di Stefano G, Gianmario V. 2013. The Elephant in the Room of Dynamic Capabilities

¹⁰⁶ Teece D J. 2007. Explicating Dynamic Capabilities.

¹⁰⁷ Teece D J, Pisano G; Shuen A, 1997. Dynamic Capabilities and Strategic Management

sustain that advantage in the face of competition, and (3) whether it can accomplish these aims under conditions of rapid environmental change (which speaks to the framework's boundary conditions).¹⁰⁸ What distinguishes it from other approaches to these "fundamental" strategy questions is that this construct was designed to be applicable "in regimes of rapid change"¹⁰⁹, where other approaches have fallen short. It is this attribute of dynamic capabilities that have attracted scholars since so many firms in globalized economies operate under technology-driven, high-velocity conditions¹¹⁰.

On the other hand, Eisenhardt and Martin¹¹¹ argue that the resource-based logic behind Teece et al.'s¹¹² framing of dynamic capabilities "encounters a boundary condition in high velocity markets". According to Eisenhardt and Martin¹¹³, depiction of dynamic capabilities may hold true "when markets are moderately dynamic", whereas in high velocity markets, where the strategic imperatives are speed and adaptability, "dynamic capabilities take on a different character". Accordingly in high velocity markets, dynamic capabilities are not "complicated, detailed, analytic processes," but rather "simple, experiential, unstable processes" with "unpredictable outcomes". Because they are in a "continuously unstable state" and subject to "potential collapse," "dynamic capabilities themselves become difficult to sustain in high-velocity markets."¹¹⁴ Based on Eisenhardt and Martin¹¹⁵ arguments, dynamic capabilities cannot provide the basis for a theory of sustainable competitive advantage in markets subject to rapid environmental change. Eisenhardt and Martin¹¹⁶ state that "in high-velocity markets where the duration of competitive advantage is inherently unpredictable, time is central to strategy, and dynamic capabilities are themselves unstable"; it is with this argument that they then view Teece et al.'s logic as inapplicable. The researcher, however, is in agreement with Teece's view, particularly when looking at PBOs that operate in such unstable environments.

In the dynamic environment, it is with respect to the notion of how a firm can sustain a competitive advantage in the face of competition that the views of these two differ mostly.

¹⁰⁸ Peteraf M, Di Stefano G, Gianmario V. 2013. The Elephant in the Room of Dynamic Capabilities

¹⁰⁹ Teece D J, Pisano G, Shuen A, 1997. Dynamic Capabilities and Strategic Management

¹¹⁰ Bourgeois L, Eisenhardt K M. 1988. Strategic Decision Processes in High Velocity Environments.

¹¹¹ Eisenhardt K M, Martin J A. 2000:1118. Dynamic Capabilities

¹¹² Teece D J, Pisano G; Shuen A. 1997:515. Dynamic Capabilities and Strategic Management

¹¹³ Eisenhardt K M, Martin J A. 2000:1106. Dynamic Capabilities

¹¹⁴ Peteraf M, Di Stefano G, Gianmario V. 2013. The Elephant in the Room of Dynamic Capabilities

¹¹⁵ Eisenhardt K M, Martin J.A. 2000. Dynamic Capabilities

¹¹⁶ Eisenhardt K M, Martin J.A. 2000:1118. Dynamic Capabilities

Teece characterizes dynamic capabilities as an “ability to achieve new forms of competitive advantage”¹¹⁷, suggesting that dynamic capabilities can be a source of competitive advantage. The authors maintain that “the durability of [an] advantage” depends on “how readily a competence or capability can be cloned by competitors”¹¹⁸. This implies that if a firm’s dynamic capabilities cannot be readily imitated by rival firms, they may be a source of sustainable competitive advantage. However, Eisenhardt and Martin view this differently, arguing that “dynamic capabilities per se can be a source of competitive, but not sustainable advantage”¹¹⁹. The reasoning flows from their view of dynamic capabilities in moderately dynamic markets as “best practices,” a representation that Teece disputes, asserting that a “well understood and replicable ‘best’ practice” is not “likely to constitute a dynamic capability.”¹²⁰

While Teece et al.,¹²¹ argues that “it is the ease of imitation that determines the sustainability of competitive advantage”, Eisenhardt and Martin observe that in the case of dynamic capabilities, “equifinality renders inimitability irrelevant to sustained advantage”¹²².

Overall, Teece et al.,¹²³ and Eisenhardt and Martin¹²⁴ are in agreement that dynamic capabilities can be a source of competitive advantage. However, by depicting dynamic capabilities as “best practices”¹²⁵ effectively implies that any competitive advantage that is attributable to dynamic capabilities is likely to be rather small and insignificant, since best practices are commonly available, though rare. This however may not be a true reflection of best practices, whilst they are rare they can therefore not be commonly available. Once they are commonly available then they cease to be best practices.

Unless capabilities are rare (scarce or unique), they cannot provide a firm with a competitive advantage¹²⁶. Further, unless capabilities are heterogeneously distributed across firms, they

¹¹⁷ Teece D J, Pisano G; Shuen A. 1997:509. *Dynamic Capabilities and Strategic Management*

¹¹⁸ Teece D J, Pisano G; Shuen A. 1997:518. *Dynamic Capabilities and Strategic Management*

¹¹⁹ Eisenhardt K M, Martin J.A. 2000:1110. *Dynamic Capabilities*

¹²⁰ Teece D J.2007:1321. *Explicating Dynamic Capabilities*.

¹²¹ Teece D J, Pisano G; Shuen A. 1997. *Dynamic Capabilities and Strategic Management*

¹²² Eisenhardt K M, Martin J.A. 2000. *Dynamic Capabilities*

¹²³ Teece D J, Pisano G; Shuen A. 1997. *Dynamic Capabilities and Strategic Management*

¹²⁴ Eisenhardt K M, Martin J.A. 2000. *Dynamic Capabilities*

¹²⁵ Eisenhardt K M, Martin J.A. 2000. *Dynamic Capabilities*

¹²⁶ Barney J B. 1991. *Firm Resources and Sustained Competitive Advantage*

cannot be a source of competitive advantage¹²⁷. This is stated clearly by Teece et al.¹²⁸, that any capability that is “homogeneous cannot be all that strategic”. This thesis aligns itself with this argument that for any competitive advantage to be observed in a firm, they need to possess difficult-to-imitate strategies or processes, such as not making use of routines in a conventional way. Difficult-to-imitate processes will allow the firm to remain competition among its competitors.

Moreover, the large body of research on various types of identifiable processes described in terms of best practice, such as alliancing, product development, knowledge brokering, and decision making¹²⁹, suggests that such processes can at times be the drivers of significant performance differences and a substantial competitive advantage for some firms¹³⁰.

To further expand their argument of best practice supporting competitive advantage, Martin and Eisenhardt, state that a best practice that will have been widespread in one industry can still be a competitive approach in a different industry where it is unknown or uncommon¹³¹. With this approach, a firm can then use the best practice that has lost value in one market to diversify into completely new industry where it will be able to benefit. However, this remains a high risk for a firm to assume that if this best practice has ceased to work in one industry it will ultimately be of benefit in a different industry. For a firm to then decide to diversify into another market under the impression that they have a best practice to be competitive might also be costly, as this will require a fully functional research and development department to understand that specific market too. Based on these arguments, there are a variety of ways in which it is possible for dynamic capabilities, as best practices in moderately dynamic markets or as simple rules and experiential processes in high-velocity environments, to provide an enterprise with a competitive advantage or even a sustainable advantage under the right conditions.¹³²

¹²⁷ Barney J B. 1991. Firm Resources and Sustained Competitive Advantage

¹²⁸ Teece D J, Pisano G; Shuen A. 1997. Dynamic Capabilities and Strategic Management

¹²⁹ Eisenhardt K M, Martin J.A. 2000. Dynamic Capabilities

¹³⁰ Eisenhardt K M, Martin J.A. 2000. Dynamic Capabilities

¹³¹ Eisenhardt K M, Martin J.A. 2000. Dynamic Capabilities

¹³² Peteraf M, Di Stefano G, Gianmario. 2013. The Elephant in the Room of Dynamic Capabilities

To understand how competitive advantage can be brought about, Peteraf and Barney¹³³ state that if a simple rule or routine provides an uncommon added-value advantage to the firm, then it can be the source of competitive advantage, though this can be short-lived.

With these two views on dynamic capability there have been various complaints about the degree of confusion in this research domain¹³⁴. The slow progress confirms the existence of a problem¹³⁵. Recent bibliometric results reveal a field that remains tightly focused on foundational issues, the extensive research effort notwithstanding¹³⁶.

2.11 Dynamic Capability Framework

A framework, like a model, abstracts from reality. It endeavours to identify classes of relevant variables and their interrelationships. A framework is less rigorous than a model, as it is sometimes agnostic about the particular form of the theoretical relationships that may exist.¹³⁷

A key step in building a conceptual framework related to dynamic capabilities is to identify the foundations upon which distinctive and difficult-to-replicate advantages can be built. In his work on dynamic capabilities, Teece formulated a framework in which the concept is based. The objective of the dynamic capabilities framework is “to explain the sources of enterprise-level competitive advantage over time, and provide guidance to managers for avoiding the zero profit condition that results when homogeneous firms compete in perfectly competitive markets.¹³⁸”

The dynamic capabilities framework put emphasis on the replicability and imitability of organizational processes and positions¹³⁹. To ensure that there is competitive advantage, it is essential to look into imitability; if something can easily be replicated by the firm, chances are high that it can be imitated across firms. Whatever that can be easily imitated it is less likely to support good financial returns. According to the Dynamic Capabilities Framework, firms need

¹³³ Peteraf M, Bergen M. 2003. Scanning Dynamic Competitive Landscapes

¹³⁴ Peteraf M, Di Stefano G, Gianmario V. 2013. The Elephant in the Room of Dynamic Capabilities

¹³⁵ Winter S G. 2003. Understanding Dynamic Capabilities

¹³⁶ Di Stefano G, Peteraf M, Verona. G. 2010. Dynamic Capabilities Deconstructed.

¹³⁷ Teece D J. 2007. Explicating Dynamic Capabilities

¹³⁸ Teece D J. 2007. Explicating Dynamic Capabilities

¹³⁹ Teece D J, Pisano G; Shuen A. 1997. Dynamic Capabilities and Strategic Management

to align their resources with market needs through sensing, seizing and reconfiguring activities¹⁴⁰.

The aim of the framework is to ensure competitiveness of the firm beyond day-to-day running. The ability to dynamically formulate and execute strategy, achieve alignment with markets and shape them where possible is the essential requirement for durable enterprise growth and profitability. The dynamic capabilities framework shows that while the firm is shaped by its past, it is not necessarily trapped to its past. The dynamic capabilities framework endeavours to capture the key variables and relationships that need to be ‘manipulated’ to create, protect, and leverage intangible assets so as to achieve superior enterprise performance.

The framework shows how competitive advantage can be attained through the firm’s ownership of scarce but relevant and difficult-to-imitate assets, in particular its tacit knowledge. However, in fast-moving business environments open to global competition and characterized by dispersion in the geographical and organizational sources of innovation and manufacturing, sustainable advantage requires more than the ownership of difficult to- replicate (knowledge) assets. It also requires unique and difficult-to-replicate dynamic capabilities. These capabilities can be harnessed to continuously create, extend, upgrade, protect, and keep relevant the enterprise’s unique asset base.

It is important to note that not all enterprise-level responses to opportunities and threats are a result of dynamic capabilities. As Winter¹⁴¹ notes, ‘ad hoc problem solving’ isn’t necessarily a capability. This thesis also goes with the view that adoption of a well-understood and replicable ‘best’ practice does not constitute dynamic capability. Implementing best practice may help an enterprise become or remain viable, but best practices that are already widely adopted cannot by themselves in a competitive market situation enable an enterprise to earn more than its cost of capital, or outperform its competitors. Likewise, invention and innovation by themselves are insufficient to generate success¹⁴².

To identify and shape opportunities, enterprises must constantly scan, search, and explore across technologies and markets, both ‘local’ and ‘distant’¹⁴³. This activity not only involves investment in research activity and researching on customer needs and technological

¹⁴⁰ Teece D J. 2007. Explicating Dynamic Capabilities

¹⁴¹ Winter S G. 2003. Understanding Dynamic Capabilities

¹⁴² Teece D J. 1986. Profiting from Technological Innovation

¹⁴³ Nelson R R, Winter S G. 1982. An Evolutionary Theory

possibilities, but also the ability to understand the demand that cannot be easily identified through surveying customers.

The general framework advanced here sees dynamic capabilities as the foundation of enterprise-level competitive advantage in regimes of rapid (technological) change. The framework indicates that the extent to which an enterprise develops and employs superior (non-imitable) dynamic capabilities will determine the nature and amount of intangible assets it will create and/or assemble and the level of economic profits it can earn.

A firm with resources and particular skills but without dynamic capabilities has a possibility of being competitive, but this will be for a short period as it will not be able to sustain supra-competitive returns for the long term. As the framework shows, dynamically competitive enterprises not only ensure that they are above their competitor, but are key to the shaping of competition and marketplace outcomes through entrepreneurship, innovation, and semi-continuous asset orchestration and business reconfiguration. The archetypical enterprise with competences/ resources but lacking dynamic capabilities will in equilibrium ‘earn a living by producing and selling the same product, on the same scale and to the same customer population’¹⁴⁴. Such an enterprise might even be good at invention, but it will likely fail to capitalize on its technological accomplishments.

2.12 Dynamic managerial capabilities

Dynamic managerial capabilities are the capabilities with which managers build, integrate, and reconfigure organizational resources and competences.¹⁴⁵ The concept of dynamic managerial capabilities is a direct analogy to more general organizational ‘dynamic capabilities,’ defined as capabilities that enable an organization ‘to integrate, build, and reconfigure competences.¹⁴⁶

Most research on dynamic capabilities to date has focused on organizational factors that enable firms to adapt to change. Whilst these factors are equally important guidance from the organisation management, is essential in particular on how well firms cope with changing circumstances. Recent studies, for example, have documented the strong influence of top management on firm response to external change¹⁴⁷.

¹⁴⁴ Winter S G. 2003. Understanding Dynamic Capabilities

¹⁴⁵ Adner R, Helfat C. 2003. Corporate Effects and Dynamic Managerial Capabilities

¹⁴⁶ Teece D J, Pisano G; Shuen A. 1997. Dynamic Capabilities and Strategic Management

¹⁴⁷ Rosenbloom R. 2000. Leadership, Capabilities, and Technological Change

Dynamic managerial capabilities are rooted in three underlying factors: managerial human capital¹⁴⁸, managerial social capital¹⁴⁹, and managerial cognition¹⁵⁰. These factors, separately and in combination, influence the strategic and operational decisions of managers.

2.13 Dynamic Capability Elements

As noted above, there are three organizational and managerial processes which are core elements of dynamic capabilities. These were provided by Teece et al.¹⁵¹ who stated these processes as coordination/integrating, learning, and reconfiguring and leveraging (added by Bowman and Ambrosini¹⁵²). To explain these processes, *reconfiguration* refers to the transformation and recombination of assets and resources, e.g. the consolidation of manufacturing resources that often occurs as a result of an acquisition. *Leveraging* refers to the replication of a process or system that is operating in one area of a firm into another area, or extending a resource by deploying it into a new domain, for instance applying an existing brand to a new set of products. As a dynamic capability, *learning* allows tasks to be performed more effectively and efficiently, often as an outcome of experimentation, and permits reflection on failure and success. *Integration* refers to the ability of the firm to integrate and coordinate its assets and resources, resulting in the emergence of a new resource base. These processes are a subset of the processes that support sensing, seizing, and managing threats¹⁵³.

According to Teece¹⁵⁴, dynamic capabilities enable business enterprises to create, deploy, and protect the intangible assets that support superior long-run business performance. As provided by Eisenhardt and Martin¹⁵⁵ and also supported by Teece¹⁵⁶ the micro foundations of dynamic capabilities which includes the distinct skills, processes, procedures, organizational structures, decision rules, and disciplines which undergird enterprise-level sensing, seizing, and reconfiguring capacities are difficult to develop and deploy. Enterprises with strong dynamic capabilities are intensely entrepreneurial and not only adapt to business ecosystems, but also

¹⁴⁸ Castanias R P, Helfat C E. 1991, 2001. The Managerial Rents Model

¹⁴⁹ Geletkanycz M A, Boyd B K, Finkelstein S. 2001. The Strategic Value of CEO

¹⁵⁰ Hoopes D, Johnson D. 2003. Special Issue: Why is there a resource-based view?

¹⁵¹ Teece D J, et.al. 1997. Dynamic Capabilities

¹⁵² Ambrosini V, Bowman C, Collier N. 2009. What are Dynamic Capabilities

¹⁵³ Ambrosini V, Bowman C, Collier N. 2009. What are Dynamic Capabilities

¹⁵⁴ Teece D J. 2007. Explicating Dynamic Capabilities

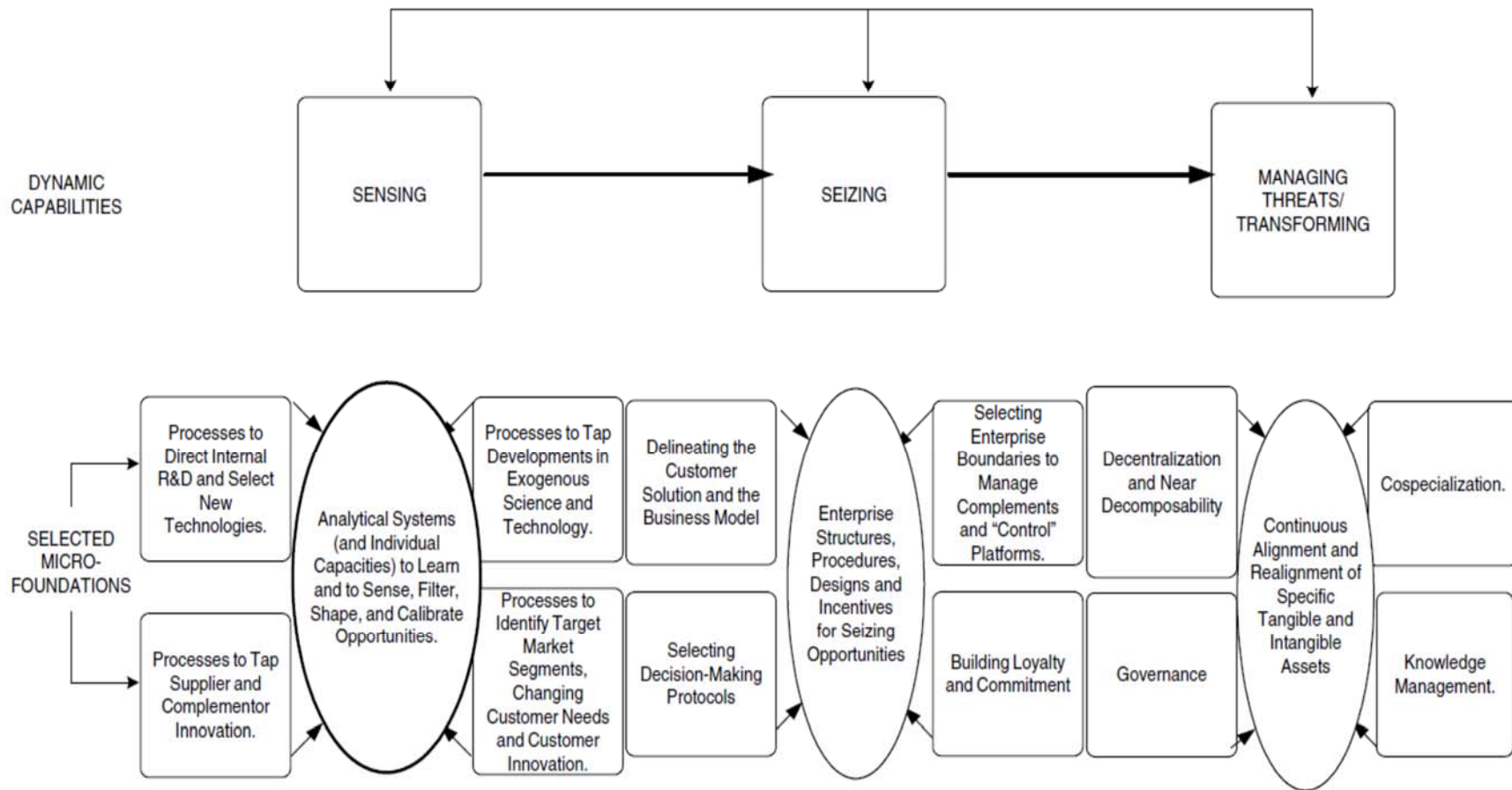
¹⁵⁵ Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

¹⁵⁶ Teece D J. 2007. Explicating Dynamic Capabilities

shape them through innovation and collaboration with other enterprises, entities, and institutions.

Dynamic Capabilities, therefore is a process of sensing and seizing opportunities with an overall goal of managing any threats by the organisation. Figure 1 below provides the foundations of dynamic capability and how they support the performance of the business.

Figure 1: Foundations of dynamic capability and business performance



Source: Teece D J, 2007)

The first two capabilities recognized as fundamental— sensing and seizing—are related to, but different from, March's¹⁵⁷ concepts of exploration and exploitation. March is clear that both capabilities are necessary for adaptation, but there are incompatibilities between the two. The incompatibilities emanate from the fact that both exploration and exploitation compete for resources and that the mindsets and organizational routines needed for one are different from the other. With regard to competition for resources, compared to seizing, sensing does not require large commitments of resources¹⁵⁸.

2.14 Processes, Positions, and Paths

As established above, the strategic dimensions of the firm are dependent on its managerial and organizational processes, its present position, and the paths available to it. In this regard, in order to assess the firm's strategic capability, there are three functions to consider, which are processes, positions, and paths. The firm's growth is heavily reliant on the typography of its processes, positions, and paths.

Managerial and organizational processes refer to the way things are done in the firm, or what might be referred to as its 'routines', or patterns of current practice and learning. Position refers to its current endowment of technology and intellectual property, its customer base and upstream relations with suppliers. Positions: The strategic posture of a firm is determined not only by its learning processes and by the coherence of its internal and external processes and incentives, but also by its location at any point in time with respect to its business assets¹⁵⁹.

Paths look at the strategic alternatives available to the firm, and the attractiveness of the potential opportunities. The firm's processes and positions collectively encompass its capabilities or competences. Paths: Where a firm can go is a function of its current position and the paths ahead and shaped by the path behind. The notion of path dependencies recognizes that 'history matters'. A firm's previous investments and its repertoire of routines (its 'history') may have a negative impact to its future behaviour. A difficult-to-replicate or difficult-to-imitate competence/capability can be considered a distinctive competence. Dynamic capabilities are the subset of the competences/capabilities which allow the firm to create new products and processes, and respond to changing market circumstances.

¹⁵⁷ March J G. 1991. Exploration and Exploitation

¹⁵⁸ Teece D J. 2007. Explicating Dynamic Capabilities

¹⁵⁹ Teece D J, Pisano G. 1994. The Dynamic Capabilities of Firms

Leonard-Barton¹⁶⁰ notes that an organization's core capabilities can just as easily create 'core rigidities'. Dynamic capabilities are situated in the environment, the paths the firm has followed, what people within the firm have done and are doing¹⁶¹.

2.15 Operating Environments for Markets (Market Dynamism)

The discussions above by various scholars show that dynamic capabilities are largely dependent on market dynamism. Dynamic capabilities also rely more on real-time information, cross-functional relationships and intensive communication among those involved in the process and with the external market. Real-time information alerts people early on to the need to adjust their actions, since problems and opportunities are spotted more quickly than when individuals were more distant from information¹⁶².

Moderately-dynamic markets are ones in which change occurs frequently, but along roughly predictable and linear paths. When markets are moderately dynamic such that change occurs in the context of stable industry structure, dynamic capabilities resemble the traditional conception of routines¹⁶³. Moderately dynamic markets are complicated, detailed, while the analytic processes relying on existing knowledge and linear execution to produce predictable outcomes. They have relatively stable industry structures such that market boundaries are clear and the players (e.g., competitors, customers, complementers) are well known. They can develop efficient processes that are predictable and relatively stable with linear steps, beginning with analysis and ending with implementation¹⁶⁴.

In very dynamic or 'high velocity' markets, change becomes nonlinear and less predictable. In high-velocity markets where industry structure is blurring, dynamic capabilities take on a different character¹⁶⁵. High-velocity markets are ones in which market boundaries are blurred, successful business models are unclear, and market players (i.e., buyers, suppliers, competitors, complementers) are ambiguous and shifting. The overall industry structure is unclear.

Unlike moderately dynamic markets, high-velocity markets are simple, experiential, unstable processes that rely on quickly-created new knowledge and iterative execution to produce

¹⁶⁰ Leonard -Barton L. 1992. Core Capabilities and Core Rigidities

¹⁶¹ Ambrosini V, Bowman C, Collier N. 2009. What are Dynamic Capabilities

¹⁶² Eisenhardt K M, Martin J A. 2000. Dynamic Capabilities

¹⁶³ Cyert R M, March J G. 1963. A Behavioural Theory of the Firm

¹⁶⁴ Helfat C E. 1997. Know-How and Asset Complementarity and Dynamic Capability Accumulation

¹⁶⁵ Eisenhardt K M 1989. Building Theories From Case Study Research

adaptive, but unpredictable outcomes and are less reliant on existing knowledge. In these markets shift focuses more on rapidly creating situation-specific new knowledge. Existing knowledge can even be a disadvantage if managers overgeneralize from past situations¹⁶⁶.

Effective dynamic capabilities in high-velocity markets are simple and not as complicated as they are in moderately dynamic markets. Simple routines keep managers focused on broadly important issues without locking them into specific behaviours or the use of past experience that may be inappropriate given the actions required in a particular situation. While dynamic capabilities are simple in high-velocity markets, they are not completely unstructured or 'organic'. Simple routines provide enough structure so that people can focus their attention amid a dissonance of information and possibilities, help provide sense-making about the situation, and be confident enough to act in these highly uncertain situations where it is easy to become paralyzed by anxiety. In high-velocity markets, dynamic capabilities are simple (not complicated), experiential (not analytic), and iterative (not linear) processes. They rely on the creation of situation-specific knowledge that is applied in the context of simple boundary and priority-setting rules. Simple routines do not give managers opportunities to grasp and so they become easy to forget¹⁶⁷. This tendency to forget is exacerbated by the high turnover and rapid growth that often accompanies firms in high-velocity markets. In more technical terms, these improvisational processes are dissipative, meaning that they require constant energy to stay on track. They are in the continuously unstable state of slipping into either too much or too little structure that is sometimes termed the 'edge of chaos'¹⁶⁸.

In high-velocity markets, absence of detailed, formal routines is not indicative of extensive use of tacit knowledge or complex social routines that cannot be codified, although these may be present. Dynamic capabilities involve the creation of new, situation-specific knowledge. They are difficult to sustain in high-velocity markets. In moderately dynamic markets, competitive advantage is destroyed from outside the firm whilst in high-velocity markets, the threat to competitive advantage comes from both outside and inside the firm. Well-known learning mechanisms guide the evolution of dynamic capabilities and underlie path dependence. The difference between the moderately dynamic markets and high velocity markets and their relation to dynamic capabilities is provided in table 3 below.

¹⁶⁶ Argote L. 2012. Organizational Learning

¹⁶⁷ Argote L. 2012. Organizational Learning

¹⁶⁸ Kauffman S. 1995. At Home in the Universe

Table 3: Dynamic capabilities and types of dynamic markets

	Moderately dynamic markets	High-velocity markets
Market definition	Stable industry structure, defined boundaries, clear business models, identifiable players, linear and predictable change	Ambiguous industry structure, blurred boundaries, fluid business models, ambiguous and shifting players, nonlinear and unpredictable change
Pattern	Detailed, analytic routines that rely extensively on existing knowledge	Simple, experiential routines that rely newly created knowledge specific to the situation
Execution	Linear	Iterative
Stable	Yes	No
Outcomes	Predictable	Unpredictable
Key to effective evolution	Frequent, nearby variation	Carefully managed selection

Source: Eisenhardt KM & Martin JA, 2000

In high-velocity markets where learning can be too rapid, selection of what to keep from experience is more crucial¹⁶⁹.

2.16 Conclusion

As noted, dynamic capabilities are embedded in organisational processes; it is these processes in projects that will allow for an organisation to learn using the knowledge created in organisational routines. The dependency of an organisation on processes shows how organisational processes are indeed essential for organisational learning. The importance of learning can also be noticed as is explained by dynamic capabilities, which will assist PBOs to remain competitive in the dynamic environments they operate in. The difficult-to-imitate processes allow for a firm to gain competitive advantage and if an organisation can reorganise the processes in a different way as opposed to the conventional way of performing these routines, then PBOs will be able to learn and remain competitive in such a dynamic

¹⁶⁹ Gersick C J G. 1994. Pacing Strategic Change

environment in which they operate in. Dynamic capabilities are indeed a form of organisational learning which relates particularly well in PBOs where the environments are highly unstable.

Chapter 3:

Monitoring and Evaluation

Monitoring is an evolving practice, which if undertaken consciously, is epistemic learning.
Guijt

3.1 Introduction

The previous chapter showed the importance of organisational routines or processes in contributing to the competitive advantage of a firm. This chapter identifies the common organisational routine in PBOs, which is Monitoring and Evaluation (M&E) and how this routine support the creation of knowledge, which in turn result in OL. The chapter assesses the different roles of M&E in projects and show how M&E plans can allow for PBOs to have dynamic capabilities and remain competitive.

3.2 Monitoring

Monitoring implies a continuing operation conducted during project implementation to ensure that the project stays on track to achieve its objectives. Monitoring is defined as “the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives.”¹⁷⁰ The monitoring exercise may be used to improve project efficacy during implementation: the project should be flexible and able to change and adapt to conditions on the ground as indicated by the exercise. However, there is a school of thought that argues for implementation of the project exactly as designed in order to test the particular model for delivery.

Through monitoring, information is collected that helps to assess the state of a resource or system, to further understand complex system dynamics, but also to measure progress and

¹⁷⁰ United Nations Development Programme. 2009. Handbook On Planning, Monitoring And Evaluating For Development Results.

performance in relation to policy implementation.¹⁷¹ The cynefin framework as provided on table 4 can be used to explain the various ways in which monitoring is performed. Conventionally, monitoring is performed with the guidance of the logic model where progress is associated to the consistent and orderly relationships and data is summarised as ‘indicators’ in relation to a hierarchy of objectives¹⁷².

Table 4: Monitoring Responses to the Different situations in the Cynefin Framework

Cynefin Framework	Monitoring Responses
Simple	Routine data collection of variables and comparing them to projected performance (as in programme logic-based monitoring). Compare practice with ‘good’ or ‘best’ practices from elsewhere
Complicated	Engage experts (from science and practice) to undertake joint analysis. Variables can be tracked to feed into analysis. Negotiation of possible explanations is needed.
Complex	Track the emergence of critical events, engage those involved to help understand/explain significance and generate ideas about possible responses; track those responses in terms of what they lead to, and so forth.
Chaotic	Intense dialogue between partners; review and re-strategise following each action; monitor to recognise the next crisis in need of action and gauge the extent to which the response has had desired effect

Source: Guijt I, 2008

¹⁷¹ Cundill C, and Fabricius C. 2009. Monitoring in Adaptive Co-management

¹⁷² Guijt I. 2008. Seeking Surprise: Rethinking monitoring

3.3 Evaluation

Evaluation can be defined as “the process of determining the worth or significance of a development activity, policy or program to determine the relevance of objectives, the efficacy of design and implementation, the efficiency or resource use, and the sustainability of results. An evaluation should (enable) the incorporation of lessons learned into the decision-making process of both partner and donor”.¹⁷³ Evaluation is periodically done to assess the relevance and performance of the project. While specific types of evaluation have been developed to address different points in the project cycle, evaluation is most commonly done on completion of the project and then years later in order to assess longer-term impact. Evaluation is also done during project implementation to assess project performance, providing continuous feedback to inform on-going changes and improvements- this type of evaluation is referred to as formative evaluation. Summative evaluation is a form of assessment that traces its roots back to measuring the attainment of goals and objectives over time.¹⁷⁴ The insights from impact assessments may be used to inform organizational and donor policy, such as whether similar projects should be initiated in other areas.

According to the Organisation for Economic Co-operation and Development/Development Assistance Committee evaluation is defined as “an assessment, as systematic and objective as possible, of an ongoing or completed project, programme or policy, its design, implementation and results.”¹⁷⁵ The aim is to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability. According to Cousins and Earl¹⁷⁶, OL complements evaluation, especially for participatory approaches that are based on the understanding that knowledge is socially constructed and that memory is formed and shared by members in the system. The primary objective of a project evaluation should be to improve organisational performance in particular for mid-term project evaluations, where the aim is to correct mistakes or unforeseen changes that are reducing project results. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors. Such evaluation results, if taken objectively, can support PBOs to gain a competitive advantage and use the results to improve

¹⁷³ United Nations Development Programme. 2009. Handbook On Planning, Monitoring And Evaluating For Development Results.

¹⁷⁴ Patton M Q 2002. Qualitative Research

¹⁷⁵ International Federation of Red Cross and Red Crescent Societies. 2011. Project/programme monitoring and evaluation

¹⁷⁶ Cousins JB, Earl LM. 1992.. The Case for Participatory Evaluation

other projects. A contradiction is invariably present: the evaluator will be more effective in putting a faltering project on course if he minimizes or disguises the critical observations. There is thus no point in making a plain-speaking, hard-hitting evaluation, one that could be a useful piece of institutional memory, since that will be taken as an indictment of project designers, implementers and supervisors. It will make them, and the organization as a whole, defensive and less open to change. It is better to downplay past errors, use code words to suggest that they exist, and move on to the main task at hand: making the project work better. The consequence, however, is that the evaluation is not much use for learning how and why things are working well or badly. It is therefore not much of an addition to institutional memory.¹⁷⁷ Accordingly, an understanding of the Organisation Memory (OM) is critical for many activities in the evaluation process, from accessing organisational knowledge to sharing that knowledge with a wider and more influential audience. OM does not only contain the information of an organisation, but also the knowledge generated throughout its lifetime¹⁷⁸. Accessing such information is important when making judgements about effectiveness, efficiency, relevance, sustainability and impact, key evaluation measurements.

3.4 Monitoring and Evaluation

Monitoring and evaluation complement each other. Whilst information obtained through monitoring is necessary, it is insufficient to conduct rigorous evaluations. Monitoring information is useful for on-going management purposes; however, a project cannot rely on the information alone as this may affect the project results by only looking at certain dimensions of project's activities. Thus, monitoring information should be thoroughly used to avoid unintended behavioural incentives. Evaluation, on the other hand, allows for a more objective interpretation of the performance. The two terms "monitoring" and "evaluation" have often been used interchangeably to refer to the process of tracking progress, accountability and assessing the results of a project. This thesis uses M&E wherever it refers to both activities as part of a cycle of learning and assessment, and to 'monitoring' and 'evaluation' when it refers to these as independent activities.

Monitoring and evaluation is about assessing actual change against stated objectives, and making a judgement whether development efforts and investments were worthwhile or 'cost-

¹⁷⁷ Berg E. 2000. Why Aren't Aid Organizations Better Learners?

¹⁷⁸ Jansen van Rensburg MS. 2014. Using Organisational Memory in Evaluations'

effective'¹⁷⁹. Therefore, M&E systems are generally constructed to provide information for reporting on achievements in order to fulfil accountability responsibilities. This has led to M&E being largely associated with a controlling and accountability function. Increasingly, however, there is recognition that M&E systems may also contribute to strategic management and learning lessons; and to feeding experiences into policy processes, as is shown in Figure 2 below, where M&E activities are linked to the ongoing reflection and learning.

Figure 2: Key M&E activities in the project cycle¹⁸⁰



Monitoring and evaluation can be used for accountability purposes¹⁸¹. In this regard M&E can be used to indicate project compliance with required parameters and demonstrate to funding agencies, donors, or the public that resources have been used appropriately. Another purpose for M&E is referred to by Failing and Gregory¹⁸² as tracking performance, and as effectiveness measurement¹⁸³. This approach to M&E is intended to measure the impacts of management actions in order to provide feedback on progress toward goals and the effectiveness of program interventions. In effectiveness measurement, performance frameworks such as results-based

¹⁷⁹ IFAD 2002. Managing for Impact in Rural Development

¹⁸⁰ There is no one generic project cycle and associated M&E activities. This figure is only a representation meant to convey the relationships of generic M&E activities within a project cycle.

¹⁸¹ Stem C, et al 2005. Monitoring and evaluation in conservation. 295-309

¹⁸² Failing L, Gregory R. 2003. Ten common mistakes in designing biodiversity 121 - 132

¹⁸³ Stem C et al., 2005. Monitoring and evaluation in conservation

and adaptive management incorporate the results of M&E into project cycles designed to facilitate continual improvement¹⁸⁴.

M&E can be used in a research context to assist with the “gathering or generation of knowledge about a subject to gain a better understanding of the topic”¹⁸⁵. Another purpose of monitoring and evaluation as provided by Failing and Gregory¹⁸⁶ is the use of M&E for decision analysis in order to provide insight for choosing amongst a range of policy options. In this case indicators are designed to be used as decision criteria on what will be measured to determine project progress. Failing and Gregory caution that significant misunderstanding can exist around the difference between M&E for decision making and M&E for tracking performance.

3.5 Purposes of Monitoring and Evaluation

Monitoring and evaluation help improve performance and achieve results. The overall purpose of M&E is the measurement and assessment of performance in order to more effectively manage the outcomes and outputs known as development results. Previously, M&E focused on assessing inputs and implementation processes; recently, M&E has gone further to focus on assessing the contributions of various factors to a given development outcome, with such factors including outputs, partnerships, policy advice and dialogue, advocacy and brokering/coordination. The purpose of evaluation is a combination of learning, guidance and accountability. Organisations may align their selves to all of these functions or gives evaluation function that focus in one of these. Table 5 below provides some of the purposes of M&E as provided by Woodhill¹⁸⁷. It is on these purposes that this thesis will focus in order to determine how PBO can attain dynamic capabilities from one project to another given their temporary nature.

Table 5: Monitoring and Evaluation Purposes

- | |
|--|
| <ul style="list-style-type: none"> - <i>Supporting operational management</i> - providing the basic management information needed to direct, coordinate and control the resources required to achieve any given objective; - <i>Supporting strategic management</i> – providing the information for and facilitating the processes required to set and adjust goals, objectives and strategies towards |
|--|

¹⁸⁴ Moynihan D. 2005. Goal based learning

¹⁸⁵ Stem C et al 2005. Monitoring and Evaluation in Conservation.295-309

¹⁸⁶ Failing L, Gregory R. 2003 Ten common mistakes in designing biodiversity indicators. 121 - 132.

¹⁸⁷ Woodhill J. 2006. M&E as learning: Rethinking the dominant paradigm

- improving quality and performance;
- *Knowledge generation and sharing* – generating new insights that contribute to the established knowledge base in a given field. This includes documenting lessons learned for sharing and feeding into policy reforms that can further enhance performance;
- *Empowerment* – building the capacity, self-reliance and confidence of beneficiaries, implementing staff and partners to guide, manage and implement development initiatives effectively;
- *Accountability, including impact evaluation*: demonstrating to donors, beneficiaries and implementing partners that expenditure, actions and results are as agreed or are as can reasonably be expected in a given situation.

Source: Woodhill J, 2006

3.6 Participatory Monitoring and Evaluation

In order to engage all project stakeholders, Participatory Monitoring and Evaluation (PM&E) is then employed. PM&E is defined here as a process where primary stakeholders, those who are affected by the intervention being examined are active participants, take the lead in tracking and making sense of progress towards achievement of self-selected or jointly agreed results at the local level, and drawing actionable conclusions. Participation is defined as the process through which stakeholders are involved in and influence decision-making, resource allocation, implementation and control of development initiatives¹⁸⁸. More specifically in relation to M&E, participation is a process of inquiry and dialogue through which stakeholders (all persons who are concerned with something, a project for example) share ideas in ways that help them to have a multidimensional perception of their needs. For participation to be meaningful, all stakeholders involved should be able to set goals, track progress, learn from change, and propose corrective action. However, engagement of primary stakeholders in M&E is often inadequate or procedural.

This thesis will focus more on PM&E to determine the possibility of dynamic capabilities in PBOs, given the inclusive in nature of this routine. Participation is increasingly being recognized to be integral in M&E process, since it offers new ways of assessing and learning from change that are more inclusive, and responsive to the needs of those most directly

¹⁸⁸ Waglé S, Shah P. 2003. Participation in public expenditure systems

affected. PM&E is geared towards not only measuring the effectiveness of a project, but also towards building ownership and empowering beneficiaries; accountability and transparency; and taking corrective actions to improve performance and outcomes. It is through taking corrective actions that a PBO can gain competitive advantage and be able to use the knowledge gained from such experiences in projects to come.

The effectiveness of PM&E requires that it be embedded in a strong commitment towards corrective action by communities, project management and other stakeholders in order to attain dynamic capabilities. More precisely, with PM&E, stakeholders at various levels engage in monitoring or evaluating a project and engage in taking or identifying corrective actions. PM&E is about strengthening stakeholders' involvement as active participants in interventions by then taking the lead in tracking and analysing progress towards jointly agreed results. Such an approach allows for demand-led planning, decision-making and improved accountability.

Effective PM&E should go beyond involving primary stakeholders in a process of 'conventional' M&E, such as consulting them on indicators and asking them to provide information or feed-back on the results. Emphasis of PM&E is on deepening participation, a process that is intrinsically linked to learning and empowerment¹⁸⁹, and linking monitoring to action. The PM&E process is built around agreeing on expected results and milestones, defining how to track progress, collecting required data, undertaking joint analysis and decide on actions.

PM&E process involves different stakeholders, with varying interests and of different power relations, making the process deeply political. In that regard, PM&E will require negotiation to reach agreement about who will participate, what will be monitored or evaluated, how and when data will be collected and analysed, what the information means, and how findings will be shared, and what action will be taken. The results can be used to improve project performance by the PBO for that particular project and if this is embedded in the organisation, such results will then be useful in improving projects to come. It is therefore important to be clear about what is being pursued with PM&E. Is the focus of PM&E mostly on monitoring (tracking and feedback)? Is it on evaluation (valuing and performance review)? Or is it more on 'strengthening and deepening participation' (shared learning, joint decision-making, mutual respect, co-ownership, democratisation and empowerment)? As seen on PM&E, engaging all project stakeholders supports greater knowledge acquisition. These findings were helpful in

¹⁸⁹ Guijt I, Gaventa J. 1998. Participatory Monitoring and Evaluation

drawing up the theory presented in Chapter 5. Project work is more temporally bound, as compared to routine organizational tasks, for example decision making, administrative tasks, and operational routines. Three levels of PM&E provided below allow for PBO learning in different but complementing ways if organisations are able to use the results with learning in mind:

- **Externally-led PM&E:** These efforts are generally organised and initiated externally and conducted by individuals or groups who do not have direct involvement or institutional interest in project outcome. Such groups are commissioned by project donors and supporting agencies, allowing for a more balanced facilitation of opinions. The external evaluator is the primary facilitator to provide insights from their experience into the PM&E process, assisting stakeholders to conduct their own activities.¹⁹⁰
- **Internally-led PM&E:** Here, efforts are carried out by those directly involved in project planning, and this include beneficiaries and the project staff. These play a major role in M&E implementation. Internally-led M&E contributes to local capacity-building and organisational strengthening.
- **Joint PM&E:** These combine both internal and external M&E approaches in an effort to assess the project by both insiders and outsiders.

Participatory Monitoring and Evaluation and M&E are often viewed as the same thing; however, these two are different, though M&E activities form part of the PM&E activities. The difference between the two is provided in Table 6 below;

Based on the differences provided in the table below, it is clear that adapting a participatory evaluation in a PBO will provide an opportunity for learning, as the evaluation will be done not only for accountability purposes, but to, as per Agris and Schon's definition, identify errors and take corrective action.

Table 6: Conventional vs. participatory evaluation

	Conventional Evaluation	Participatory Evaluation
Main Audience	External Experts. Donors and Policy Makers related to the intervention	Community members, project staff, facilitator
What data was collected	Predetermined indicators of success, principally cost and production outputs	No specific focus; this emerges based on purpose and stakeholder information

¹⁹⁰ Rugh J. 1992. Self Evaluation: Ideas for Participatory Evaluation

		Needs. People identify their own indicators of success which may include production outputs
How	Focus on scientific objectivity, distancing of evaluators from other participants; uniform, complex procedures; delayed, limited access to results	Self-evaluation, simple methods adapted to local; culture; open; immediate sharing of results through local involvement in evaluation processes
When	Usually upon completion of project/programme, sometimes also mid-term	More frequent, small-scale evaluations
Core Purpose	Accountability, usually summative to determine if funding can continue	Same as conventional M&E and to empower local people initiate, control and take corrective action
Perspective on flexibility	Initial M&E system is considered valid for the duration of the development intervention; rarely explicit revision	Recognise that stakeholders come and go, contexts change, information needs change, strategies shift and therefore the M&E focus and process needs adaptation

Source: Narayan-Parker, 1993 & Guijt I, 2008

3.7 Participatory Monitoring & Evaluation Principles

Evaluation process can be analysed in terms of how evaluations are initiated, teams are contracted and supervised, how quality is assured and how evaluation results are received. As noted with the externally-led PM&E, monitoring and evaluation involve outside experts who will measure performance against pre-set indicators. PM&E differs from more conventional approaches in that it seeks to engage key project stakeholders more actively in reflecting and assessing the progress of their project and, in particular, the achievement of results. Alongside the range of purposes that are possible to pursue with more participatory forms of M&E is its growth as a generic term¹⁹¹ and about which there is no common understanding. This makes it

¹⁹¹ Other terms used to describe PM&E practice are: Participatory monitoring; Participatory evaluation; Participatory assessment, monitoring and evaluation; Participatory impact monitoring; Process monitoring; Self-monitoring/self-evaluation; Auto-evaluation; Stakeholder based evaluation/assessment; Empowerment evaluation; Community monitoring; community-based monitoring and evaluation; community driven M&E

imperative to be clear about what is being pursued with PM&E. This thesis looks at how PM&E as routines can possibly allow for dynamic capabilities in PBOs. Is the focus of PM&E mostly on *monitoring* (tracking and feedback)? Is it on *evaluation* (valuing and performance review)? Or is it more on ‘*strengthening and deepening participation*’ (shared learning, joint decision-making, mutual respect, co-ownership, democratisation and empowerment)¹⁹²? Emphasis will be on shared learning and joint decision-making by PM&E to support dynamic capabilities.

Core principles of PM&E as provided by the World Bank¹⁹³ are:

- primary stakeholders are active participants – not just sources of information;
- building capacity of local people to analyze, reflect and take action;
- joint learning of stakeholders at various levels; and
- catalyzing commitment to taking corrective actions.

Principles provided by the World Bank can support dynamic capabilities in various forms, particularly joint learning and the ability to take corrective actions, ensure that project participants are able to build new process that can be used for the current project or documented to be used in next projects.

3.8 Integrating Participatory Monitoring & Evaluation in overall project design

During project design the purpose and scope of PM&E is set out, establishing the basis for effective participation by stakeholders. When incorporating PM&E to project design, key conditions, resources and responsibilities required should be indicated. Failure to incorporate PM&E in project design may result in mere M&E for accountability being done, which then cannot allow for dynamic capabilities. It is still critical to ensure that the PM&E process is perceived as integral to implementation and to success, with findings feeding into decision-making. PM&E components therefore need to be connected with other project routines, systems and procedures.

During design, PM&E initiatives to be included are capacity building for all stakeholders to be involved, information and feedback mechanisms, internal learning, documenting experience,

(in World Bank documents); Citizen monitoring; Participatory planning, monitoring and evaluation; Transformative participatory evaluation

¹⁹² Estrella J et al. 2000. *Learning from Change*

¹⁹³ <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTPCENG/0contentMDK:20509352~menuPK:menuPK:1278203~pagePK:148956~piPK:216618~theSitePK:410306,00.html>
(Accessed on 19 March 2015)

and provisions for scaling up and institutionalization. Most resources for the PM&E process are required in the start-up phase when the approach has to be designed and tested, and facilitators have to be trained and coached. External consultants may be needed to support the design and training of trainers.

3.9 Why is Participatory Monitoring and Evaluation important?

The common function of PM&E is to evaluate the impact of a given project and changes that have occurred as a result of project initiatives. The emphasis is on project objectives and actual achievement. Participatory evaluation allows for stakeholders and project managers with information to assess whether project objectives have been met and how resources have been used in order to help improve implementation.¹⁹⁴ To allow for organisational learning, self-evaluation is used to assess the project objectives and their own organisational capacities; that is, whether the objectives were too limited or over-ambitious. Self-evaluation enhances the sustainability, replicability and effectiveness of development efforts through the strengthening of people's organisational capacities. Joint reflection therefore encourages project partners to carry out a more direct and in-depth analysis of project achievements and their own performance within it to draw significant lessons from them for future planning.¹⁹⁵

3.10 Social Accountability and Participatory Monitoring and Evaluation

Social accountability is defined by the World Bank as an approach that relies on civic engagement in public affairs. PM&E differs from social accountability as it is applied to interventions within the realm of control of primary stakeholders. In such instances, stakeholders will be able to respond based on the findings. The PM&E process may also help to clarify rights and responsibilities and, where needed, formulate demands towards other actors and articulate these for dialogue and decision-making. PM&E becomes linked to social accountability.

3.11 How Monitoring and Evaluation is conducted

In most projects, evaluations are initiated on the basis of the evaluation plan, which will clearly show how and when an evaluation will be done. It will also show who will be involved as well as where information will be obtained. The plan is usually agreed upon by the project staff and the funding agency, who, in some cases, may initiate for an evaluation for learning or

¹⁹⁴ Campos F, Coupal P. 1996. Participatory Evaluation

¹⁹⁵ Sommer M. 1993. Whose Value Matter?

accountability purposes. It is important for PBOs to then incorporate M&E for the purposes of organisational learning in this plan. For this to be effective, the project design should be able to clearly articulate how the M&E system will be part of the overall project. Often, a logical framework¹⁹⁶ is developed at the start of the project that will then guide PBOs in their M&E activities. In the framework, performance indicators¹⁹⁷ that will determine the project success are agreed upon, including the project target and the baseline data.

An example of the logical framework is provided below:

Table 7: Logical Framework Example

Summary of Objectives/Activities	Objectively Verifiable Indicators	Means/Source of Verification	Important Assumptions
Goal:			
Specific Objectives:			
Expected Outputs:			
Activities:			

*Source: FAO Corporate Document Repository*¹⁹⁸

The Logical Framework helps to conceptualize a project and analyze the assumptions behind it. Since the development of the Logical Framework, it has been adopted by numerous development agencies these include bilateral and international development Organisations. The Logical Framework is useful for project design, implementation, monitoring, and evaluation. A logical framework matrix (or logframe) is the output of a program design process where you work out how the program activities will lead to the immediate outputs, and how these will lead to the outcomes and goal¹⁹⁹. A flexible and continuously updated logframe is a basis for

¹⁹⁶ The logical framework (LogFrame) helps to clarify objectives of any project, program, or policy. It aids in the identification of the expected causal links—the “program logic”—in the following results chain: inputs, processes, outputs (including coverage or “reach” across beneficiary groups), outcomes, and impact. It leads to the identification of performance indicators at each stage in this chain, as well as risks which might impede the attainment of the objectives. The LogFrame is also a vehicle for engaging partners in clarifying objectives and designing activities. During implementation the LogFrame serves as a useful tool to review progress and take corrective action. (WorldBank, 2004. Monitoring and Evaluation: Some tools)

¹⁹⁷ Performance indicators are measures of inputs, processes, outputs, outcomes, and impacts for development projects, programs, or strategies. When supported with sound data collection—perhaps involving formal surveys—analysis and reporting, indicators enable managers to track progress, demonstrate results, and take corrective action to improve service delivery. (WorldBank, 2004. Monitoring and Evaluation: Some tools)

¹⁹⁸ <http://www.fao.org/wairdocs/x5405e/x5405e0p.htm>. Accessed on 7 April 2015

¹⁹⁹ <http://www.fao.org/wairdocs/x5405e/x5405e0p.htm>. Accessed on 7 April 2015

learning, and an effective management tool to guide implementation, monitoring and evaluation. However, when the framework is too rigid and remains the same throughout the project, it becomes a tool for accountability to donors with little use in learning and for an organisation to have dynamic capabilities.

3.12 Uses of Participatory Monitoring and Evaluation

As provided earlier, evaluation results are used differently by stakeholders involved. The funding agency may want the results to demonstrate their role in a particular development initiative, whilst the implementing partner, which in this thesis refers to the PBO, will use the results for accountability purposes to the funding agency, and may also support the actual learning of all the stakeholders involved. This thesis identifies evaluation results and the continuous monitoring as integral processes of the routine to support PBO learning.

3.13 Learning and Monitoring and Evaluation

As noted above, M&E allows for learning, as organisations can use past experience to contribute to more informed decisions. Better decisions will lead to improved performance and accountability. A PM&E process contributes to the construction of information feedback systems that strengthen learning and build Organisations that value critical reflection, and learn from success and failure alike²⁰⁰.

Much of the literature on learning processes situates itself within the field of M&E²⁰¹. Korten²⁰² was one of the first authors to point out that organisations evaluate their errors in different ways. When the purpose of M&E is organizational learning and continual improvement, however, it may not be necessary to involve outside parties in the process²⁰³. In these cases it makes more sense to conduct M&E with internal resources to maximize the learning process. It is not always feasible to include all interested parties directly in an M&E program²⁰⁴, and there is also an unresolved answer on the most appropriate amount of participation from stakeholders.²⁰⁵

Monitoring and evaluation functions that are intended to result in learning and improvement

²⁰⁰ IFAD, 2002

²⁰¹ Oakley P, Pratt B. 1994. Measuring the Process

²⁰² Korten D, Klauss R. 1984. People-centered Development

²⁰³ Salafsky N, Margoluis R. 2003. What Conservation Can Learn

²⁰⁴ Sayer J A et al. 2007 Assessing Environment and Development Outcomes

²⁰⁵ McShane T O, Wells M P. 2004. Getting Biodiversity Projects to Work

are sometimes not well applied. Moynihan²⁰⁶ says that performance management is sometimes treated merely as a reporting mechanism with no intention toward genuine learning or change. Organisations that limit change to “doing the same thing better”²⁰⁷ versus being open to meaningful change do not benefit from the learning that is possible when basic assumptions, strategies, goals and relevance are periodically revisited. In order to have dynamic capabilities in PBOs, these organisations will need to apply M&E in an effort to gain results that will create meaningful change to the organisation. Such a deeper openness to change is referred to by Moynihan as *double-loop learning*. Organizational cultures that punish mistakes tend to discourage learning and the effectiveness of M&E²⁰⁸. Additionally, significant learning opportunities can be missed when M&E fails to pick up on unexpected results²⁰⁹. Unexpected results usually come out when an organisation does not restrict itself to the existing M&E plan in order to collect project results and be open to other issues that are not part of the predefined indicators. Critically important is the presence of a feedback loop that links the findings from monitoring back to decision-making processes. This way, learnings can be incorporated into the next management cycle²¹⁰.

Often, M&E is conducted as an afterthought with limited resources towards the routine, yet the routine is a recognized management practice that allows for learning and change when implemented regularly. M&E activities should be guided by things like ownership, relevance and usefulness of the data, whether lessons are learned through M&E, by whom, and how this learning could be improved. Data collection is prominent in M&E activities; however, reports from the data normally have limited readership and do not appear to contribute to improving projects, yet the reports could support learning. The purpose of M&E is a tool for communicating what is happening in the project and if necessary, deciding how to change it, which can then result in double loop learning. The challenge is often to whom the information should be communicated to allow for learning in particular in PBOs.

Even among implementers of projects and donors who have access to the evaluators and the reports, learning from M&E appears difficult, and evidence of learning from an evaluation and

²⁰⁶ Moynihan D P. 2005. Goal Based Learning

²⁰⁷ Moynihan D P. 2005. Goal Based Learning

²⁰⁸ Meffe G K et al., 2002 Ecosystem Management: Adaptive

²⁰⁹ Behn R D. 2003. Why measure performance? Public Administration Review

²¹⁰ Margoluis S. 1998. Measures of Success

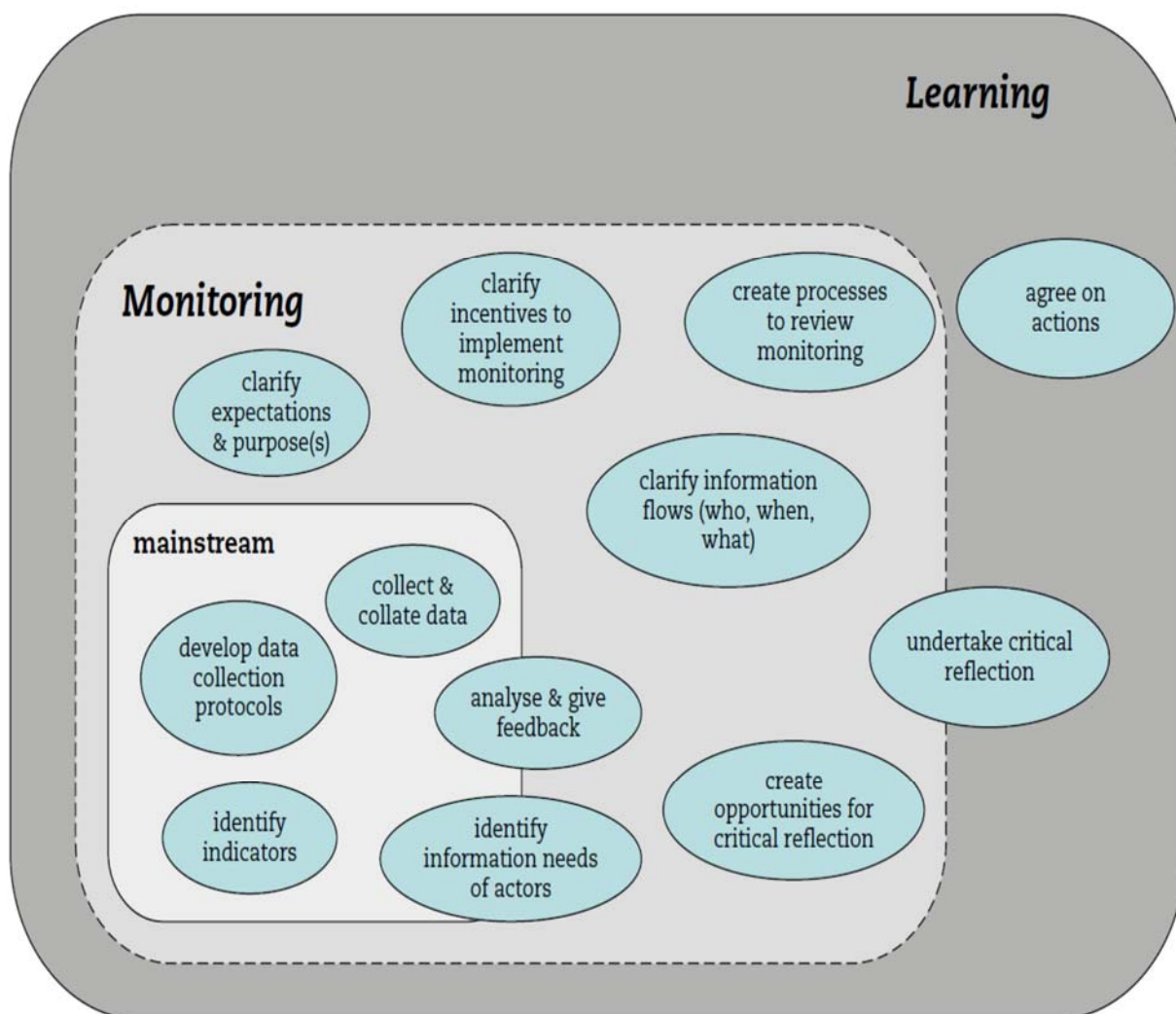
implementing recommendations appears scarce²¹¹. The lessons to be learned in the routine will differ for each of the stakeholders and require some process of assimilation and mutual acknowledgement.

A well-functioning M&E system is a critical part of good project management and accountability. The availability of reliable information will allow for:

- Project implementation with accurate, evidence-based information/knowledge that informs management and decision-making to guide and improve project/programme performance- this will support single and double loop learning;
- Contribution to organizational learning and knowledge sharing by reflecting upon and sharing experiences and lessons so that we can gain the full benefit from what was done and how it was done allowing for double and triple loop learning.
- Accountability and compliance by demonstrating whether or not tasks have been performed as is outlined in the M&E Framework.
- Stakeholder feedback, to provide input into and opinions of the project, modelling openness to criticism, and willingness to learn from experiences and to adapt to changing needs.
- Promoting and celebrating project work by taking note of the achievements.

Guijt in her thesis provided a relationship between monitoring activities and learning, providing a synopsis she referred to as the sliding scale from (mainstream) monitoring to learning:

²¹¹ Shapiro J. 1996. Evaluation: Judgement day or management tool?: 77

Figure 3: Relationship between Monitoring and Learning

Source : Guijt I, 2008

The figure shows the fluid definitional membrane of monitoring with the common monitoring activities provided under 'Mainstream'. This thesis takes the same view as Guijt that, if monitoring is indeed to make a contribution to 'learning', then there is a need to rethink M&E beyond its mere compliance checking process and adjust some activities henceforth.

3.14 Learning and Accountability

Traditionally, M&E has been used by donor and government agencies to hold beneficiaries and programme recipients accountable to agreed goals and performance targets. In this conventional way of M&E, funders/supporting agencies usually define what is monitored and evaluated and how monitoring and evaluation is contacted. While there are differences in approach, it not about learning or accountability, as both learning and accountability are essential in evaluation. Of the two, however, learning is the area in which most projects see the

greatest need for improvement. Accountability has long been a core concern for evaluation units; learning is now the “new frontier” where a whole range of new opportunities and challenges exist. This research looks at learning and its importance for PBOs to be able to gain competitive advantage across projects.

The success of a project, , is highly dependent on the people involved, and more so for a PBO to remain relevant after one project utilising the dynamic capabilities will be of value. Their participation in learning how to improve a project throughout its existence is fundamental. To attain this, views from all stakeholders should be well considered. This will include continuously being able to identify what is working or not working, what problems exist and why, and how such problems can be resolved. Learning certainly requires more than only “listening”. Opportunities need to be created for project staff, implementing partners and primary stakeholders to analyse their experiences with the project, thereby contributing to learning by all involved stakeholders. Such opportunities can be attained by a good M&E system that collects data and provides opportunities to take corrective measures.

M&E is an open and critically reflective communication process to strengthen project partnership. Putting participatory learning at the centre of good project management requires both data on project activities and personal accounts of people’s experiences resulting in organisational learning. For this to be successful, there is need for regular reviews by project staff and all other involved stakeholders, including external support from externally led evaluations for example.²¹².

A good project M&E system designed to meet the information needs for internal impact and learning-oriented management will produce the information required for external accountability without much additional effort. The problem is that most projects work the other way round: first they try to do everything needed for reporting and then they invest little time in sorting out their own learning processes.

The main objective of M&E in a project should be to allow learning. Through evaluation, the project will be able to identify what works and what does not, what has been done right and where there is need for improvement. Results from the process will empower the decision-

²¹² The focus on M&E to support internal project learning and management does not mean ignoring wider upward and downward accountability. Projects have important responsibilities to primary stakeholders, government agencies, funding agencies and society at large to account for their expenditures, activities, outcomes and impacts. In turn, the superfunding agencies must account to their governments and taxpayers for the investments made

makers to act in an informed and constructive way. Results of M&E will ensure that changes are made where necessary (single loop learning.)

3.15 Conclusion

M&E has often been viewed as an external function in organisation development and growth. Every day in the life of any organisation, the attempt to document information and use it to make decisions is evidence of monitoring. Traditionally, M&E has often been used to account for the taxpayer's money to justify the existence of a project and/or its results. However, M&E can support learning in any organisation and for Project Based Organisations (PBOs) where learning remains a challenge, given that project teams often disperse on completion of each project.

M&E can be of different use to organisations, with the main purposes being accountability and learning. Organisational learning can only be attained if PBOs incorporate this function at project design and M&E planning level. To allow for dynamic capabilities, M&E cannot be implemented separately, but must be integrated in the whole organisation and the project initiatives, resulting in PM&E. There is need to have a flexible approach to M&E and avoid a rigid logic framework that will guide the project. As noted in this chapter, information obtained from PM&E, if well documented, can allow for an organisation to gain competitive advantage and use such information in implementing other similar projects and learn from these to improve the current project and projects to come.

Chapter 4

Organisational Learning

Learning is a developmental process that integrates thinking and doing. It provides a link between the past and the future, requiring us to look for meaning in our actions and giving purpose to our thoughts.

Bruce Britton

4.1 Introduction

The previous chapters have built on what constitutes Organisational Learning (OL) with specific reference to PBOs. The routines that can support learning (Monitoring and Evaluation) have been clearly articulated and how this relates to OL is provided.

This chapter seeks to understand the dynamics of learning, the concepts of single-loop, double-loop and triple-loop learning, and how they allow for the realization and appreciation of how an organisation can follow to gain a competitive advantage. These concepts are discussed in this chapter in gaining an understanding of OL in PBOs. An organisation's potential to learn and develop over time is one of the most important assets to compete with other organisations.²¹³

The chapter will focus on how OL contributes to competitive advantage in a dynamic environment as is provided by Teece in dynamic capabilities.

4.2 Organisational Learning

OL is defined as 'the purposeful and evolutionary growth of individual and collective knowledge within an organisation that manifests in shared work practice and that ultimately matures into organisational routines and standards'.²¹⁴ Linking OL to knowledge, it is then defined as a process of changing organizational actions through new knowledge and

²¹³ Casey A. 2005. Enhancing Individual and Organizational Learning

²¹⁴ Knipfer K, Kump B, Wessel D, Cress U. 2013. Reflection as a Catalyst for Organisational Learning

understanding²¹⁵.

OL can be traced back to more than three decades with various meanings attached to it. Cyert and March²¹⁶ were probably the first who referred to the concept currently known as organizational learning. OL is viewed as a management tool, allowing managers to turn firms into being more adaptive. OL has been articulated in the language of systems theory as is provided by the early organisational learning subject professionals, March and Olsen²¹⁷, who speak of environmental response and individual adaptation.²¹⁸

Many view OL as a smooth cycle involving the conversion of knowledge from one type or level to another, for example tacit to explicit or individual to collective as provided by Nonaka's knowledge creation spiral. Once-off learning was, however, acknowledged by Zollo and Winter²¹⁹, though the majority agree that there should be some continuity across tasks within the organization, allowing for organizational learning.

In explaining organisational learning, Argyris provides the challenge of learning being contributed to the tacit and explicit knowledge form. According to Argyris, organisations mostly store and use knowledge in tacit rather than explicit form. Contrary to other writers on knowledge management, such as Nonaka, Argyris views tacit knowledge purely as a constraint to learning and not as a source of learning. In order to become a learning organisation, Argyris focuses on making tacit knowledge explicit in order to be available to everyone within the organisation. Peter Senge, however, believes that for an organisation to learn there are five disciplines that should be in existence and that all five should be available; these disciplines will be discussed further in section 4.5.

4.3 Learning Organisation

The term has often been confused with Organisational Learning, where in some cases people have used these phrases interchangeably. However, a learning organisation refers to an expression of flexibility, change and innovation which is done by an organisation purposefully in order to be competitive. Unlike OL, where learning can occur without knowing with a

²¹⁵ Fiol M C, Lyles M A. 1985. Organizational Learning. Academy of Management

²¹⁶ Cyert R M, March C. 1963. A Behavioural Theory of the Firm

²¹⁷ March J C, Olsen JP. 1976. Ambiguity and Choice

²¹⁸ There are various forms of OL as a concept with different authors having written on OL; Argyris and Schon (1978) focus on the various forms of feedback loops. Morgan (1986) refers to the metaphor of a brain as an information processing system in describing organizational learning, whereas Senge (1990) bases his ideas on Forester's theory of systems dynamics.

²¹⁹ Zollo M, Winter S G. 2002. Deliberate Learning

Learning Organisation, the organisation will purposefully incorporate the learning process in their different routines. It was widely believed that a Learning Organization is created on the basis of individuals' ability to think of the Organisations as a system²²⁰. With this argument, individuals will therefore acquire specific skills, information, and knowledge in order for Organisations to learn and to become Learning Organisations.

A learning organization, as stated by Senge, is where the “people continuously expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together”²²¹. DiBella argues that a learning organisation is a form of organisation, whereas organisational learning is the process of learning in an organisation²²².

A definition of a learning organisation that relates specifically to the development sector is ‘an organisation which actively incorporates the experience and knowledge of its members and partners through the development of practices, policies, procedures and systems in ways which continuously improve its ability to set and achieve goals, satisfy stakeholders, develop its practice, value and develop its people and achieve its mission with its constituency²²³’.

According to Hyvarinen and Wall, an important feature of learning organisations is that they are organised so that learning occurs at five levels:

1. Individual learning – learning that participants experience through involvement in campaign and organisational development;
2. Team or work group learning (sharing lessons between individuals working together in permanent work groups or temporary teams) – participation in sub-collective or main collective meetings and project work yields discussion regarding practices and outcomes that is recorded and used to augment future planning and action;
3. Cross-functional learning (sharing lessons between departments or sections e.g. between Monitoring and Evaluation and operational staff)– meetings occur between coordinators of different areas. This allows the opportunity to streamline organisational processes and the development of knowledge management systems;

²²⁰ Senge P.1990. The Fifth Discipline

²²¹ Senge P.1990:3. The Fifth Discipline

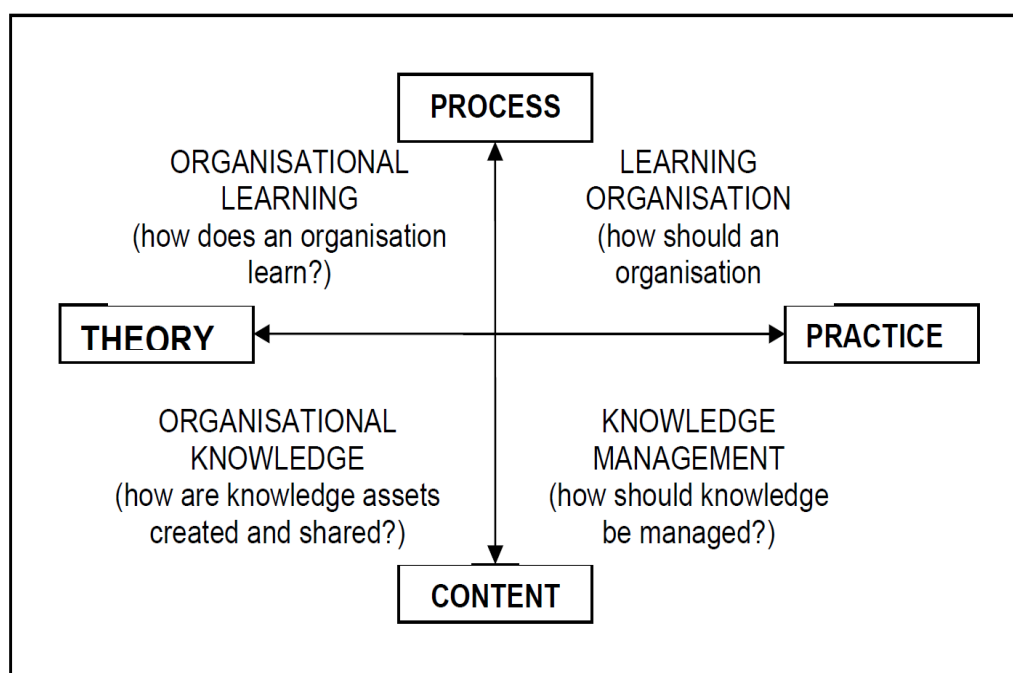
²²² DiBella A J. 2001. Learning Practice

²²³ Aiken M, Britton B. 1997. The Learning Organization and the Voluntary Sector

4. Operational organisational learning (focusing on improving practice, increasing effectiveness and efficiency)– strategic meetings occur whose objective it is to assess organisational practices toward improving effectiveness and efficiency in event planning and management, volunteer coordination, publicity and networking, capacity development of participants and organisational learning and knowledge management; and
5. Strategic organisational learning (learning to deal with significant changes in the environment which affect the overall strategy of the organisation)– scenario planning occurs within the organisation so that it is equipped to deal with a number of potential environment and organisational changes that may occur.²²⁴

A comprehensive review of the OL theory by Easterby-Smith and Lyles showed how learning organisation, OL and knowledge management relate. Figure 4 below provides the relation of LO, OL, Knowledge Management as was interpreted by Easterby-Smith and Lyles.

Figure 4: Organisational Learning, Knowledge Management and Learning Organisation



Source: Easterby-Smith and Lyles, 2003²²⁵

The figure above shows how these concepts are interlinked, but also acknowledging that they do not refer to the same thing as with other authors, who have argued that the terms could be

²²⁴ <http://www.gdrc.org/ngo/global-ngos.html> Accessed on 12 December 2014.

²²⁵ Easterby-Smith M, Lyles M A. 2003. Introduction: Watersheds of organisational learning

used interchangeably. Roper et al., for example, make little mention of organisational knowledge or knowledge management (KM), but emphasise that the terms OL and LO often are used interchangeably²²⁶.

4.4 The Three Organisational Learning Levels

According to Argyris and Schön, Organisational learning can be categorised in terms of a three-level evolutionary model consisting of single-, double- and triple-loop learning. This section describes the model, linking these directly to M&E.

4.4.1 Single-Loop Learning

This form of learning is basically achieved through following the rules. Single-loop learning refers to making simple adaptations and taking corrective actions. While this is important, the process does not allow for organisational innovation. Most experts assert that a majority of Organisations operate according to single-loop learning: members establish rigid strategies, policies and procedures, and then spend their time detecting and correcting deviations from the “rules.” Single-loop learning occurs when error detection “permits the organization to carry on its present policies or to achieve its present objectives”²²⁷ This kind of organizational learning manifests itself as a consolidation process, that is, changes in the organization's knowledge and competency base without altering present policies, objectives or mental maps.²²⁸

Single-loop learning can be explained using the Monitoring and Evaluation systems, organisations develop M&E frameworks with the set indicators that guide organisations' performance. The extent to which they are achieving the set indicators measure their efficiency and whenever the project is far from reaching the set indicators according to the expected time frame, specific measures are put in place to ensure that the project achieves these indicators.

4.4.2 Double-Loop Learning

While single-loop learning refers to learning by improving, double-loop learning refers to learning by transforming. Double-loop learning involves reframing, that is, learning to see things in totally new ways by changing the rules. Double-loop learning is achieved if “error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies and objectives”²²⁹. In other words, double-loop learning manifests itself as a

²²⁶ Roper L, Pettit J.2003.Development and the Learning Organisation.

²²⁷ Argyris, C, Schön D. 1978, Organizational Learning

²²⁸ Snell R, Man-Kuen Chak A, 1998. The Learning Organisation

²²⁹ Argyris C,Schön D.1978. Organizational Learning

transformation process, that is, changes in the organization's knowledge and competency base by collectively reframing problems and developing new policies, objectives and mental maps.²³⁰

In double-loop learning, members of the organization are able to reflect on whether the “rules” themselves should be changed, not only on whether deviations have occurred and how to correct them. This kind of learning involves more “thinking outside the box,” creativity and critical thinking. This learning often helps participants understand why a particular solution works better than others to solve a problem or achieve a goal. Double-loop learning can be categorised as a form of higher level learning, which is characterised by non-routine activities, and which occurs in terms of heuristics and insights²³¹. Non-routine activities are engaged in when new knowledge has been assimilated by an organisation, as a result of exploration. Experts assert that double-loop learning is critical to the success of an organization, especially during times of rapid change, for example in dynamically changing environments,²³² PBOs typically work in such an environment.

For double-loop learning to develop, the key actors in the organization have to be able to create on-going dialogues, a conversational process in which defensive reasoning and behaviour do not impede free and open inquiry²³³, Double-loop learning appears to facilitate the adaptive potential of an organization, but most Organisations seem to have great difficulties in actually learning in a double-loop manner. ²³⁴ Organisations practising double-loop learning are open to examining how organisational practice diverges from ‘espoused theory’ and addressing these inconsistencies.

Using the M&E example, with double loop-learning the organisation reviews the set indicators in the M&E Framework and ascertains why they are not achieving certain results as is provided by the indicators, a process of reviewing and agreeing on whether there is need to modify the available indicators will be undertaken.

4.4.3 Triple-Loop Learning

This can be explained as learning about learning. Triple-loop learning entails members

²³⁰ Snell R, Man-Kuen Chak A, 1998. The Learning Organisation

²³¹ Fiol M C, Lyles M A. 1985. Organizational Learning. Academy of Management

²³² March J G, 1991. Exploration and Exploitation in Organizational Learning

²³³ Argyris C et al., 1985. Action Science: Concepts, Methods

²³⁴ Argyris C. 1996. Organizational Learning II: Theory, Method and Practice.

developing new processes or methodologies for arriving at such re-framings. Triple-loop learning is about increasing the fullness and depth of learning about the diversity of issues and dilemmas faced, by linking together all local units of learning in one overall learning infrastructure as well as developing the competences and skills to use this infrastructure²³⁵. Triple-loop learning manifests itself in the form of “collective mindfulness”, members discover how they and their predecessors have facilitated or inhibited learning, and produce new structures and strategies for learning. Triple-loop learning involves “learning how to learn” by reflecting on how we learn in the first place. In this situation, participants would reflect on how they think about the “rules,” not only on whether the rules should be changed. This form of learning helps staff to understand a great deal more about themselves and others regarding beliefs and perceptions. Triple-loop learning might be explained as double-loop learning about double-loop learning.

To continue the above example, triple-loop learning occurs when, after having engaged in discussion with the stakeholders on the set indicators, you both discuss the dynamics of the conversation, including whether use of indicators is the correct approach to review project results, once that has been done, the organisation will identify what learning was produced from the conversation and how that learning was produced. Specific to PBOs triple-loop learning looks at the success or failures of other projects and learn from the processes that could have been performed.

Table 8: Organisational Learning Types

Type of Organisational Learning	Type of Work	Situation Appropriate	Results in a change of action	Challenges your assumption	Challenges your learning framework	Focus of learning type
Single-Loop Learning	Technical	When tackling routine, repetitive issues	Yes	No	No	Improving
Double-Loop Learning	Technical/ Adaptive	When tackling complex, non-programmable issues	Yes	Yes	No	Understanding and Improving
Triple- Loop Learning	Adaptive	When you want to learn how to learn	Yes	Yes	Yes	Transforming, Understanding and Improving

Source: Eilertse S and London K, 2005²³⁶

²³⁵ Flood R L, Romm N R A, 1996. Diversity Management: Triple Loop Learning

²³⁶ Eilertse S, London K. 2005. Modes of Organizational Learning.

4.5 Senge's Five Disciplines

In his book *The Fifth Discipline*, Senge pointed out a simple set of dynamics that humans want to learn in order to understand why things are the way they are in a holistic way. As noted, for an organisation to be a learning organisation, there is need for individuals to take the lead role in ensuring that they incorporate learning in the specific routines. Leaders should therefore facilitate this process of a learning organisation. Peter Senge's five-discipline approach was informed by the work of Argyris and Schön. With this, he outlined his vision of a learning organisation as an adaptive entity responsive to past errors and able to transform itself continually. In order to achieve this, an organisation needs to apply five interrelated disciplines, namely personal mastery, team mastery, mental models, shared vision and systems thinking. Senge believed that for organisational learning to thrive, all these five disciplines should be present.

In most organisations and particularly PBOs as have been noted, organisational learning is minimal and there are a number of challenges that face organisations to be able to learn. Scholars have identified learning disabilities which are interrelated, the learning disabilities helps to understand the role of five disciplines to learning. The learning disabilities give the foundation of the five disciplines to learning and how these support learning in an organisation. Senge provided five disciplines that can help leaders in developing learning organisations briefly explained below.

4.5.1 Shared Vision

Shared vision is a discipline used for bringing into alignment the vision and efforts of people organization-wide. With a shared vision, all staff will have an understanding of what the organisation wants to achieve and where it aspires to be. The vision is not only for the managers, but it becomes part of the organisation-wide operations. All activities, processes and problem-solving fall in a common direction.

Senge states: "When people truly share a vision they are connected, bound together by a common aspiration. Personal visions derive their power from an individual's deep caring for the vision." Shared vision supports learning organisation by providing the focus and energy for learning. Senge states that the "bedrock" for developing shared vision is personal mastery. Shared vision emerges from personal visions, and through, this commitment is created. It is through shared vision that managers should understand that vision does not come from the top, nor from the strategic planning process. Management vision cannot be considered as "shared"

unless staff feel part of it, and if their personal visions are also incorporated into the organisation vision. In order for a shared vision to be achieved, the management should realise that the visions they formulate still remain personal visions until they have been fully realised by all staff. Senge states that occupying a position of leadership does not mean that managers' visions are *automatically* the organization's vision. There is a relationship between shared vision and systems thinking, with systems thinking looking at how the organisation has created, and shared vision looking at how people want to create.

4.5.2 Mental Models

In explaining mental models, Peter Senge states that; "Our mental models determine not only how we make sense of the world, but how we take action"²³⁷. This discipline allows for identifying how the actual data supports or not the various views available about the world. Mental models, therefore, need to be based on real data; failure to do so will affect the understanding of the environment. Every person has their own assumptions and views that have an effect on how they will interact with others. Despite in some cases denying the conceptions individuals hold, it is not always consistent with the actions exposed. The mental model discipline requires for openness and honesty as individuals and colleagues. This can be enhanced through good listening skills. Systems-thinking may not be possible if the individual's mental models are embedded in past experiences. It has, however, been argued that mental models are too restrictive and may not support learning in an organisation, as these are specific to an individual.

4.5.3 System thinking

System thinking is a discipline for seeing wholes. According to Senge, this is the "cornerstone" of all the disciplines. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static 'snapshots.'²³⁸ With high complexities in the world, systems thinking is viewed to be of high importance. Senge states that the human's ability to create more information that can be absorbed, to foster far greater interdependency than anyone can manage, and to accelerate change far faster than anyone's ability to keep pace with shows the high complexities that the world faces. As such, Senge identifies systems thinking as a discipline for seeing the "structures" that underlie complex situations, and for discerning high- from low-leverage change. System thinking is a way of seeing the

²³⁷ Senge P. 1990:175. The Fifth Discipline.

²³⁸ Senge P. 1990. The Fifth Discipline.

connections, links, or relationships, hence “seeing wholes”. Instead of treating organisational processes as separate activities, this process allow for an interdependency of these activities. The discipline deals with the big picture and allows for the identification of the various interrelationships and patterns as a whole and not part of the situation. Systems thinking can highly relate to the participatory monitoring and evaluation process discussed in the previous chapter. This discipline identifies how different parts are related, for example the different organisational units, with the overall goal of attaining the shared vision. Systems thinking allow for feedback, and these feedback loops allow for the identification of the available systems and the desired outcomes.

4.5.4 Personal Mastery

This discipline refers to personal growth and learning. Individuals that possess high personal mastery are continually increasing their abilities to create the results they seek. When we experience personal mastery, there is a sense of effortless “flow.” The individual’s never-ending quests for self-improvement and self-discovery underlie the spirit of the learning organization. These people work with change and are not against it, feel connected to other people and life, and significantly live in a continual learning mode. The holistic approach to personal mastery is through viewing an individual’s life as creative work involving an on-going dual process of 1) clarifying what is important, and 2) continually learning how to assess current reality in relation to progressing toward that vision²³⁹.

Managers can support personal mastery through interactive performance appraisal. Other activities to be included can be comparing people’s individual visions with the vision of the company and identifying and discussing personal and professional behaviors important to the success of the team. The incorporation of personal mastery allows for the realisation that personal growth is of value in an organisation and allows for ‘on-the-job-training’.

4.5.5 Team Learning

Team Learning builds on the personal mastery discipline. Through team leaning, there is alignment of the team capacity in order to achieve the organisational goals. Individual learning is not always of importance throughout, as individuals may learn without necessarily facilitating organisation learning; it is therefore the teams that becomes of value for learning to take place. When there is team learning, flow of information exists, where feedback can be provided freely, allowing for innovative problem resolving.

²³⁹Raines L. 2009. Looking Both Ways Through The Windows Of Senge’s Five Disciplines

Team learning is a collective discipline involving dialogue and discussion as a way in which team members can communicate. Senge defines dialogue as “deep listening” and free exploration of ideas, and discussion as searching for the best view to support decisions. With dialogue, people learn to ask questions that help learning without individuals having to make expert points. It is also important to note that conflict is expected in a team and this allows for growth and development. The team, however, should be able to productively use these disagreements to allow for organisational development. Senge explains, “...the difference between great teams and mediocre teams lies in how they face conflict and deal with the defensiveness that invariably surrounds conflict.” Whenever managers internalize their mental models, there is a problem of thinking they have the answers and there is no need of inquiring with subordinates; as a result, managers become very defensive. This highlights the importance of dialogue in a team, thereby supporting learning within the organisation.

4.6 Learning

Learning is a process of reconstructing organisational knowledge. Learning is also viewed as the development of new insights through the revision of assumptions, causal maps or interpretive schemas.²⁴⁰ Freidlander²⁴¹ explains that, “Change resulting from learning need not be visibly behavioral. Learning may result in new and significant insights and awareness that dictate no behavioural change. In this sense the crucial element in learning is that the organism be consciously aware of differences and alternatives and have consciously chosen one of these alternatives. The choice may not be to reconstruct behaviour but, rather, to change one’s cognitive maps or understandings”. According to the World Bank, learning is a processor flow, which involves obtaining or acquiring knowledge and capabilities.

Learning has been defined as a permanent change in behaviour as a result of repetition and experience, leading to the ability to perform tasks better and faster. From a strategic perspective, learning has been considered, as a source for a possible competitive advantage. Through learning, Organisations can adapt to the environmental constraints, avoid the repetition of past mistakes and preserve crucial knowledge that might otherwise be lost.

Argyris²⁴² states that, an organization may be said to learn to the extent that it identifies and

²⁴⁰ Freidlander F.1983. Patterns of Individual and Organizational Learning

²⁴¹ Freidlander F.1983. Patterns of Individual and Organizational Learning

²⁴² Argyris C, Schon D A. 1978: 113. Organizational Learning: A Theory of Action Perspective

corrects errors”. Stata²⁴³, however links learning to innovation, describing learning as “... the process by which individuals gain new knowledge and insights and thereby modify their behaviours and actions”. In line with the issue of cognition behaviour is the notion that learning is a function of conscious thought. There are, however, some who suggest that learning does not have to be conscious or intentional, as in the case of operant conditioning²⁴⁴. OL theorists²⁴⁵ agree that learning, even if activated fortuitously, requires conscious cognitive reflection. Scholars have argued that OL occurs unconsciously²⁴⁶, while Crossan, Lane, and White²⁴⁷ believe that there is some conscious cognitive reflection that happens in order for learning to occur. Fiol and Lyles²⁴⁸ distinguish between learning that requires conscious, cognitive reflection and that which is by mere *unreflective action-taking*. Their definition of learning is “the development of insights, knowledge and associations between past actions, the effectiveness of those actions, and future actions”²⁴⁹. This thesis will take the notion that learning is in fact mostly unconscious, as it occurs almost on a daily basis without one really noticing. An example of this could be correcting errors faced in a previous project or task performed previously. However, there are cases where learning is intentional. For example, in monitoring and evaluation of dynamic capabilities in order to achieve competitive advantage, the organisation needs to put an effort into tracking what could have been errors that resulted in the organisation failing to attain the desired objectives. This process requires putting resources in order so as to reflect and put measures to address these errors. This can be through lesson learned initiatives that can then be documented for future reference.

Teece, whose work is mainly in dynamic capability, defines learning in organisations as a permanent change in behavior as a result of repetition and experience, leading to the ability to perform tasks better and faster²⁵⁰. Other authors²⁵¹ in dynamic capabilities also view learning to be a source for a possible competitive advantage- this is discussed in detail in Chapter Two (Dynamic Capabilities). Based on all the definitions provided, it is clear that learning is a

²⁴³ Stata R. 1989: 64 Organizational Learning: The Key to Management Innovation

²⁴⁴ Huber GP. 1991. Organizational Learning: The Contributing Processes and Literatures

²⁴⁵ Crossan L et al. 1999. An organizational learning framework: From intuition to institution

²⁴⁶ Huber GP. 1991. Organizational learning: The contributing processes and literatures

²⁴⁷ Crossan L, et al. 1999. An organizational learning framework : From intuition to institution

²⁴⁸ Fiol C and Lyles MA. 1985. Organizational learning. Academy of Management

²⁴⁹ Fiol C and Lyles MA. 1985. Organizational learning. Academy of Management

²⁵⁰ Teece DJ, Pisano G, Shuen A, 1997. A Dynamic capabilities and strategic management

²⁵¹ Grant RM. 1996, Prospering in dynamically-competitive environments; Lei, D, Hitt, MA, Bettis R;1996. Dynamic core competencies

process that ensures an improvement in the process. This can be through correction of errors resulting in better task performance. This research will use this definition to describe learning in organisations.

4.7 Domains of Learning

To understand what learning means, it is important to take a look at Bloom's taxonomy of learning which was designed to assist on how people learn in schools. In the 1950s, Bloom and colleagues came up with levels of educational activity, from the very simple (like memorizing facts) to the more complex (such as analyzing or evaluating information). These domains were specific to schools; however, they are also applicable to organisations. The identified three domains of educational activities or learning are Cognitive: mental skills (knowledge), Affective: growth in feelings or emotional areas (attitude or self), and Psychomotor: manual or physical skills (skills)²⁵². The taxonomy of learning is then seen as the overall goals that an individual should attain upon learning. Originally formulated by Bloom in 1956, the classification was later revised in 2001. There are six major categories of cognitive learning, starting from the simplest to the most complex. The revised classification saw the two highest forms of cognition being reversed (that is creating and evaluating) and making the classification a process. The levels of educational activity are explained in the table below:

Table 9: Cognitive Domain

Category	Examples, key words (verbs), and technologies for learning (activities)
Remembering: Recall or retrieve previous learned information.	<p>Examples: Recite a policy. Quote prices from memory to a customer. Recite the safety rules.</p> <p>Key Words: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states</p> <p>Technologies: book marking, flash cards, rote learning based on repetition, reading</p>
Understanding: Comprehending the meaning,	Examples: Rewrite the principles of test writing. Explain in one's own words the steps

²⁵² <http://www.nwlink.com/~donclark/hrd/bloom.html> (Accessed on 23 July 2015)

<p>translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.</p>	<p>for performing a complex task. Translate an equation into a computer spreadsheet.</p> <p>Key Words: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates</p> <p>Technologies: create an analogy, participating in cooperative learning, taking notes, storytelling, Internet search</p>
<p>Applying: Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.</p>	<p>Examples: Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test.</p> <p>Key Words: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses</p> <p>Technologies: collaborative learning, create a process, blog, practice</p>
<p>Analyzing: Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.</p>	<p>Examples: Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training.</p> <p>Key Words: analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates</p> <p>Technologies: Fishbowls, debating, questioning what happened, run a test</p>
<p>Evaluating: Make judgments about the value of ideas or</p>	<p>Examples: Select the most effective solution. Hire the most qualified candidate. Explain and</p>

<p>materials.</p>	<p>justify a new budget.</p> <p>Key Words: appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports</p> <p>Technologies: survey, blogging</p>
<p>Creating: Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.</p>	<p>Examples: Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome.</p> <p>Key Words: categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes</p> <p>Technologies: Create a new model, write an essay, network with others</p>

Source: <http://www.nwlink.com/~donclark/hrd/bloom.html>

The cognitive domain presented on the table above shows how knowledge is conceptualised from recalling the knowledge obtained from books to creating new knowledge based on the knowledge attained. These domains can also be directly linked to the process that takes place in an organisation. Organizational learning is not primarily tied to teaching and individuals' skills and knowledge acquisition, but to learning in the social and institutional environment that makes up an organization.²⁵³ Bloom also provided three levels of knowledge or products that could be processed, which are factual, conceptual and procedural. In the educational approach 'factual' is defined as basic elements students must know to be acquainted with a discipline or solve problems, 'conceptual' as interrelationships among the basic elements within a larger structure that enable them to function together, and 'procedural' as how to do something, its methods of inquiry, and criteria for using skills, algorithms, techniques, and methods. In organisations, factual issues will be those pertaining to the project. For example,

²⁵³ Elkjaer B.2003. Organizational Learning: 'The Third Way'

it will be a fact for a scholarship project that they need to identify students who will receive the bursaries. With conceptual, these are how the different departments work together to ensure that project results are attained, whilst procedural will refer to the various methodologies undertaken, for example to select appropriate students to receive the bursaries.

4.8 Organisation Knowledge

Authors suggest that competitive advantage depends on the ability to create new knowledge, disseminate it throughout the organization and embody it in products, services and systems²⁵⁴. Further organisational knowledge creation is viewed as essential for any organisation.

Organisation Knowledge has been discussed in the literature under different names which include “invisible assets”²⁵⁵, “organizational memory”²⁵⁶, “core competencies”²⁵⁷, “organizational capability”²⁵⁸, and “organizational culture”²⁵⁹.

Knowledge can be made explicit and shared among persons and groups. Examples of codified knowledge can be “artifacts” such as intranets, documents, databases, manuals, guidelines and reports. However, some view this differently with the understanding that knowledge is instead situated in social and organizational practice and relationships.²⁶⁰ Individual members also serve as knowledge repositories in Organisations²⁶¹. Rotating of members from one organizational unit to another is one way of transferring knowledge across the units²⁶² and possibly from one project to another in PBOs.

4.9 How do Organisations Learn?

Organisational Learning occurs at individual, group and organizational level. Individual learning is grounded in the cognitive perspective, which emphasises that individual learning involves storing, retrieving, transforming, and applying information. Irrespective of the form of learning, which can be adaptive or generative, single-loop, double-loop or triple -loop, it

²⁵⁴ Migliarese P, Verteramo S. 2005. Knowledge Creation and Sharing in a Project Team

²⁵⁵ Roehl I. 1987. Mobilizing invisible assets.

²⁵⁶ Stein EW. 1989, Efficient Capital Markets; Wals & Ungson, 1991, Organisational Memory

²⁵⁷ Prahalad CK, Hamel G. 1990. The Core Competence of the Corporation

²⁵⁸ Ulrich L Lake D. 1991. Organizational Capability

²⁵⁹ Cook SN Yanow D. 1993. Culture and Organizational Learning

²⁶⁰ Verteramo S. De Carolis M. 2009. Balancing Learning and Efficiency Crossing Practices and Projects in Project-based Organisations

²⁶¹ Ungson W. 1991. Organisational Memory

²⁶² Kane A, Argote L, Levine J, 2005. Knowledge Transfer

must first occur at the individual level. Wang and Ahmed²⁶³ argue that learning starts with the individual, with a learning organisation being founded on the learning process of individuals in the organisation. A learning organisation, therefore, has to integrate individual learning into organisational learning. An organisation learns through its members²⁶⁴.

According to Fiol and Lyles, whilst individual learning is important to organisations, organisational learning is not simply a sum of each member's learning²⁶⁵. Fiol and Lyles further assert that organisations, unlike individuals, develop and maintain learning systems which not only influence their immediate members, but also are transmitted to others by means of organisational histories and norms.

Crossan, Lane, and White²⁶⁶ state that 'organisational learning' is used only whenever learning progresses to the organisational level, resulting in new organisational routines and standards. They argue that organisational learning is a dynamic process involving four phases which are intuiting, interpreting, integrating and institutionalising. Nonaka's²⁶⁷ spiral of knowledge framework depicts learning acquisition and transfer amongst individuals as a process of internalizing and externalizing knowledge. Internalization processes enable the learner to absorb knowledge so that it becomes part of one's tacit knowledge base. Tacit knowledge is acquired through socialisation, for example by joint practice opportunities, job shadowing and error experimentation, whilst explicit knowledge is obtained through lectures and reports, which is then absorbed to later become tacit knowledge.

Crossan, Lane, and White's²⁶⁸ understanding of organisational learning is in line with Nonaka's²⁶⁹ view of organisational learning taking place whenever knowledge is crystallised within the organisation, and when work units test reliability and applicability of new knowledge. Senge²⁷⁰ draws his argument from 'systems thinking', stating that organisational learning is only successful when it is based on an understanding of how the whole organisational system is connected, rather than a focus on individual parts. Based on this

²⁶³ Wang A. 2003. Organizational Learning

²⁶⁴ Shrivastava P.1983. A Typology of Organizational Learning

²⁶⁵ Fiol MC and Lyles MA. 1985 Organizational learning. Academy of Management

²⁶⁶ Crossan L, Lane HW, White RE.1999. An organizational learning framework: From intuition to institution

²⁶⁷ Nonaka I.1994. A Dynamic Theory of Organizational Knowledge Creation.

²⁶⁸ Crossan L, White RE. 1999. An Organizational Learning Framework

²⁶⁹ Nonaka I. 1994. A Dynamic Theory of Organizational Knowledge Creation.

²⁷⁰ Senge P.1990. The Fifth Discipline

argument, M&E in an organisation therefore needs to be integrated throughout all parts, resulting in a Participatory Monitoring and Evaluation, as explained in Chapter Three in detail.

Organisational learning is, however, more than just a collective learning of team members, but it is dependent on individual learning. Hedberg states that “although organisational learning occurs through individuals, it would be a mistake to conclude that organisational learning is nothing but the cumulative result of their member’s learning”²⁷¹. Members of organisations and leadership may change, but organisational memory will keep particular behaviours, mental maps, and values that will be passed on to others. Such an understanding is particularly important to PBOs who constantly have new project teams with each project.

It is also important to note that OL is a result of knowledge created or distributed within the organisation or externally. It may learn from feedback information derived from the environment and experience of other Organisations; for PBOs, this can be experience from other projects. Learning processes are mainly activated by feedback information in an effort to adapt to environmental changes. Learning can, however, be the result of plain chance events and experimenting. Researchers have identified the various positive effects of feedback. Despite high-feedback having been found to improve learning, high-feedback was also seen to have a negative effect on exploratory behaviour over a long period.²⁷² Specific to evaluation where recommendations of a project are provided as “project feedback”, such feedback can aid learning as the organisation uses the results to improve the project or other projects within the organisation. Rick and Weber²⁷³ viewed feedback differently, where they argue that withholding feedback led to deeper deliberation and greater learning than providing feedback. This thesis argues that feedback, provided particularly in the context of M&E, will support learning.

Specific to the development sector, learning processes situate themselves within the field of M&E. Korten²⁷⁴ points out that organisations evaluate their errors in different ways. When organisations see errors as failures, team members will tend to hide their errors, resulting in little learning at organisational level. However, if an organisation sees errors as sources of information, team members will be encouraged to discuss past experiences and to carry forward

²⁷¹ Hedberg B 1981:6. How Organizations Learn and Unlearn?

²⁷² Goodman W, Hendrickx M, 2004. Feedback Specificity

²⁷³ Weber R. 2010. Meaningful Learning

²⁷⁴ Korten D. 1984. Rural Development Programming

new knowledge; Korten refers to this as the ‘learning process approach’.

4.10 Lessons Learnt

Lessons learnt provides an opportunity for reflection during and after project completion. The reflection process assists in assessing what worked well with the project and what could be improved. A successful lessons-learnt program will help an organisation to repeat desirable outcomes and avoid undesirable outcomes. Generally a lesson might arise from interesting problems and how they have been tackled, in what circumstances and with what success. In addition, lessons could be about the assumptions made that turned out not to be true. Other people may avoid making the same assumptions. Risks may have been poorly identified or been managed better. Studies show that learning lessons from project is vital. Kerzner states that continuous learning and improvement are the highest level of project management maturity, indicating that without discounted lessons learnt, a company can revert from maturity to immaturity in project management, knowledge get lost and past mistakes repeated²⁷⁵. Supporting this is Berke, who states that best practises and lessons learned are the building blocks of organisational learning and organisational knowledge²⁷⁶. Lessons support projects in a number of ways and these include:

- Project managers learn how to manage experientially; it is important to reflect and gain these lessons;
- Lessons can feed into the assessment, risk analysis or initial planning of the next project;
- Lessons are used to feed into improving the project management processes;
- Lessons are used to improve management decision making;
- Projects are part of a cycle, and lessons learned can be tested and experimented within the next cycle;
- Lessons learned procedures are important to disseminate knowledge within the project team, to other projects;
- Lessons learnt are useful for benchmarking; and
- Knowledge from learning projects can lead to changes in organisational strategic focus²⁷⁷.

²⁷⁵ Kerzner H. 2000. Applied Project Management

²⁷⁶ Berke MF. 2001. Best Practices Lessons Learned

²⁷⁷ Williams T. 2008. How do Organisations Learn Lessons.

4.11 Reflective Learning

The process of reflection is one of the driving forces of bottom up-organisational learning.²⁷⁸ Daudelin defines reflection as ‘the process of stepping back from an experience to ponder, carefully and persistently, its meaning to the self through the development of inferences; learning is the creation of meaning from past or current events that serves as a guide for future behaviour’.²⁷⁹ The process of reflection contributes immensely to OL. As Edmondson puts it, ‘an organization can be said to change when its actions have been modified as a result of reflection on new knowledge or insight’²⁸⁰. The SLAM (strategic learning assessment map) model explains how learning can be achieved through feedback.²⁸¹ The model shows a “relationship between stocks of learning at individual, group or organisation level and business performance. Specific measures, however, need to put in place to allow for reflection and evaluation of performance and call for improvements.

Learning from feedback is a core competence, particularly in PBO. The SLAM model provides two reflection concepts, namely feed forward and feed-back. Feed forward refers to how individual learning gets integrated into learning at group and organisational levels, while feed-back refers to how organisational learning affects individual and group learning. With feed-forward, individual learning is seen to bring changes in the structure, products, procedures, and culture of an organisation, while feed-back shows the influence of organisational systems, structure and strategy for an individual. Both the reflection concepts will be used in this model where feed-forward by individual project staff can be used to improve current and potential projects if integrated into the organisation structures. Feed-back, on the other hand, will help the project staff to use the already existing organisational memory to capacitate the project staff. As stated by Sterman, all learning depends on feedback²⁸².

4.12 Learning through Experience

Experience is an essential component for learning and knowledge creation, and the extent to which it contributes to competence development is dependent upon the structures and strategies used by individuals and Organisations to learn by experience. For PBOs, experience may be lost as a project comes to an end and when the staff disbands, yet learning from experience can

²⁷⁸ Knipfer K ,Kump B ,Wessel D, Cress U, 2013. Reflection as a catalyst for organisational learning

²⁷⁹ Daudelin MW. 1996: 39. Learning from Experience through Reflection

²⁸⁰ Edmondson AC 2003:128. The Local and Variegated Nature of Learning

²⁸¹ Bontis N, Crossan, M, Hulland J. 2002. Managing an organizational learning system.

²⁸² Sterman JD. 1994. Learning In and About Complex Systems.

allow for an organisation to gain that competitive advantage. Kolb's experiential learning cycle explains the role of experience in learning²⁸³, indicating that experience alone is not enough. Structured reflection and observation from several perspectives are essential in learning through experience as has been noted above. The Kolb model highlights the importance of experiential learning in project-based Organisations where the unique nature of projects means the ability to test implications of concepts in new situations is essential to competence development.

Experience gained from one project, if used purposefully, can support another project in not repeating the same mistakes, for example, and repeating the successes of the project gained. Learning seeks to ensure that mistakes are improved and experience supports that. For projects, the context may not be the same across projects and learning from experience, therefore, should be in such a way that there is no generalisation of the successes or mistakes. Thus learning from experience is complex and dependent upon the learner, the task and the context. This thesis recognises that PBOs can make use of experience to support learning. Experience can also be from M&E. In projects, experience will be obtained from the documentation of lessons learned, M&E reports, CoP discussions and staff rotation.

4.13 Organisational Experience

Experience by an organisation can affect how an organisation learns; an organisation, therefore, acquires its experience in various forms. Thus organisational experience can be acquired directly by the focal organisation or indirectly from other units²⁸⁴. With a PBO this can then be experience acquired from other projects too and this form of learning is then referred to as knowledge transfer²⁸⁵. Experience can be acquired on a new task or on a task that has been performed repeatedly in the past, for example past projects experience.

Learning and accumulated experience that is embedded in organizational routines and practices may sometimes act as an enabler of improvisational learning.²⁸⁶ Feldman and Pentland²⁸⁷ also agree to this, stating that organizational routines are not inflexible per se, highlighting the ability of actors to innovate around such routines. With M&E, routines may be seen to be more inflexible, given that the PBO itself may shun from revising the M&E procedures. For the PBO

²⁸³ Knowles MS, Holton EF III, Swanson RA. 1998. *The Adult Learner*

²⁸⁴ Argote L, 2012. *Organizational Learning and Knowledge Management*

²⁸⁵ Argote L, Ingram P, Levine JM, Moreland RL. 2000. *Knowledge Transfer in Organizations*

²⁸⁶ Swan J, Scarbrough H, Newell S. 2010. *Why Don't (or Do) Organizations Learn*

²⁸⁷ Feldman MS and Pentland BT, 2003

to remain competitive, they then have to identify ways to be innovative around the routines.

A unit of task experience can be a success or a failure. Organisations learn from both successes and failures²⁸⁸. Sitkin²⁸⁹ sees learning from failure as more effective than learning from success, as failure allows for deeper search and understandings compared to a success. Studies have shown that organisations mostly learn from successful experiences compared to learning from failure. However, either learning is of value to PBOs as it will allow for the organisation to gain a competitive advantage.

4.14 Why should an organisation learn?

According to organizational learning researchers²⁹⁰, OL only occurs in response to immediate problems, imbalances and difficulties much more than it does in response to deliberate planning. This form of OL can be traced to M&E where the processes help to correct errors noticed. Both OL and M&E can therefore allow for an organisation to gain competitive advantage as they respond to the challenges being faced. Cyert and March²⁹¹ perceive organizational learning as adaptation to changes in the environment. This adaptation focuses on three different phases of decision-making process: adaptation of goals, adaptation in attention rules, and adaptation in search rules. “Learning is about both gaining new knowledge from external sources and also learning from our own experience in order to develop best practice. Such best practices allow for dynamic capabilities in organisations.”²⁹² Supporting the notion that there is a relationship between learning and action, Argyris suggests: “An organization may be said to learn to the extent that it identifies and corrects errors”²⁹³. Stata²⁹⁴ links learning to innovation and describes learning as “... the process by which individuals gain new knowledge and insights and thereby modify their behaviours and actions”.

From the research on organisational learning, the following are identified as the importance of OL:

- organisation can easily adapt to change

²⁸⁸ Denrell J, March C. 2001. Adaptation as Information Restriction

²⁸⁹ Sitkin S B. 1992. Learning through Failure

²⁹⁰ Cangelosi D.1965. Organizational Learning: Observations Toward a Theory

²⁹¹ March JG, Cyert RM.1963. . A Behavioural Theory of the Firm

²⁹² British Overseas NGOs for Development, <http://www.bond.org.uk/aboutus/index.html>

²⁹³ Argyris C, Schön D. 1996:113. Organizational Learning II: Theory, Method and Practice

²⁹⁴ Stata R ,1989:64. Organizational Learning: The Key to Management Innovation

- sustainable competitive advantage²⁹⁵
- be more responsive to the market place
- improve personal skills and quality
- grow through innovation
- workforce become more flexible
- improved social interaction among staff

4.15 Sufficient Redundancy

As noticed in sections above, organisational knowledge creation is essential in supporting learning and there are five enabling conditions for organizational knowledge creation: intention, autonomy, fluctuation and creative chaos, redundancy, and requisite variety. Redundancy and requisite variety are interrelated and with broader implications to organizational success than is to knowledge creation alone. Redundancy and requisite variety is an under-recognized attribute in successful organisations.

The term ‘redundancy’ may seem an unnecessary evil as it relates to unnecessary duplication, waste, or information overload. Redundancy in organisational knowledge creation refers to the existence of information that goes beyond the immediate operational requirements of organisation members. Sharing redundant information promotes the sharing of tacit knowledge and thus speeds up the knowledge creation process. In business organisations, redundancy refers to intentional overlapping of information about business activities, management responsibilities, and the company as a whole.²⁹⁶ While new knowledge is developed by individuals, Organisations play a critical role in articulating and amplifying that knowledge. Any organisation operating in a dynamic environment need not to only process information, but also create information and knowledge. The organisation’s interaction with internal, external resources and environment, as well as the creation and distribution of knowledge are important in building a dynamic and understanding organisation.

Redundancy of information facilitates knowledge and absorption and this is useful for PBOs where participation of team members is enhanced. Redundancy also creates resiliency within the team. To build redundancy, tactics such as strategic rotation between functions, teams and technologies have been shown to be effective. In PBOs the rotation can be among projects. Also, developing alternate competing solutions to support set-based decision-making ensures

²⁹⁵ This is directly related to dynamic capabilities which allow for competitive advantage

²⁹⁶ Nonaka I, Takeuchi H. 1995. The knowledge-creating company.

the team looks at the problem from several perspectives and hence increases learning. Redundant information can be instrumental in speeding up concept creation. A concept that was created by an individual or a group often needs to be shared by other individuals who may need the concept immediately. Redundant information in PBOs therefore become relevant as concepts created can be shared across projects. The redundancy of information refers to the existence of information more than the specific information required immediately by each individual. The sharing of extra information between individuals promotes the sharing of individual tacit knowledge²⁹⁷.

It is worth noting that organizational redundancy is not only about duplication, however; it is created by people consulting each other, keeping an eye on each other, checking and correcting, asking critical questions. Instead of having two people duplicate each other, with the same mistakes, Organisations need people with different backgrounds in somewhat different roles; in other words, variation or diversity²⁹⁸. It is argued that redundancies and safety measures should be designed into the organization from the start and not added afterwards²⁹⁹. Redundancy is, however, essential in supporting learning in organisations, and without redundancy it is only a matter of compliance. Redundancy of information is believed to bring about "learning by intrusion" into an individual's sphere of perception.³⁰⁰

Knowledge and capability to create knowledge are the most important source of a firm's sustainable competitive advantage. Knowledge creation is a process in which various contradictions are synthesized through dynamic interactions among individuals, the organization, and the environment³⁰¹.

Figure 5: SECI Framework

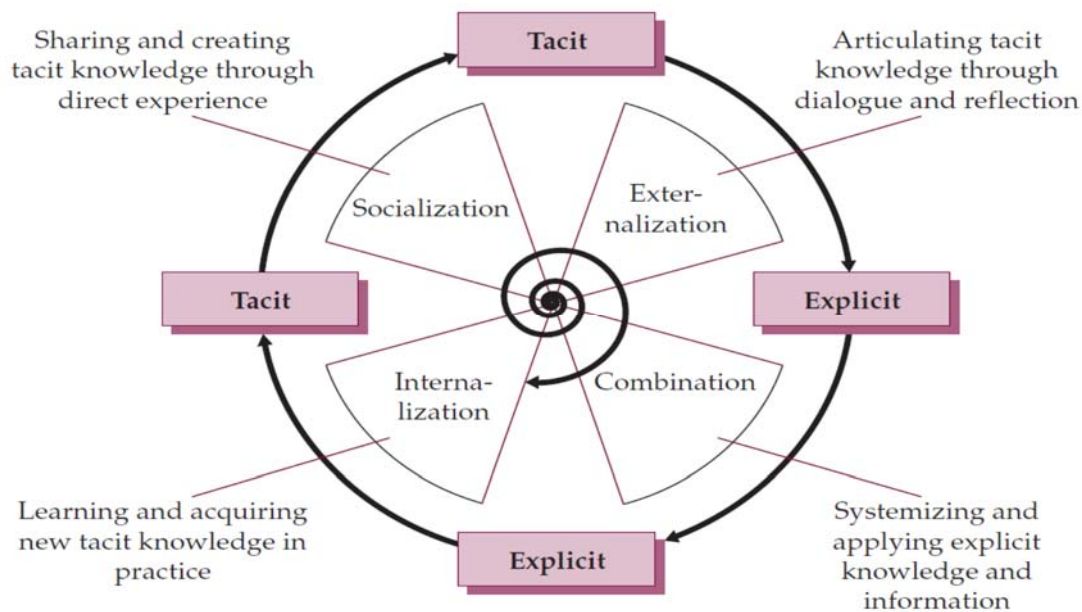
²⁹⁷ Nonaka I.1994. A Dynamic Theory of Organizational Knowledge Creation

²⁹⁸ Weick KE. 1987. Organizational culture

²⁹⁹ Perrow C. 1999. Organising to reduce vulnerabilities.

³⁰⁰ Nonaka I.1994. A Dynamic Theory of Organizational Knowledge Creation.

³⁰¹ Nonaka I, Toyama R. 2002. A firm as a dialectic being:



Source: Nonaka I, Takeuchi H, 1995

The SECI framework provides another view on how organisations create knowledge as opposed to only processing information. With the dynamic operating environments within which PBOs in particular operate, organisational knowledge creation is important to support the continuous change and adaptation. Knowledge is created in the spiral that goes through adverse concepts such as order and chaos, micro and macro, tacit and explicit, and creativity and efficiency.

Knowledge requires a physical context to be created and it depends on particular time and space. Knowledge does not just exist in one's cognition. Rather, it is created in situated action³⁰² To explain knowledge creation interactions, the concept of Ba is used. The Ba concept explains how participants share their contexts and create new meanings through interactions. Ba is a continuously created generative mechanism that explains the potentialities and tendencies that either hinder or stimulate knowledge creative activities³⁰³. Ba lets participants share time and space, though it is not restricted by time and space. In knowledge creation, especially in socialization and externalization, it is important for participants to share time and space through direct experience. A close physical interaction is important in sharing the context and forming a common language among participants. However, Ba can exist in a mental or virtual place as well as a physical place, and does not have to be bound to a certain space and

³⁰² Suchman L. 1987. Plans and Situated Actions

³⁰³ Nonaka I, Toyama R.2003. The knowledge creating theory revisited

time³⁰⁴. Ba provides a shared context in which individuals can interact with each other to create new meaning. By its nature, a Ba is ad hoc and dynamic³⁰⁵.

4.16 Knowledge Exploration and Knowledge Exploitation

Knowledge exploration and exploitation are both crucial elements for the organisation's success³⁰⁶. According to March³⁰⁷ "exploitation," involves learning from repeating the same tasks (low novelty), and "exploration," which involves learning from new tasks (high novelty). "A short-term focus on efficiency, based on exploitation of existing knowledge and technologies" may conflict with "a long-term focus on innovation and strategic development, based on exploration of new knowledge and technologies"³⁰⁸. March argues that firms focusing too much on exploration may suffer the costs of experimentation without gaining many of its benefits due to many undeveloped new ideas.³⁰⁹ Due to the direct benefits of exploiting current competencies, Organisations tend to focus more on exploitation.³¹⁰ A study on project-based learning in different Organisations found that project-oriented Organisations tend to focus on actions that produce the fastest results rather than actions that produce optimal outcomes in the long term. With this, learning is restricted within that project with unlikely transfer of knowledge across projects.³¹¹

4.17 Knowledge as a source of Learning in Project Based Organisations

Studies on organizational knowledge consider knowledge and intangible assets to be key factors in achieving competitive advantages. Brown and Duguid believe that it is knowledge, and not transactional costs, that keeps an organization together. With this, it is clear that organisational knowledge provides the organization with an advantage impossible to achieve in the market³¹². Organisations go beyond mere problem-solving through creating and defining problems, developing and applying knowledge to solve the problems, and then further developing new knowledge through the action of problem-solving. The organization and individuals grow through such process. The organization is not merely an information-

³⁰⁴ Nonaka I, Toyama R.2003. The knowledge creating theory revisited

³⁰⁵ Hiroataka T, Shibata T. 2006. Japan, Moving Toward a More Advanced Knowledge Economy.

³⁰⁶ Eriksson PE. 2013. Exploration and Exploitation

³⁰⁷ March C. 1991. Exploration and exploitation

³⁰⁸ Eriksson PE. 2013, 333. Exploration and Exploitation

³⁰⁹ March C. 1991. Exploration and Exploitation in Organizational Learning

³¹⁰ Uotila et al. 2009. Exploration, Exploitation, and Financial Performance

³¹¹ Swan et al. 2010. Why Don't (or Do) Organizations Learn from Projects?

³¹² Brown JS, Duguid P. 1998. Invention, Innovation & Organization

processing machine, but an entity that creates knowledge through action and interaction³¹³. Thus, organisational knowledge is defined as individual knowledge shared by all the members of an organization. Grant confirms this view, stating that the creation of knowledge is merely individual, thereby affirming that the main aim of a company is the application of knowledge to the production of goods and services, and not the creation or acquisition of knowledge³¹⁴. This view is not necessarily true for a PBO, where the creation of knowledge is the cornerstone; however, it is the application of knowledge beyond the project or for organisational improvement that remains a challenge. Projects create a lot of knowledge through the learning activities and the organisational routines. Relating to project-based learning, Scarbrough et al³¹⁵ defined it as a process encompassing learning within projects (intra-project learning or exploration) and also learning from projects to other projects (inter-project learning or exploitation) and to the wider organization.

The view by Spencer of organisational knowledge being embedded in organisational rules and routines approach is somewhat relevant to the approach this model takes. As has been noticed above, it is through routines that organisational knowledge gets created, for example through monitoring. Further, Nonaka's epistemological dimension of the creation of organizational knowledge through dialogue between tacit and explicit knowledge supports the creation of new ideas and concepts. The model proposed in this thesis recognizes that for a PBO where there is usually limited time, tacit knowledge is often under-utilised, as individuals are in a hurry to complete the project. The model proposes the greater use of tacit knowledge through a better dialogue with explicit use of developed manuals during trainings or routines like M&E or documenting of lessons learned. This dimension sets out a level of social interaction in which individually-created knowledge is transformed and legitimized. The value of dialogue is supported by Oswick et al., who demonstrate that it is dialogue that generates individual and organizational learning, creating meaning and understanding³¹⁶. The model provided in this thesis shows the importance of knowledge and the need for its proper use to allow for learning in PBOs.

³¹³ Nonaka I, Toyama R, Nagata A. 2000 A firm as a knowledge creating entity

³¹⁴ Grant R. 1996. 'Prospering in Dynamically Competitive Environments

³¹⁵ Scarbrough H et al, 2004. Project-Based Learning

³¹⁶ Oswick C, Anthony P, Keenoy T, Mangham I, Grant D. 2000. A Dialogic Analysis of Organizational Learning

4.18 Communities of Practice

Communities of Practice (CoP) have been described as a “privileged locus” for learning, creation and transferring knowledge within an organisation as well as externally known as organizational networks. Research on CoPs has moved, over time, from the study of small groups and of the learning processes which take place within them, to other subjects: organizational aspects and the innovative potential of CoPs³¹⁷. CoP can therefore be viewed as:

- a group of people that engage in activities that share a common interest and where there is ongoing learning through practice (a CoP is bound together by shared interest in a knowledge domain); and
- a self-organizing system based on two elements: practice and identity³¹⁸.

Members of a CoP share interests, specific competencies, routines, formal and informal rules³¹⁹. The goals and purpose of a CoP are formed based on knowledge needs, though this is mainly to formalise the structure, as mostly CoPs rarely have a specific result to deliver to the organisation but a group of people that can support learning. CoP are self-organising, but organisational support is vital, particularly for PBOs where there is a lack of time and people sharing the same interests who may not be known if the organisation does not facilitate. In addition, people should have time and encouragement to participate. In PBOs, the CoP will support learning across projects; however, it is worth taking note that two projects may be completely different and one might argue that they may be no need to have the CoP. While this is true, it is important to note that very often project processes will be somewhat similar and through the CoP such processes can be discussed, allowing for learning.

A CoP allows members to interact regularly, sharing common areas of interest, and this can be achieved even for geographically-dispersed professionals using Information and Communication Technologies. A PBO can make use of CoP to facilitate learning across projects. Knowledge created during this process can then be documented and create a great source of organisational memory from projects. CoPs, operating within a project-based

³¹⁷ De Carolis M, Corvello V. 2006. Multiple Competences in Distributed Communities of Practice

³¹⁸ Lave J, Wenger E. 1991. Situated Learning

³¹⁹ Garrety K, Robertson, PL, Badham, R. 2004 Integrating Communities of Practice in Technology Development Projects.

organization, allow for concentration of expertise³²⁰. A CoP within a PBO allows for project members to establish informal professional social networks and are often the preferred way members can get feedback from knowledgeable peers. Combining project teams and CoPs seems to be an effective way to make an organization simultaneously oriented to output and learning.

Table 11: Organizational variables and factors that affect the effectiveness of CoPs

Input (what organization "gives" to group)	Process (how this group operates)	Output (what group gives to organization)
Structure design: size, membership, competences needed, roles, hierarchy Design and formalization degree of tasks Resources: time, work space (physical or virtual) and financial resources HRM mechanisms	Coordination systems used Emerging roles Communication systems adopted Group culture Identity degree	Contribution to: Strategic goals – medium term Operational goals – short term

Source: Verteramo S, De Carolis M, 2009

CoPs are created in order to face poorly-defined problems of learning and knowledge creation and sharing, where classic organizational forms can be weak³²¹. Verteramo and De Carolis further state that CoP support knowledge exploration and exploitation processes from across and between projects. They is a network in which specifically useful information can be found, in which professional competencies can be improved, and are a home for professional identity³²².

4.19 Conclusion

Organisational learning is a process of detecting and correcting errors with an overall goal of improving the efficiency of an organisation. It is through OL that an organisation manages to develop improved ways of delivering services, organising their routines.

For organisational learning to take place, individuals in the organisation need for themselves to learn; however, it goes beyond the cumulative learning of these individuals. As provided in dynamic capabilities, OL ensures that an organisation gains competitive advantage, which is

³²⁰ Garrety K, Robertson, P L, Badham, R. 2004 Integrating Communities of Practice in Technology Development Projects.

³²¹ Verteramo S, De Carolis, M, 2009. Balancing Learning and Efficiency

³²² Verteramo S, De Carolis, M, 2009. Balancing Learning and Efficiency

particularly important for PBOs if they are to remain relevant from one project to another. With this in mind, the definition of OL that this thesis uses is the firm's ability to organize internal and external procedures and routines to continuously remain competitive.

Studies show that learning in projects has two aspects: the creation of new knowledge (exploration) and the use of existing knowledge from various sources (exploitation). The understanding of learning in much of the early literature on organizational learning³²³, is built upon the metaphor of knowledge acquisition. Scholars have shown that when OL rests upon the metaphor of knowledge acquisition there is a challenge with regard to understanding and explaining how an individual learning outcome can then be transferred to the organization. As seen in the literature it is difficult to separate individual and organization learning. Learning is practical and an everyday processes that happens consciously and unconsciously in some instances. How the PBO then learns and becomes competitive in such a highly-volatile environment requires both exploration and exploitation. In order to be competitive, an organisation needs to make a decision to consciously incorporate learning as part of the organisational processes. As noted in this chapter, PBOs processes like M&E support knowledge acquisition are an essential process for OL.

³²³ March C. 1963. A Behavioural Theory; Huber, 1991, Organizational Learning

Chapter 5:

Organisational Learning and Monitoring and Evaluation

Learning communities are diverse and multi-faceted:

Peter Senge

5.1 Introduction

The previous chapters have shown that for an organisation to thrive, gaining a competitive advantage is important, and more so for a Project Based Organisation. For such an organisation to continuously remain relevant in this dynamic environment, the organisation needs to refocus, organise itself and be able to deliver results for different projects and clients. In the context of OL, economic environment and competitive advantage, organisational memory cannot be static, that is, only contained in the paperwork of the organisation without externalisation, yet the memory is what the organisation has learnt. Learning as a dynamic capability has been identified as “a process by which repetition and experimentation enable tasks to be performed better and quicker”³²⁴. It is against this understanding that PBO can utilise M&E processes from various projects to be learning organisations. Whilst much work has been done on OL, there is little on PBOs that particularly focuses on how such types of organisations will be able to learn from one project to the next.

This thesis provides a working framework that can be adapted by such organisations to realise learning in these dynamic environments, allowing for competitive advantage. As stated by Senge, learning has a positive effect on organisational effectiveness: “the rate at which organisations may learn may be the only sustainable source of competitive advantage”.³²⁵

It is no doubt that knowledge and learning are the new power bases of the knowledge economy

³²⁴ Teece D J, Pisano G; Shuen A. 1997:520. Dynamic Capabilities and Strategic Management

³²⁵ Senge PM. 1990. The Fifth Discipline.

and that they are what build and sustain competitive advantage and survival in this economy. Knowledge and learning become tools for widening the gap between success and failure. For PBOs, like any other organisation, relevance is essential, and this will depend on their capacity to learn and to change in the light of what they learn and the ability to create sufficient redundancy becomes of more importance in PBO than in any other form of an organisation. Seminal studies like Argyris and Schon's double-loop learning notion, Senge's the "Fifth Discipline," and Pedler, Burgoyne, and Boydell's learning company toolkit and the idea of "learning curves" are widely used by large management consulting firms. Double loop learning in particular is important during times of rapid change, such as in dynamically-changing environments. The framework provided in this chapter forms the basis of this research. This framework is based on the work described in the chapters above and specifically linking this to PBO learning. The framework looks at how the different notions in particular M&E and how it can be translated to practice and integrated into the PBO to allow sufficient redundancy. The chapter provides the conceptual framework proposed for learning in PBOs and further provides suggestions of how this framework can be operationalised. Bloom's taxonomy of learning is also influential in understanding the various learning dimensions that are proposed in this framework.

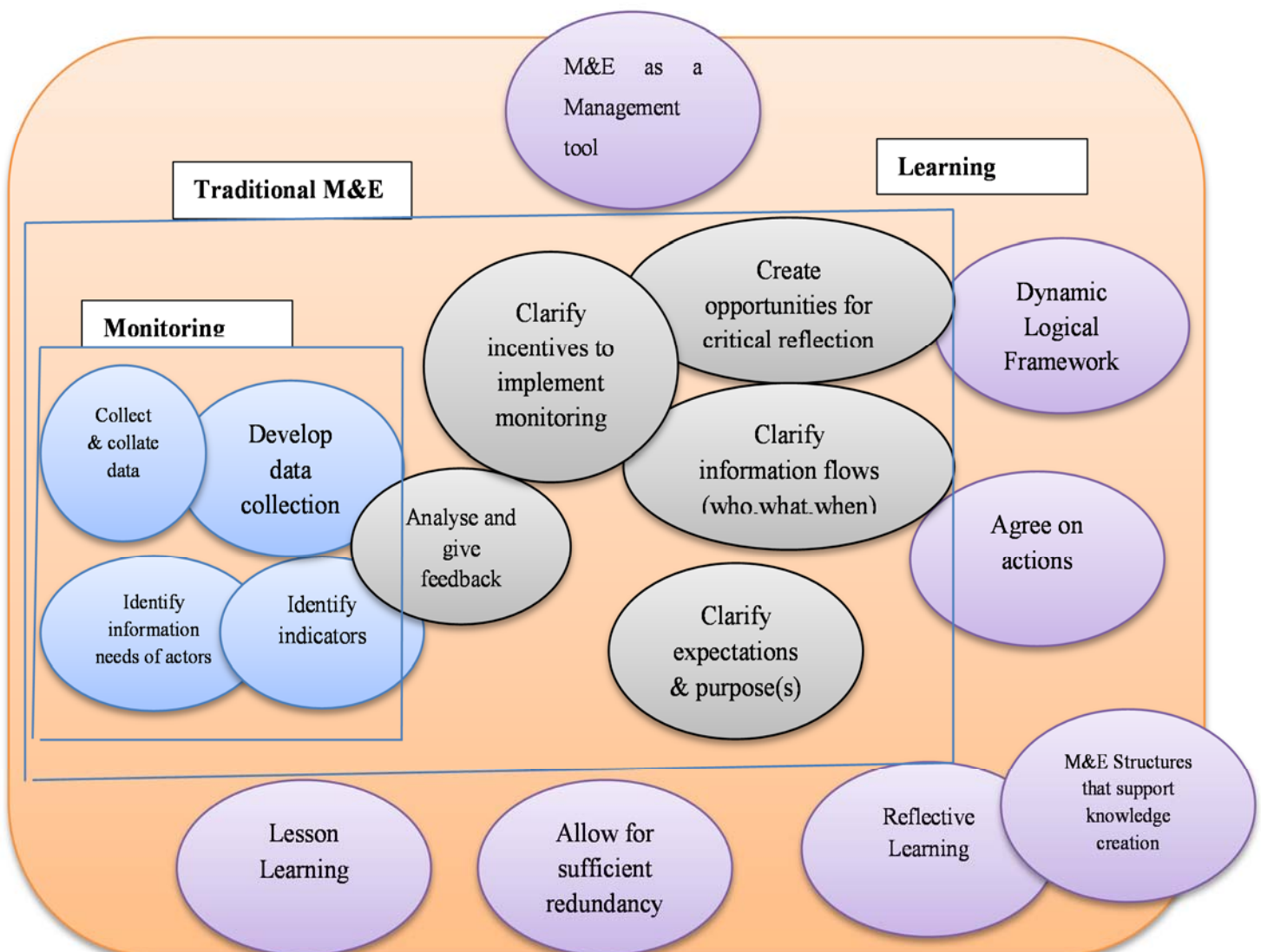
5.2 Organisational Learning Framework for Project Based Organisations

Through M&E a lot of knowledge is created; however, there are a range of possibilities one can expect in the relationship between M&E and learning. There are two possibilities that are completely opposite to each other that can be expected as a result: where M&E may not in any way provide for sufficient redundancy or where the M&E process can itself be viewed as the necessary tool for learning in PBOs. This thesis takes the latter view by providing the transformations that may be adapted to the traditional M&E process. The purpose in my investigations of Dynamic Capabilities and Organisational learning in the previous chapters assisted in gaining an insight on the learning capabilities of PBOs. Learning, monitoring and evaluation are considered core processes of any organisation to gain competitive advantage.

Dynamic Capabilities rely on cross-functional relationships, which is the same for PBOs. In their (PBOs) case, they are dependent on various projects, but all are all essential in providing feedback for learning. Thus, M&E should not focus on compliance checking, but rather develop mechanisms in which capabilities can be developed. The traditional M&E processes normally support single-loop learning by checking what was done against the logical framework, and thereby qualifying traditional M&E to be an ordinary capability. If a PBO can

attain dynamic capabilities, then they will less likely be dependent on individuals within the firm. Such a capability can only be attained when an organisation has sufficient redundancy. The theory proposed by the researcher in this framework is based on four main components; a) Monitoring and Evaluation, b) Lesson Learning, c) People and d) Structure (MELPS). It is, however, important to note that this is not merely a presence of the components using the traditional approaches, but rather a reinterpretation of the components in order to be able to realise learning using MELPS in PBOs.

Overall this theoretical framework argues that: a) M&E is the dynamic capability that a PBO can utilise to remain competitive and learning achieved henceforth; and b) The traditional M&E methods are, in actual fact, associated with the ordinary capabilities that only permit sufficiency (and occasionally excellence) in the performance of a well-delineated task.



The figure above provides the graphical presentation of the conceptual framework proposed in this thesis. It was adapted from Guijt (2008); however, the essential elements of learning for PBOs are then included as the thesis argues through the framework presented in this chapter.

5.2.1 Monitoring and Evaluation

In recent years, expectations have grown about the potential of monitoring to contribute to learning, as the now widely-used phrase ‘accountability and learning’ illustrates. Monitoring becomes a sub-system of learning. In order for M&E to support learning, an organisation will perform M&E beyond the conventional approach and view this routine as an activity that can support learning and a dynamic capability in itself. This thesis presents an enhanced way to conduct M&E in order to allow for learning. Like dynamic capabilities, M&E rely on real-time information from the project in order to make decisions that will then support single/double or triple learning.

Increasingly, however, there is recognition that M&E systems may also contribute to strategic management and learning lessons and to feeding experiences into policy processes where M&E activities are linked to the ongoing reflection and learning, as is provided in section 3.3. This thesis argues that M&E are the dynamic capabilities that a PBO may utilise to remain competitive and achieve learning as a result. Like OL, M&E activities may be embedded in the organisation structures, and this what a PBO can aim to achieve. If monitoring is, indeed, to make a contribution to ‘learning’, then a wide range of other activities are needed to fulfil that expectation. These activities are discussed in the section below. Dynamic capabilities rely on real time-information, and as has been provided in Chapter 3, there is a lot of information that is created through M&E activities. As a dynamic capability, M&E’s capability to constantly create information at every stage of the project is no doubt a competitive process to support the specific project and potentially gain a competitive advantage to then be able use that information in other projects of the organisation.

Monitoring activities, when used to allow for learning, become standard practice and cannot be separated from day-to-day activities. People join teams at different times during a project’s life cycle to contribute expertise as needed, and when their work is done, they move on to new projects or assignments. The project team exists solely to complete the project: when it ends, the team dissolves. Secondly, it leads to a very customer-centric approach, which means close collaboration to determine requirements in order to design and build the right systems. Project teams focus narrowly on their own objectives—a strength as noted above — but their ability

to resolve complex problems also depends on the free flow of ideas and knowledge from others and across projects. Management should realize the importance of OL in general and Organisation Learning Capability in particular due to the fact that innovation is dependent on the company's capability to learn how new knowledge is managed.

No two projects are exactly the same within the organisation, meaning that individuals have to keep learning on each new project. The learning that takes place in a project team setting is also very dynamic. When problems arise, teams concentrate their resources, bring together the necessary expertise, and either solve the problem, mitigate it, or carry it forward as a risk. However, the ability to use and remember past experiences from other projects will be a learning process (this relates to the taxonomy of learning of remembering provided in table 9).

As mentioned above, M&E is indeed the dynamic capability that a PBO may require to remain competitive. The traditional M&E methods are in actual fact associated to the ordinary capabilities that only permit sufficiency (and occasionally excellence) in the performance of a well-delineated task, as is presented in the ordinary capabilities in Chapter 2. The practical M&E processes that are proposed in the section below show how these routines allow for single-, double- and triple-loop learning.

As noted in Chapter 3, through the various activities presented in Figure 3, knowledge is created, and if a PBO chooses to use M&E to attain a competitive advantage, then such knowledge created will support PBO learning.

5.2.1 Monitoring and Evaluation as a Management tool

Very often M&E is used as an accountability tool to demonstrate how public funds have been used to achieve politically-desired results. Donor/client accountability is articulated in terms of donors wanting to know if public funds are being effectively spent. The role of politics in donor projects has been on the forefront in projects³²⁶. It is therefore important to provide measures on how to incorporate donor politics into M&E frameworks, and more so, incorporate learning in the framework, as has been provided above on including project performance indicators in the logical framework. M&E should be recognized as a management practice that allows for learning and change when implemented regularly. Interesting questions to address in preparing for M&E include those about ownership, relevance and usefulness of the data, whether lessons can be learned through M&E and by whom, and how this learning could be improved. This

³²⁶ Riddell RC. 2007. Does Foreign Aid Really Work

process reflects on how some common M&E activities can be deviated, thereby leading to double-loop learning. M&E results should be able to be used by the PBO itself and not only for use by the funding agent. If the results are to be used by the PBO itself, a dynamic capability framework will have been incorporated, with its competitiveness going beyond the day-to-day smooth running of the existing project. Evaluating the processes themselves will be useful for the PBO and this will require engaging the project staff and documenting evaluation results for future project use. Documentation of evaluation results is also part of externalisation of the knowledge created and overall PBO learning.

a. Sufficient Redundancy through Monitoring and Evaluation

To allow for learning through M&E, a PBO may choose to view M&E as an essential routine that support knowledge creation and not only as an accountability exercise to the client or funding agent. Data collected during monitoring can be useful in building up to the learning. Whilst essential for the present project improvement, it can also be collected with learning in mind and overall support learning for other projects. This process allows for sufficient redundancy. Data collection will, however, need to be done in a much more comprehensive manner and not guided or restricted to the defined indicators provided in the logframe. Simple data collection and addressing the variances is part of single-loop learning, commonly performed in M&E. This framework proposes that the PBO optimises the process of knowledge creation in M&E, which will provide an uncommon added value advantage to the organisation and be a source of competitive advantage. Various data collection methods are normally utilised, though this is done to collect information on how the processes have been undertaken and to make known the results thereof.

b. Adaptability in Dynamic Markets

Dynamic capabilities look at how an organisation, for example, is continually changing to adapt to the current environment it is operating in. Ordinary capabilities as provided in section 2.5 allow for a firm to perform tasks on an on-going basis, making use of more or less the same techniques on the same scale to support existing products and services for the same customer population. When M&E is performed to obtain results for that specific project, then ordinary capabilities are achieved, which is normally the status quo with most M&E activities to inform operational activities of the project being implemented. However, this thesis realises that for a PBO to remain operational beyond one project, a PBO will choose to have dynamic capabilities where M&E results from one project will be able to make a contribution to another project.

Here, the PBO will use the results to ensure that mistakes from one project are not repeated in another project for the PBO. This approach to M&E is a dynamic capability for the organisation, allowing for competitive advantage as the PBO make use of knowledge obtained from projects to improve and not to repeat same errors. Such knowledge is unique to the specific PBO as it learns from its different projects embedded within the firm (see section 2.5) on how dynamic capabilities are, in fact embedded, within a firm. Knowledge created by the PBO in the different projects is unique to the organisation and cannot easily be imitated, a key component of dynamic capabilities.

This thesis proposes that positive learning results will be attained by the PBO when it is able to make use of knowledge from one project to support performance of another project. The adaptability of the PBO to various knowledge forms is closely aligned to one of Peter Senge's five disciplines, which is systems thinking. While in his work Peter Senge emphasised that systems thinking allow for interdependency of activities within the organisation, this thesis uses this idea to relate to the activities of the different projects of the PBO. This process, however, requires for the organisation to not only use the knowledge as it is, but to be flexible in realising how the knowledge can be adapted to a different project that has different objectives. The ability of the firm to use knowledge from one project in another is closely supported by one of the key elements of dynamic capability, *integration*, provided on section 2.13. Further, this is directly related to Peter Senge's five-discipline approach, where a learning organisation is viewed as an adaptive entity responsive to past errors and able to transform itself continually; in this case, the PBOs ability to remain competitive from project to project.

5.2.2 Lesson Learning

Engaging in lesson learning initiatives in organisations is yet another practice that PBOs can adapt in order to realise OL. This is in support of Berke's view of lessons learnt as building blocks of organisational learning and organisational knowledge provided on page 74, section 4.10. Lesson learning is a common practice in organisational process nowadays, and closely related to M&E, as it engages in knowledge creation with high levels of externalisation of the knowledge during meetings and lesson learnt processes.

Lesson learnt initiatives can best be described by the operational organisational learning identified by Hyvarinen and Wall (Section 4.3), which is a feature of learning organisations that focus on improving practice, increasing effectiveness and efficiency. Operational organisational learning is when strategic meetings are conducted whose objective it is to assess

organisational practices toward improving effectiveness and efficiency in event planning and management. This particular understanding of operational OL can directly be linked to the lesson learnt initiatives that a PBO can adopt henceforth. Bloom's taxonomy of learning on understanding is somewhat relevant to how the lesson learnt process can be used to support OL in PBOs. The understanding gained by individuals on how a project has performed will be translated to a lesson learning process that will in the end support learning.

Identifying lesson learnt is directly related to double-loop learning. The transformation process that double-loop learning aims at achieving through collectively reframing problems and developing new policies and objectives is key to the process of identifying lessons learnt. PBOs can achieve this process through:

- providing a list of project's successes and factors that promoted the success;
- providing a list of project's failures and the effect on the project;
- delineating areas of potential improvement;
- proposing information that can assist other team members/projects; and
- assessing how the process would be done differently if it were to be done again.

When identifying the lessons learnt from a project, it is important to note that this process should be viewed as a learning process and lessons emerging from this should be shared across the project and with other projects.

The frequency with which documenting of lessons is done is of importance to ensure that lessons are not forgotten and also avoid spending a lot of time in meetings when there are no lessons that will have been learnt. The framework proposes that the meetings called to gather lessons learnt be conducted upon reaching a specific milestone which is provided in the project design documents. The lesson learning process will interrogate the activities undertaken to reach that particular milestone involving all stakeholders that took part. Every process that was done will be interrogated on why it was done. Documenting of lessons over time and possibly on project completion will then allow for sufficient redundancy in PBOs, thus becoming a dynamic capability for the organisation. Further, using the definition of triple-loop learning as learning to learn, the framework views the lesson learning process to support that; as team members gather to identify what the lessons have been, that process will in itself identify how predecessors have facilitated or inhibited learning.

5.2.3 People

Due to their nature, PBOs normally have a lot of people from different projects engaged, and

their interactions will facilitate knowledge creation. This theory places “people” as central to OL in PBOs. Section 2.3 shows that capabilities are built on collective learning derived from how employees have worked together, as well as on special equipment or facilities to which the firm has access. Thus, knowledge created during the interactions results in redundancy and facilitates learning. It has been noted that while OL is not merely learning of the individuals within the organisation, it is, however, through the learning of the individuals that learning of the organisation can be realised. On page 53 (Section 4.3), the researcher provided the important elements for learning organisations, where Hyvarinen and Wall provided individual learning as one of the essential component to support learning. on page 71, (Section 4.9) an argument by Wang and Ahmed was presented, which states that learning starts with the individual, with a learning organisation being founded on the learning process of individuals in the organisation. The role of people in OL is also supported in Peter Senge’s five disciplines, where in the shared vision discipline, he put an emphasis on how the vision and efforts of people in the organization-wide is a key element to a learning organisation, (see section 4.5.1). Recognising that learning of individuals is essential in OL, in PBOs this even becomes more relevant. Knowledge creation in PBOs is centred on people interactions and these can be among project team members or project stakeholders who share a common goal of achieving the set objectives of the project being implemented. As noted in section 4.3.2, for double-loop learning to be achieved, there is need for key actors in the organization to create on-going dialogues. In PBOs the ongoing dialogue by the “key actors” (PBO management, PBO team members and stakeholders) will be deemed necessary to achieve the double-loop learning.

The participatory M&E provided in section 3.5 shows that people are indeed at the centre of learning in PBO. This theory recognises that organisational learning is not the accumulative learning of individuals, but their ability to create and share knowledge through the SECI processes is vital in successfully achieving learning in PBOs. Collective learning is commonly considered to result from PM&E and also as was provided by Peter Senge’s discipline on team learning (see section 4.5.5). PM&E is a form of M&E that PBOs may adapt and because of its nature, a lot of people are engaged, thus having M&E embedded in all organisational processes. With PM&E, almost all stakeholders in the project are involved thus sufficient redundancy. As noted, redundancy is indeed essential in learning (See Section 4.14). With PM&E, joint decision-making is made possible and hence dynamic capabilities facilitated.

5.2.4 Structure

In order to facilitate M&E in all project structures, processes need to be developed in such a

way that knowledge creation and storage is made possible. A dedicated knowledge unit that becomes the warehouse for all projects knowledge will facilitate this process. In section 1.2, one of the main challenges of learning in PBOs provided is the lack of a set arrangement to assist the collection of the knowledge. With a lack of a repository to store the collected knowledge from various projects PBO structure can “lose” knowledge and learning. It is against this background that PBOs can make use of a knowledge unit properly managed and accessible by all projects. A knowledge unit can then be seen as best practise for the PBO, supporting the notion by Martin and Eisenhardt in their dynamic capabilities theory, where they highlight that a best practice can indeed be a form of a competitive advantage. A dedicated knowledge unit, therefore, may be useful to PBOs for the purposes of facilitating knowledge sharing among projects, as well as storing of created knowledge from different projects. M&E reports produced from different projects can all be deposited into the knowledge unit which is accessed by the PBO.

Another important process that forms part of the structure is the staff rotation across projects. If PBOs can organise their different projects in such a way that there are interactions across projects, such a flexibility in organisations will allow knowledge-sharing across projects. Learning across projects can be viewed as a best practice, as provided in dynamic capability theory, which that a best practice in one industry can still be a competitive approach in a different industry. This understanding becomes appropriate amongst PBOs where the best practice in one project can still become relevant in another. Learning organisations are viewed to be those organisations that not only make use of best practices, but are also flexible in dynamic environments, which is a particular characteristic of a PBO. This is well-explained in the dynamic capability theory section, stating that successful firms in dynamic environments are those demonstrating timely responsiveness, rapid and flexible product innovation, with management’s capability to effectively coordinate and redeploy internal and external competences.

Table 12 below provides an overview of the activities proposed under the MELPS. The role of people in PBO learning is further evidenced by the engagement of almost all stakeholders in all the processes.

Table 12: PBO Learning through MELPS

Activity	When	Responsible (People)
Adaptability in Dynamic Markets	During and After Project Implementation	PBO Management and Project Staff
Sufficient Redundancy through Monitoring and Evaluation	During and After Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management
Monitoring and Evaluation as a Management tool	Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management
Participatory	Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management
Evaluation process and results	Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management
Evaluation Design	At Project Design	All Stakeholders: Project Staff, Project Funders, PBO Management
Lessons Learnt	On reaching a project milestone	All Stakeholders: Project Staff, Project Funders, PBO Management

5.3 Practical Monitoring and Evaluation Solutions to support Learning

In order to test the theory proposed above, there is need for providing some practical solutions that PBOs may need to adapt to then allow for learning. The proposed practical solutions provided in this section shows how this research has deviated from the traditional M&E associated with compliance and accountability. The theory proposed and practical solutions are common in M&E as provided by Guijt in Figure 3; however, this thesis shows how these can be adjusted to allow for dynamic capabilities whilst providing refined and additional activities

to be adopted and overall learning in PBOs. The practical solutions provided allow for M&E to go beyond the single-loop learning and support double-and triple-loop learning to some extent.

5.3.1 Integration of M&E systems in all structures

Effective learning requires integration of M&E and learning systems at all levels in the organisation. As noticed, the reliance on cross-functional relationships in dynamic capabilities allow for organisations with dynamic capabilities to gain a competitive advantage. Such integration requires a clear vision with regard to organisational learning and the practical development of monitoring and evaluation. Within this context, attention needs to be paid to the organisational culture and structure, as well as to monitoring and evaluation systems, their linkage to work processes and the necessary staff competencies. A project constitutes various processes and positions implemented to achieve the results. Whilst information is collected at all these stages, there is lack of utilising that information in supporting triple-loop learning, for example. With this framework, information collected at different stages is used to report on project progress and then allows for interrogating the processes performed in determining the success and errors. When M&E is integrated at all levels, tacit knowledge is externalised that otherwise may not have been, and each section recognises the importance of analysing why certain things have been done the way they have been and the consequences thereof. This framework recognises that making use of these processes in a different and non-imitable way will ensure that the PBO can transfer the tacit knowledge from project to project, which otherwise may have never been transferable

5.3.2 Data collection and analysis to support learning

Whereas data collection will be done by project team members from all departments, the collection and type of data/information will need to be verified and consolidated by the Monitoring, Evaluation and Learning Team to make it useful knowledge. For a positive result in OL, the process of data collection will be done in a way that knowledge be created through socialisation, externalisation, combination and internalisation (SECI). Here the following activities are proposed:

Regarding **socialisation**, the M&E team will obtain valuable knowledge through observing how processes are undertaken. In PBOs this can be done in such a way that the knowledge can still be made available to other projects. Therefore, **Externalisation** will be deemed necessary where the knowledge created through socialisation is put into guidelines and procedure

manuals on how tasks are performed. Further knowledge created from different projects in the manuals will be used to provide generic organisational guidelines that can be adapted for any project (**combination**). Finally, the guidelines will be used by project staff and passed on from project to project, resulting in individual learning which is important in organisational learning (**internalisation**).

The knowledge creation process proposed here shows how capabilities are built through M&E and with such structures the PBO may not have to be dependent on individuals. This is essential, particularly for this type of organisation where project staff members disband on project completion. The capabilities grown through the knowledge creation process are less likely to be dependent on individuals, as these are built within organisation structures and passed on from project to project allowing for the PBO to have a competitive advantage.

5.3.3 Dynamic Logical framework

The logical framework is often guided by the project objectives and so are the indicators. This result in the M&E being done only to address project objectives and are unlikely to use the knowledge gained to support learning beyond that project. The conventional logical framework supports singleloop learning in identifying deviations from the targets outlined in the logical framework. However, the dynamic logical framework proposed in this thesis recognises that such a management tool can allow for double-loop learning. When indicators within the framework do not allow for effective results identification, the indicators will have to be modified and come up with possibly new indicators during the evaluation process. The dynamic logical framework will still use the same elements provided in Table 7. Positive results will flow from having a dynamic logical framework and not be a static management tool. If a PBO chooses ad-hoc team meetings; knowledge-sharing is facilitated, thereby supporting learning. For positive PBO learning the meetings will engage both project team members and permanent organisational staff. These processes will allow for learning and recognising that knowledge sharing opportunities with all staff is in itself a dynamic capability, where processes are embedded in the PBO through the utilisation of both internal and external resources.

The logical framework is normally the basis on how monitoring and evaluation for a project can be conducted, outlining the different indicators that the project will use to measure success and where the data will be collected. The logical framework clarifies how the project is expected to work and what it is going to achieve, and helps to ensure that inputs, activities, outputs and purpose fit together. This thesis proposes that the logical framework be used to

include indicators that are not part of the data required by the PBO client, but specifically for PBO learning purposes. Here, instead of the logical framework guiding the organisation for reporting purposes to the client only, it may also be used as a source of building organisational memory. The researcher term these indicators “organisational performance”; once the indicators are formalised and included in the logical framework, chances are high that data collection to support this will be done and become the responsibility of staff to collect this specific data. Such a modification to the logical framework may provide the PBO with an uncommon added advantage and be a source of competitive advantage, clearly showing that indeed M&E elements are part of dynamic capabilities

5.3.4 Evaluation process and results

Evaluations involve identifying and reflecting upon the effects of what has been done and judging their worth. Evaluation findings allow project managers, beneficiaries, partners, and other project stakeholders to learn from experience and improve future interventions, an essential component of gauging project worth. If these results can then be used to improve the existing structures, single-loop learning can be attained.

During the evaluation process, there is need to move beyond taking stock of what the project was tasked to do against the deliverables, as this is the mere “policing” process that M&E has often been associated with. The evaluation process will assess all project procedures and results of the project. In assessing project procedures, the PBO will learn how certain processes were performed, what the mistakes were, and how these were corrected or can be corrected. This initiative will support double-loop learning, where the evaluation has identified and corrected the emerging errors. Furthermore, project evaluation results can then be utilised to inform successor projects, and that allows for triple loop learning by the PBO.

5.3.6 Distribution of M&E reports

Although collecting information should not be an end in itself, M&E reports often have limited readership and do not appear to contribute to improving projects and learning. The purpose of M&E as a tool is to communicate what is happening in the project and, if necessary, deciding how to change it. Often the challenge is to whom the information should be communicated, in particular for use by the PBO. As noted, M&E reports are often viewed as client requirements, such that the evaluation reports are never utilised by the PBO itself. The thesis proposes that evaluation reports by external consultants for example be made accessible to the PBO management, which will help them realise their usefulness in learning about the successes and

failures/mistakes of the project. Further, use of these evaluation reports in successor projects can allow for the PBO to take note of how tasks may have been performed and what may need to be changed, thereby promoting triple-loop learning and taking cognisance of the fact that the projects may be completely different.

5.3.7 External Evaluation

Even among project implementers and donors who have access to the evaluations and the reports, learning from M&E appears difficult, and evidence of learning from an evaluation and implementing recommendations appears scarce. Lessons that can be learned in the M&E cycle are likely to be different for each of the stakeholders engaged (project beneficiaries, client and the PBO) and require some process of assimilation and mutual acknowledgement. For positive results to flow, when commissioning evaluators, focus should not be on obtaining results that are of use to one stakeholder, which is the client mostly; rather, the evaluators' terms of reference should be comprehensive so that they facilitate knowledge creation that may help the PBO. Evaluations are normally funded by the client (funding agent) and restricted to the indicators in the logical framework, making it difficult for the PBO to even have input on how the evaluation should be performed. However, the proposal provided above regarding the inclusion of specific PBO indicators in the logical framework will attempt to ensure that if the external evaluation is done, the organisational performance indicators are evaluated too.

5.3.8 Evaluation Design

To allow for double-loop learning as project indicators are examined, the evaluation process provides an opportunity of getting rid of indicators that may not be of any benefit to the project whilst adding more. Monitoring and Evaluation: As provided in Chapter 3, evaluation results show how the project has performed, with recommendations on how to improve similar current or future projects when the evaluation is done during project implementation. If PBO chooses to use information from evaluation to support learning, it is important to ensure that the evaluation be designed taking this into consideration. The evaluation design will therefore incorporate the assessment of the organisational performance indicators which supports learning for PBO. Recommendations from evaluations are normally used to support current project improvement with no learning across projects, yet this can be an opportunity for learning across projects, allowing for triple-loop learning. Using the recommendations, the project can then be improved and double-loop learning achieved. For a PBO with various projects implemented simultaneously, evaluation results from other projects can actually allow

for the organisation to gain competitive advantage as they learn across projects.

5.3.9 Participatory Monitoring and Evaluation

When M&E is participatory, knowledge creation tends to be high. The proposed framework in this thesis recognises that to allow for competitive advantage, all stakeholders need to be engaged in the process of monitoring and evaluation, and also that the “people” element provided above supports the role they play in supporting OL in PBOs. A participatory approach ensures that learning take place at all stages of the project, as this is not restricted to one department. Integration of M&E in all processes ensures that challenges or successes of the project can be identified throughout the project and support double-loop learning. Any deviation that may have taken place will easily be noticed when every project member is involved. A participatory process is in direct support with how dynamic capabilities are viewed where internal and external resources are utilised to ensure a firm gain competitive advantage in the case of PM&E, external stakeholders and PBO staff.

5.3.10 Communication systems

Communication among different projects implemented concurrently by a PBO is normally minimal or to some extent non-existent, as each project often seems to be working under a very restrictive timeline. With such limited time to execute the project, there is a missed opportunity for projects to communicate what is working or not working that can be adopted by another project. For positive results to follow, a communication systems or an open information systems can be developed where those lessons learnt documents can be deposited and be accessible to all projects. This may be incorporated with communities of practice. Information system to ensure a wider circulation of M&E reports will be equally important; with this, redundant information created becomes relevant for the organisation and support learning. With constraint in time for PBOs, learning through communication systems should be done carefully, such that information that is made available can in actual fact be useful to other projects. Further, CoPs can also be adapted in facilitating learning across projects as a communication systems mechanism. Projects by a PBO will have a different start and end date, making it difficult for CoPs to share lessons learned in one project as the implementation phases could actually be different. However, learning through CoP should not only be to support the existing project currently implemented, but for the PBO as a whole. With that in mind, each CoP may have a permanent staff member participating. Discussions during the CoP can be documented for wide distribution with the PBO management and storage. Topics discussed

during CoP may focus more on processes and be all inclusive to cater for the different implementation phases by projects. CoP do allow for dynamic capabilities in PBOs due to their nature of involving members from different projects.

5.3.11 Reflective Learning

As noted in Chapter 4, the SLAM model shows how learning from feedback can be attained. Feedback from different sources contributes to OL, and this feedback is collected through formal and informal means including feedback from evaluation processes. The following are ways in which the feedback can be obtained;

a) Formal progress meetings: During progress meetings, as team members highlight the status of the project, project team, funders and beneficiaries assess if there are any mistakes or whether results could have been attained differently. A stock take done, identifying the mistakes and corrective measures that may have been put in place or that can be done thereafter. In addition, an interrogation process can follow, where project team will justify why they could have taken a particular approach. These meetings should not be viewed as error-finding processes but to understand that whatever the mistakes identified will be useful in double-loop learning and gaining competitive advantage in the dynamic market.

b) During lessons learnt: Using the approach provided on lesson learning, feedback and feed forward will be achieved.

c) Informal ad-hoc meetings: These may not need to be planned and can be done at anytime. When discussing the project in a non-formal way, project feedback is collected. This is equally important as ideas do not necessarily have to be thought through, but those ideas and issues from the project implementation can then be developed further during formal meetings or in evaluation reports. During the informal discussions, information may be lost, as there is no note-taking done. The project manager or whoever is involved in the discussion may shortly write the discussion points and follow them up through other formal approaches. Documenting the discussions will support creating organisational memory and externalisation of tacit knowledge.

d) Evaluation and Progress reports: Feedback on a project as documented in these reports will also support learning as has been provided above.

e) Individual performance review: Performance review is mostly viewed as an individual performance measure process focusing on how the individual has managed to execute the tasks in their specific job description. This theoretical framework proposes a different approach that

will allow learning from performance review feedback. It is helpful in discussing why a certain individual performed the way they did, identifying the mistakes performed, and what the individual did to rectify these. The discussion will be a lesson learning process done at an individual level different from the lesson learning provided above, which focuses more at a unit level. For positive results to follow, the feedback learning process can be performed on a more frequent basis, for example every month, and not to wait for the normal quarterly or annual reviews.

5.3.12 Staff Rotation in Projects

Finally, a technique used for spreading knowledge and supporting learning is to move people around the organisation and, in this case, around projects. By posting people in another project, experience is transferred as people make contacts with new colleagues and different projects. This process, however, has to take cognisance of the fact that projects may differ, thereby requiring more time for one to understand project procedures of the project one will have been posted to. In order for staff rotation to be effective, this will have to be for staff that has been engaged in CoPs, for example those who are already familiar with certain processes in projects. However, learning through staff rotation in projects may be argued as individual learning with little effect on organisational learning. For this to be effective, learning by rotation may be followed up with other activities discussed above, for example communication with other staff and documenting the lessons learnt to be embedded into the organisation. This will aid in ensuring that it does not end up as just individual learning. The summary of the activities provided in the table below is guided by the MELPS framework.

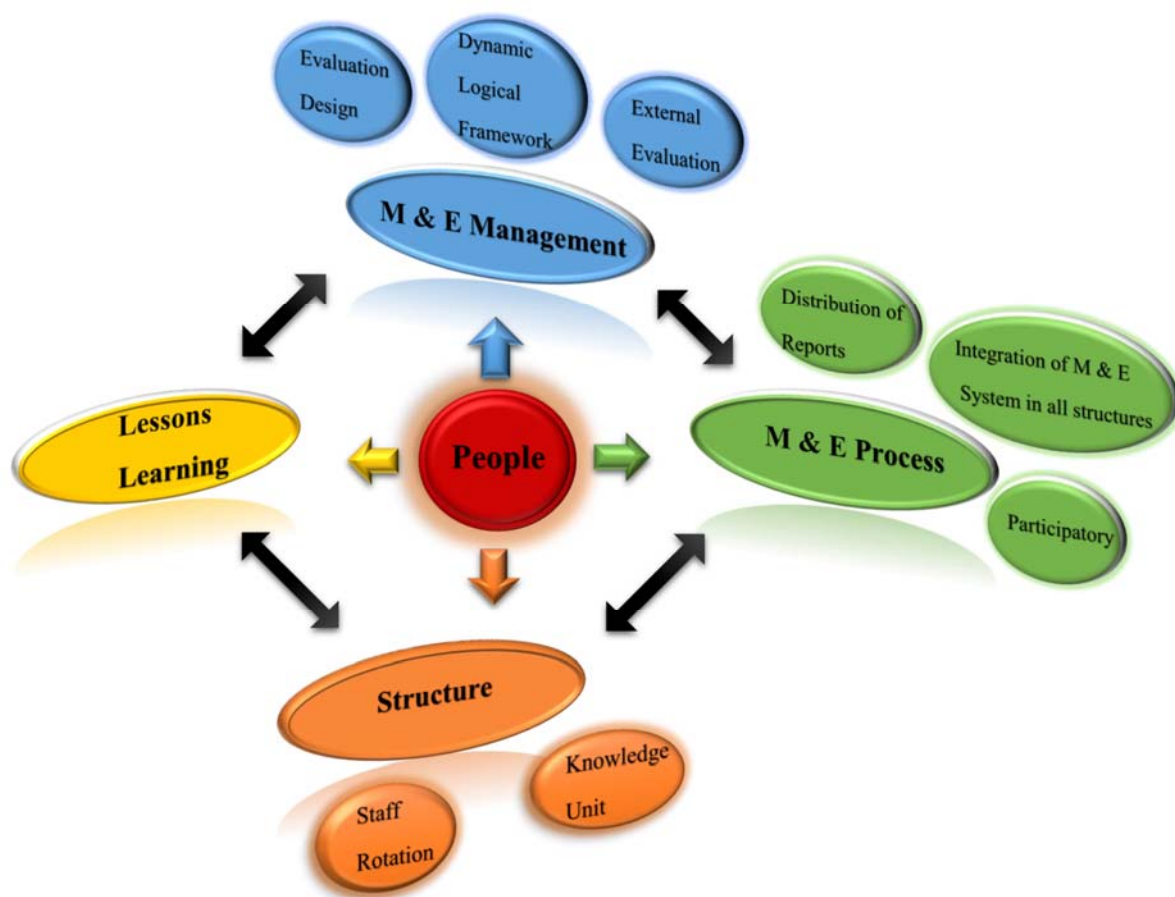
Table 13: Summary of the Proposed Activities

Activity	When	Responsible (People)
Integration of M&E systems in all structures	At Project Design	PBO Management
Dynamic Logical framework	At Project Design	All Stakeholders: Project Staff, Project Funders , PBO Management
Distribution of M&E reports	On Finalising the Report	Project Staff and Management
Engaging external	During Project	PBO Management

evaluators	Implementation	
Data Collection and Analysis to support learning	During Project Implementation	Project Staff and Management
External Evaluation	At mid-term or on project completion	PBO Management and Consultants
Staff Rotation in Projects	During Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management
Communication Processes	During Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management
Reflective Learning (<i>Formal progress meetings; During lessons learnt; Informal adhoc meeting, Individual performance reviews</i>)	During and After Project Implementation	All Stakeholders: Project Staff, Project Funders, PBO Management

5.4 Monitoring and Evaluation, Lesson Learning, People and Structure

Linkage of learning and performance, in this instance performance assessed through M&E, was anticipated 40 years ago by Freire's "Pedagogy of the Oppressed." Often knowledge related to project output is captured through the routines provided in this chapter, but there are several difficulties in acquiring knowledge related to process, for example how the project was conducted, which will be useful in assisting future project processes. The framework provides some processes that seek to acquire such knowledge. Projects and PBOs will therefore require exceptionally efficient knowledge management systems if they want to learn from their experiences. Practical solutions of learning provided in the MELPS framework are not dependent of one another, but for learning to take place in a PBO, all these components ought to exist to some extent.

Figure 6: MELPS Framework

The framework is based on four main components that relate to each other. This thesis groups M&E activities into M&E Management and Process, as the framework proposes deviating M&E from the traditional approach in order to support learning in PBOs. The two M&E structures provided relate to each other though the separation is only to assist the organisation in being able to identify the strategic activities (M&E Management) and operational (M&E Process). The thesis provides MELPS as the essential component to be adopted by PBOs to gain a competitive advantage. The various components that constitute MELPS allow for huge amounts of knowledge creation, which is not only for use in the existing project, and hence sufficient redundancy is realised as the knowledge can be of use beyond the specific project where the knowledge was created. This then supports learning, as provided in the preceding chapter. While organisational learning is not restricted to individuals, it is important to take note of the central role people make, a significant contribution particularly in PBOs where the

team members are only available for a limited time to implement the specific project and disband thereafter.

5.5 Conclusion

Generally OL is seen as a result of certain processes within an organisation, as opposed to itself being a process. This thesis takes the notion of OL as a process where an organisation will never cease to learn and as a process that takes place in everyday life of an organisation. This particular understanding is more relevant to a PBO, as the organisation is able to use the information obtained in one project to support another project within the organisation. Dynamic Capabilities allow for an organisation to be adaptive in a dynamically-changing environment, and this thesis argues that M&E is a dynamic capability that a PBO will require to support for learning. With OL, organisations are believed to be better able to turn it into a more adaptive organisation. Learning in organisations therefore occurs over time, and as for PBOs, they need to then have the courage to apply the lessons they learn and mechanisms to link action with accountability. Learning from experience can simply mean the freedom to repeat the same mistakes.

The framework presented in this chapter brings some possible approaches of PBOs' learning. The approaches may pose some limitations and can be expanded to allow for learning in PBOs. The framework provides a working structure to provide mechanisms for learning in PBOs utilising M&E as a dynamic capability. M&E activities provided in this thesis can be instrumental in reshaping learning in PBOs; however, this can only be made possible if M&E is re-conceptualised beyond the traditional M&E of compliance as the framework attempts to do. The M&E practical solutions provided in the thesis shows how sufficient redundancy can actually be attained, for example when M&E is participatory and in coming up with a dynamic logical framework that includes indicators beyond the existing project including performance level indicators. Traditional M&E is mostly capable of supporting single-loop learning; however, the proposed framework provides practical examples where double-loop learning can be made possible, for example through feedback meetings.

However, to take the theory proposed in this thesis to the next level and to be able to make conclusive recommendations, the theory needs to be operationalized with extensive empirical research that will work towards validating or disconfirmation of the theory. The empirical research on operationalizing and confirming or disconfirming the theory will lead to continuous refinement, development, better application, a clearer and, ultimately, a more practical theory,

for PBOs. It is however important to note that based on this research, PBO learning can somewhat be supported when M&E is radically re-conceptualised, absorbing, among other factors, experiential learning as is provided by lesson learning and all other activities provided in the MELPS framework.

Bibliography

- ADNER R, HELFAT C 2003. Corporate effects and dynamic managerial capabilities. *Strategic Management Journal* 24(10) 1011–1025
- AIKEN M, BRITTON B 1997. The Learning Organization and the Voluntary Sector, in COOK J, et al. *The Learning Organisation in the Public Services*. Aldershot: Gower.
- AMBROSINI V, BOWMAN C, COLLIER N. 2009. What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews* 11(1) 29–49
- ARGOTE L 2012. Organizational learning and knowledge management, in KOZLOWSKI S (ed) *Oxford handbook of organizational psychology*. Oxford: Oxford University Press
- ARGOTE L, INGRAM P, LEVINE JM, MORELAND RL 2000. Knowledge transfer in Organisations: Learning from the experiences of others. *Organizational Behavior and Human Decision Processes* 82 (1) 1–8
- ARGOTE L. 1999. *Organisational Learning: Creating, retaining and transferring knowledge*. Norwell MA: Kluwer
- ARGOTE L. 2011. Organisational Learning Research. Past, Present and Future. *Management Learning* 42(4) 439- 446
- ARGYRIS C, SCHÖN, D 1978. *Organizational learning: A theory of action perspective*, Reading, Mass: Addison Wesley
- ARGYRIS C, SCHÖN, D 1996. *Organizational learning II: Theory, method and practice*. Reading, MA: Addison Wesley.
- ARGYRIS C, PUTNAM, R, MCLAIN SMITH, 1985. *Action science: concepts, methods, and skills for research and intervention*. San Francisco: Jossey-Bass.
- AYAS K, ZENIUK, N. 2001. Project-based learning: Building communities of reflective practitioners. *Management Learning* 32(1): 61-76.
- BARNEY J. 1991. Firm resources and sustained competitive advantage. *Journal of Management* (17): 99–120.
- BARNEY J. 2007. *Gaining and Sustaining Competitive Advantage*, Third Edition. Pearson: Upper Saddle River, NJ
- BARNEY JB. 2001, Is the resource-based “view” a useful perspective for strategic management research? Yes, *Academy of Management Review*, 26, No.1, pp. 1, 41-56

- BARRETO I. 2010. Dynamic capabilities: A review of past research and an agenda for the future. *Journal of Management* 36(1) 256—280
- BECKER M C. 2004. Organizational routines: a review of the literature. *Industrial and Corporate Change* 13(4): 643-677.
- BEHN R. 2003. Why measure performance? Different purposes require different measures. *Public Administration Review* 63: 586 - 606
- BERG E.2000. *Why Aren't Aid Organizations Better Learners?* Discussion Paper. Expert Group on Development Issues: 24 August 2000
- BERKE MF.2001. *Best Practices Lessons Learned (BPLL): A view from the trenches*. PMI Seminars and Symposium Proceedings 2001; 2001 Nov. 1-2001 Nov. 10; AIPM (CDRom). USA: PMI; 2001
- Bloom's Taxonomy of Learning Domains. <http://www.nwlink.com/~donclark/hrd/bloom.html>. (Accessed on 23 July 2015)
- BONTIS N, CROSSAN, M, HULLAND, J. 2002, Managing an organizational learning system by aligning stocks and flows. *Journal of Management Studies* 39 (4): 437-69
- BOURGEOIS L, EISENHARDT K. 1988. Strategic decision processes in high velocity environments: Four cases in the microcomputer industry. *Management Science* 34 816-835
- BRITTON B .2002. *Learning for change, principles and practices of learning organisations*, Swedish mission council 5/2002
- BROWN JS, DUGUID P.1998 Invention, Innovation and Organization .*Organization Science*, September 1998, 1-36.
- BURT R S.2005.*Brokerage and Closure: An Introduction to Social Capital*. New York: Oxford University Press
- BROWN J S, Duguid, P. 1998 'Invention, innovation & organization. *Organization Science*, September 1998: 1-36
- British Overseas NGOs for Development. <http://www.bond.org.uk/aboutus/index.html>) Accessed on 12 December 2014
- BURROWS P. 2004. A rising iPod lifts all boats, *Business Week Online*
- BURT R S.1992. *Structural Holes: The Social Structure of Competition*. Boston. MA: Harvard University Press
- CAMPOS J, COUPAL FP. 1996. *Participatory Evaluation*. Prepared for the UNDP (Draft)

- CAMPOS JE, HELLMAN JS, 2005. *Governance Gone Local: Does decentralization improve accountability, in World Bank (ed), East Asia Decentralizes: Making Local Government Work: Washington D.C: 237-252.*
- CANGELOSI VE, DILL WR. 1965. Organizational Learning: Observations Toward a Theory', *Administrative Science* 10(2): 175-203.
- CANTWELL J. 2014. Revisiting international business theory: A capabilities-based theory of the MNE. *Journal of International Business Studies* 45: 1-7.
- CASEY A. 2005. Enhancing individual and organizational learning. *Management Learning* 36, (2): 131- 47
- CASTANIAS RP, HELFAT C F. 1991. Managerial Resources and rents. *Journal of Management*, 17:155-171
- CASTANIAS RP, HELFAT C F. 2001. The Managerial Rents Model: Theory and Empirical Analysis. *Journal of Management* 27:661-678
- COOK J, Staniforth D, Stewart J. 1997. *The Learning Organisation in the Public Services*. Aldershot: Gower
- COOK S DN, YANOW D. 1993. Culture and Organizational Learning. *Journal of Management Inquiry* (2) 373
- COUSINS JB, EARL LM. 1992. The Case for Participatory Evaluation. *Education Evaluation and Policy Analysis* 14(4): 397–418.
- CROSSAN MM, LANE HW, WHITE R E. 1999. An organizational learning framework: From intuition to institution. *Academy of Management Review* 24(3): 522-37
- CUNDILL G, FABRICIUS C. 2009. Monitoring in adaptive co-management: Toward a learning based approach. *Journal of environmental management*, 90(11): 3205-11
- CYERT R M., MARCH J G. 1963. *A behavioural theory of the firm*. Englewood Cliffs, NJ: Prentice Hall
- DAUDELIN M W. 1996. Learning from experience through reflection. *Organizational Dynamics* 24(3): 3648
- DAVIES A , BRADY T. 2000. Organisational capabilities and learning in complex product systems: towards repeatable solutions. *Research Policy* 29 (7-8) 931-953
- DE CAROLIS M, CORVELLO V. 2006. Multiple competences in distributed Communities of Practice: the case of a Community of financial advisors” in FEHÉR P. (eds) *Proceedings of 7th European Conference on Knowledge Management (ECKM)*, Budapest, Hungary, 4-5 September 2006: 116-125

- DE FILLIPPI R J, ARTHUR M B. 1998. Paradox in project-based enterprise: The case of film making. *California Management Review* 40(2) 125-139
- DENRELL J, MARCH J G. 2001. Adaptation as information restriction: The hot stove effect. *Organization Science* 12 (5):523–538.
- DI STEFANO G, PETERAF MA, VERONA G. 2010. Dynamic capabilities deconstructed: a bibliographic investigation into the origins, development and future directions of the research domain. *Industrial and Corporate Change* 19(4): 1187-1204.
- DIBELLA AJ. 2001. *Learning Practices: Assessment and Action for Organizational Improvement*. Upper Saddle River, NJ: Prentice Hall.
- EASTERBY-SMITH M, LYLES MA. 2003. *Introduction: Watersheds of organisational learning and knowledge management in The Blackwell Handbook of Organisational Learning and Knowledge Management*. (Eds.), Blackwell Publications, MA
- EASTERBY-SMITH M, CROSSAN MM, NICOLINI, D. 2000. Organizational learning: Debates past, present and future. *Journal of Management Science* 37(6) 783-796
- EASTERBY-SMITH M, LYLES MA, PETERAF, MA. 2009. Dynamic capabilities : Current Debates and future directions. *British Journal of Management* 20
- EDMONDSON AC. 2003. The Local and Variegated Nature of Learning in Organisations: A Group-Level Perspective. *Organization Science* 13(2): 128-146.
- EISENHARDT KM. 1989. Building Theories From Case Study Research. *Academy of Management. The Academy of Management Review* Oct 1989 (14) 4: 532
- EISENHARDT KM, MARTIN JA. 2000. Dynamic capabilities: What are they? *Strategic Management Journal* (21) 10/11: 1105-1121
- ELKJAER B. 2003. Organizational Learning: ‘The Third Way’. Organizational Learning and Knowledge *5th International Conference*. June, 2003
- ELLIOT B. 2000. Why Aren’t Aid Organisations Better Learners?; *Expert Group on Development Issues*. August 2000.
- ERIKSSON PE. 2013. “Exploration and Exploitation in Project-Based Organisations: Development and Diffusion of Knowledge at Different Organizational Levels in Construction Companies.” *International Journal of Project Management* 31 (3): 333–341.
- ERWIN D. 2010. Trying to become a different type of company: Dynamic Capability at St Corona. *Strategic Management Journal* 32: 1-31.

- ESTRELLAM J, BLAUERT, CAMPILAN D, GAVENTA J, GONSALVES J, GUIJT I, JOHNSON D, RICAFORT R. 2000. *Learning from Change: Issues and experiences in participatory monitoring and evaluation*, London, Intermediate Technology Publishers and International Development Research Centre.
- ESTRELLA M, GAVENTA J. 1998. Who counts reality? Participatory monitoring and evaluation: A literature review (*IDS Working Paper 70*). Brighton: IDS.
- FAILING L, GREGORY R. 2003. Ten common mistakes in designing biodiversity indicators for forest policy. *Journal of Environmental Management*. 68:121 - 132.
- FELDMAN MS, PENTLAN BT. 2003. Reconceptualising organisational routines as a source of flexibility and change. *Administrative Science Quarterly* (48) 94-118
- FEHÉR P. 2006 (eds) *Proceedings of 7th European Conference on Knowledge Management (ECKM)*, Budapest, Hungary, 4-5 September 2006: 116-125
- FIOL MC, LYLES MA. 1985. Organizational learning. *Academy of Management Review*. 10(4):803–813.
- FLOOD RL, ROMM NRA. 1996. *Diversity Management: Triple Loop Learning*. Wiley, London, UK.
- FLOYD S W, LANE P.J. 2000. Strategizing Throughout the Organization: Managing Role Conflict in Strategic Renewal. *Academy of Management Review* (25) 154-177
- FAO. 2015. <http://www.fao.org/wairdocs/x5405e/x5405e0p.htm>. Accessed on 7 April 2015
- FRIEDLANDER F. 1983. *Patterns of individual and organizational learning*. In *Srivastava, Suresh & Associates (eds.), The executive mind, New insights on managerial thought and action* :192–220. San Francisco, CA: Jossey Bass.
- GARRETY K, ROBERTSON PL, BADHAM R. 2004. Integrating Communities of Practice in Technology Development Projects. *International Journal of Project Management* 22(5): 351-358.
- GERSICK CJG. 1994. Pacing Strategic Change: The Case of a New Venture. *The Academy of Management Journal* 37 (1) 9-45
- GELETKANYCZ MA, BOYD B K, FINKELSTEIN S. 2001. The strategic value of CEO external directorate networks: Implications for CEO compensation. *Strategic Management Journal*, 22: 889-898
- GOODMAN JS, WOOD R E, HENDRICKX M. 2004. Feedback specificity, exploration and learning. *Journal of Applied Psychology* 89 (2): 248–262.
- GRANT R. 1996. 'Prospering in dynamically competitive Environments: Organizational capability as knowledge integration', *Organization Science* 7 (4): 375-387

- GUIJT I. 2006. *Triggering adaptation in Adaptive Collaborative Management - Learning through collaborative monitoring*, CIFOR-in press.
- GUIJT I, BERDEGUE J, ESCOBAR G, RAMIREZ E, KEITAANRANTA J. 2005. *Institutionalizing Learning in Rural Poverty Alleviation Initiatives*. Santiago, Chile, RIMISP.
- GUIJT I, GAVENTA J. 1998. *Participatory Monitoring and Evaluation: Learning from Change*. Brighton, IDS. *IDS Policy Briefing 12*.
- GUIJT I, WOODHILL J. 2004. *Lessons Learned as the Experiential Knowledge Base in Development Organisations: Critical Reflections. Paper presented at the European Evaluation Society Sixth International Conference, Berlin 2004* Theme: Putting Knowledge Management to Work.
- GUIJT I. 2008. *Seeking Surprise: Rethinking monitoring for collective learning in rural resource management*. Wageningen, The Netherlands: Wageningen University,. Retrieved from <http://edepot.wur.nl/139860>
- HARRIS D, KAEFER F, SALCHENBERGER L. 2009. *A Framework for Organizational Learning and Knowledge Alignment between Business and Information Technology. Organization Science Winter Conference XV Steamboat Springs Colorado*
- HEDBERG B. 1981. *How Organisations learn and unlearn?* In P.C. Nystrom & W.H.Starback (eds). *Handbook of organizational design*: 8–27..London: Oxford University Press.
- HELFAT C.1997. *Know-how and asset complementarity and dynamic capability accumulation: the case of R&D. Strategic Management Journal 18: 339-360.*
- HELFAT C, SIDNEY G, WINTER. 2011. *Untangling Dynamic and Operational Capabilities: Strategy for the (N)ever- Changing World. Strategic Management Journal Volume 32, pp. 1243-1250*
- HELFAT C, FINKELSTEIN S, MITCHELL W, PETERAF M, SINGH H, TEECE D J, WINTER S. 2007. *Dynamic Capabilities: Understanding Strategic Change in Organisations*. Blackwell Publishing, Malden
- HELFAT C, PETERAF MA.2009. *Understanding dynamic capabilities: Progress along a developmental path. Strategic Organisations 7(1) 91-102*
- HELFAT C ,WINTER SG. 2011. *Untangling Dynamic and Operational Capabilities: Strategy for the (N)ever- Changing World. Strategic Management Journal (32) 1243-1250(N)ever- Changing World. Strategic Management Journal (32) 1243-1250*
- HIROTAKA T, SHIBATA T. 2006. *Japan, Moving Toward a More Advanced Knowledge Economy: Volume 2. Advanced Knowledge Creating Companies*. Washington, DC: World Bank.

- HOBDAY M 2000. The project-based organisation: an ideal form for managing complex products and systems. *Research Policy* 29,871-893
- HOOPEs D ,JOHNSON D. 2003. Special Issue: Why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24: 889-902
- HUBER GP. 1991. *Organizational Learning: the contributing processes and the literatures*.
- HYVARINEN J,WALL E.2014. Tips for global activists about running sound Organisations. <http://www.gdrc.org/ngo/global-ngos.html> (Accessed on 12 December 2014).
- IFAD. 2002. *Managing for Impact in Rural Development: A Practical Guide for M&E*
- INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES. 2011. Project/programme monitoring and evaluation (M&E) guide. IFRC.Geneva.
- ITAMI H, ROEHL TW. 1987. *Mobilizing invisible assets*. Cambridge, MA: Harvard University Press.
- JANSEN VAN RENSBURG MS. 2014. Using organisational memory in evaluations. *African Evaluation Journal* 2(1). Art. #75, 9 pages.
- KANE AA, ARGOTE L, LEVINE JM. 2005. Knowledge transfer between groups via personnel rotation: Effects of social identity and knowledge quality. *Organizational Behavior and Human Decision Processes*. 96: 56–71.
- KASVI JJJ; VARTIAINEN M, HAILIKARI M. 2003.Managing knowledge and knowledge competences in projects and project Organisations. *International Journal of Project Management*, 21 (8): 571–582.
- KAUFFMAN S. 1995. *At home in the universe*. NY: Oxford.
- KEEGAN A, TURNER RJ, CRAWFORD L. 2000, *Learning By Experience In The Project-Based Organization*. Erasmus Research Institute of Management.
- KERZNER H.2000. *Applied Project Management: Best Practices on Implementation*, New York: Wiley
- KIM J, MINER AS. 2009. Organizational learning from extreme performance experience: The impact of success and recovery experience. *Organization Science*. 20 (6): 958–978.
- KNIFER K, KUMP B, WESSEL D, CRESS U.2013. *Reflection as a Catalyst for Organisational Learning*
- KNOWLES MS, HOLTON EF,SWANSON RA. 1998. *The Adult Learner*,5th ed, Houston, TX: Gulf Publishing Company.

- KORTEN D. 1984. *People-centered development: contributions toward theory and planning frameworks*. Kumarian Press: West Hartford, Conn.
- KORTEN D, KLAUSS R 1984. Rural Development Programming: The Learning Process Approach in KORTEN D and KLAUSS R (eds) *People-Centered Development: Contributions toward Theory and Planning Frameworks*. West Hartford, CT, USA: Kumarian Press.
- KRISTIN K , BARBARA K, DANIEL W, ULRIKE C. 2013. Reflection as a catalyst for organisational learning. *Studies in Continuing Education*. 35(1): 30-48, DOI: 10.1080/0158037X.2012.683780
- LANDAETA RE. 2008. Evaluating Benefits and Challenges of Knowledge Transfer Across Projects. *Engineering Management Journal*, 20 (1), 29-38
- LAVE J, WENGER E. 1991. *Situated Learning: Legitimate Peripheral Participation*, Cambridge University Press.
- LECLER CJ, KINGHORN J. 2014. Dynamic capabilities, expert and entrepreneurial learning. *South African Journal Business Management* 45(2):65-81.
- LECLER CJ.2013. *Organisational Learning and Dynamic Capabilities: A Case Study*. University of Pretoria.
- LEI D, HITT MA, BETTIS R. 1996. Dynamic core competencies through meta-learning and strategic context. *Journal Business Management* 22(4):549– 69.
- LEI D, SLOCUM JW, PITTS RA. 1999. Designing Organisations for competitive advantage: the power of unlearning and learning. *Organizational Dynamics*; 27(3): 24–38.
- LEONARD-BARTON D. 1992. Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal* 13, Special Issue: Strategy Process: Managing Corporate Self-Renewal. 111-125
- LEVITT B, MARCH JG. 1988. Organizational Learning. *Annual Review of Sociology* 14: 319-340
- LEVINTHAL DA, MARCH JG. 1993. The myopia of learning. *Strategic Management Journal*, 14(S2): 95–112
- LINDKVIST L, SODERLUND J, TELL F. 1998. Managing product development projects: On the significance of fountains and deadlines. *Organization Studies* 19(6): 931-951.
- LIPPMAN S, RUMELT R. 1982. Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *Bell Journal of Economics*, 13:418-438

- MADSEN P, DESAI V. 2010. Failing to learn? The effects of failure and success on organizational learning in the global orbital launch vehicle industry. *Academy of Management Journal* 53 (3): 451–476.
- MARCH JG, CYERT RM. 1963. *A Behavioural Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.
- MARCH JG, OLSEN JP. 1976. EDS. *Ambiguity and Choice in Organisations*. Bergen: Universitetsforlaget.
- MARCH JG. 1991. Exploration and exploitation in organizational learning. *Organization Science* 2: 71–87.
- MARGARET P, GIADA DI S, GIANMARIO V. 2013. The Elephant in the Room of Dynamic Capabilities: Bringing Two Diverging Conversations Together. *Strategic Management Journal* 34:1389-1410.
- MARGOLUIS R, SALAFSKY N. 1998. *Measures of Success: Designing, managing, and monitoring conservation and development projects*. Washington, D.C: Island Press.
- MARSDEN D, OAKLEY P, PRATT B. 1994 *Measuring the Process: Guidelines for Evaluating Social Development, UK: INTRAC*.
- McDERMOTT R. 1999. Learning across teams: How to build communities of practice in team Organisations. *Knowledge Management Review* 8, 32–36
- MCSHANE T, WELLS M. 2004. *Getting biodiversity projects to work: Towards more effective conservation and development*. New York: Columbia University Press.
- MEFFE G, NIELSEN L, KNIGHT R, SCHENBORN D. 2002. *Ecosystem management: Adaptive, community-based conservation*. Washington, DC: Island Press.
- MEREDITH JR, MANTEL SJ. 1995. *Project management—a managerial approach*. New York: John Wiley & Sons.
- MIGLIARESE P, VERTERAMO S. 2005. Knowledge Creation and Sharing in a Project Team: An Organizational Analysis Based on the Concept of Organizational Relation. *The Electronic Journal of Knowledge Management* 3 (2):97-106.
- MORGAN G. 1986. *Images of organizations*. Sage Publications, Beverly Hills, California.
- MOYNIHAN D. 2005. Goal based learning and the future of performance management. *Public Administration Review* 65: 203 - 216.
- NARAYAN-PARKER D. 1993. Participatory evaluation: Tools for managing change in water and sanitation (*World Bank Technical Paper 207*). Washington DC: World Bank.

- NELSON R, WINTER S. 1982. *An Evolutionary Theory of Economic Change*. Harvard University Press, Cambridge, MA
- NEWELL S, BRESNEN M, EDELMAN LH, SCARBROUGH SJ. 2006. Sharing knowledge across projects: Limits to ICT-led project review practices. *Management Learning* 37(2) 167-185.
- NONAKA I. 1994. A dynamic theory of organizational knowledge creation. *Organization Science*, 2(1): 88-115.
- NONAKA I, TAKEUCHI H. 1995. *The knowledge-creating company: how Japanese companies create the dynamics of innovation*. Oxford University Press: 80-83.
- NONAKA I, TOYAMA R, NAGATA A. 2000. A firm as a knowledge creating entity: a new perspective on the theory of the firm. *Industrial and Corporate Change* 9(1), 1–20.
- NONAKA I, TOYAMA R 2002. A firm as a dialectic being: toward the dynamic theory of the firm. *Industrial and Corporate Change* 11, 995–1109.
- NONAKA I, TOYAMA R 2003. The knowledge-creating theory revisited: knowledge creation as a synthesizing process. *Knowledge Management Research & Practice* (1): 2–10
- OAKLEY P, PRATT B. 1994. *Measuring the Process: Guidelines for Evaluating Social Development*, Intrac Publications, Oxford.
- OSWICK C, ANTHONY P, KEENOY T, MANGHAM I, GRANT D. 2000. A dialogic analysis of organizational learning. *Journal of Management Studies* 37(6):887-901.
- PATTON MQ. 2002. *Qualitative Research and Evaluation Methods*. Sage Publications, London.
- PEDLE M, BURGOYNE J, BOYDELL T. 1999. *The Learning Company Toolkit*. Peter Honey Publications
- PENTLAND BT, FELDMAN MS, BECKER MC, LIU P. 2012. Dynamics of organizational routines: A generative model. *Journal of Management Studies*, 49(8):1484-1508
- PERROW C. 1999. Organizing to Reduce the Vulnerabilities of Complexity. *Journal of Contingencies and Crisis Management*. 7 (3) September: 150-155.
- PETERAF MA, BERGEN ME. 2003. Scanning Dynamic Competitive Landscapes: A Market-Based and Resource-Based Framework. *Strategic Management Journal*, 24: 1027-1041
- PETERAF M, Di STEFANO G, GIANMARIO V. 2013. *The Elephant in the Room of Dynamic Capabilities*
- PORTER ME. 1991. Towards a Dynamic Theory of Strategy. *Strategic Management Journal*

- PRAHALAD CK, HAMEL G. 1990. *The Core Competence of the Corporation*. President and Fellows of Harvard College
- PRUSAK L. 1997. *Knowledge in Organisations*. Butterworth-Heinemann, Oxford.
- RAINES L. 2009. *Looking Both Ways Through The Windows Of Senge's Five Disciplines*
- RICK S, WEBER RA. 2010. Meaningful learning and transfer of learning in games played repeatedly without feedback. *Games and Economic Behavior*, 68 , 716–730.
- RIDDELL RC. 2007. *Does Foreign Aid Really Work?*. Oxford: Oxford University Press.
- RODRIGO G, LESSARD D, SINGH A. 2014. Strategic partnering in oil and gas: A capabilities perspective. *Energy Strategy Reviews* 3:21-29.
- ROEHL I. 1987. *Mobilizing invisible assets in Search Works Mobilizing invisible assets*. Harvard University Press, Cambridge,
- ROMME AGL, ZOLLO M, BERENDS P. 2010. Dynamic capabilities, deliberate learning and environmental dynamism: a simulation model, *Industrial and Corporate Change* 19 (4) :1271–1299
- ROPER L, PETTIT, J, EADE D. 2003. Development and the Learning Organisation: *A Development in Practice Reader*. Oxfam GB, Oxford.
- ROSENBLOOM RS. 2000. Leadership, Capabilities, and Technological Change: The Transformation of NCR in the Electronic Era. *Strategic Management Journal Special Issue: The Evolution of Firm Capabilities* .21(10-11): 1083–1103
- RUBIA EG, LAZARO AA, DIAH K, NURHASYIM LH, NORTON GA, AYAS K. 1996. Professional project management: a shift towards learning and a knowledge creating structure. *International Journal of Project Management* 14 (3) 131-136
- RUGH J. 1992. *Self Evaluation: Ideas for Participatory Evaluation of Rural Community Development Projects*. Oklahoma City, Oklahoma: World Neighbors, Inc.
- RUMELT PR. 2011. *Good Strategy Bad Strategy: The Difference and Why It Matters*. Crown Business.
- SALAFSKY N, MARGOLUIS R. 2003. What Conservation Can Learn from Other Fields about Monitoring and Evaluation. *BioScience*. 53 (2): 120-122. University of California Press
- SAYER, J, CAMPBELL B, PETHERAM L, ALDRICH M, PEREZ R, ENDAMANA D. 2007. Assessing environment and development outcomes in conservation landscapes. *Biodiversity Conservation*. 16 :2677 - 2694.
- SCARBROUGH H, SWAN J, LAURENT S, BRESNEN M, EDELMAN L, NEWELL S. 2004. Project-Based Learning and the Role of Learning Boundaries. *Organization Studies: Sage Publications Inc*. 25(9):1579-1600.

- SENGE P.1990. *The Fifth Discipline: The Art and Practice of the Learning Organisation*. New York: Doubleday/Currency.
- SHAPIRO J. 1996. *Evaluation: Judgement day or management tool?* Durban: Olive Publications.
- SHUEN A, FEILER PF, TEECE DJ. 2014. *Dynamic capabilities in the upstream oil and gas sector: Managing next generation competition*
- SHRIVASTAVA P. 1983. A Typology of Organizational Learning Systems. *Journal of Management Studies* 20(1): 7-28.
- SIMON DG,HITT MA. 2003. 'Managing Resources: Linking Unique Resources, Management, and Wealth Creation in Family Firms', *Entrepreneurship Theory and Practice* 27: 339-58
- SITKIN SB. 1992. Learning through failure: The strategy of small losses. *Research on Organizational Behavior* 14: 231–266.
- SNELL R, MAN-KUEN CA. 1998. The learning organisation: learning and empowerment for whom? *Management Learning*. 29 (3):337–364.
- SOCIETY FOR ORGANISATIONAL LEARNING. 2009. 'History – the evolution of SOL' www.solonline.org, Accessed on 10 December 2014.
- SOMMER M. 1993. Whose Value Matter? Experiences and Lessons from a Self Evaluation in PIDOW project. Karnataka, India. May- November, 1991, *Swiss Development Cooperation. Bangalore Field Office*
- SOREN E, KELLAN L. 2005. *Modes of Organizational Learning*. Kollner Group,
- STATA R. 1989. Organizational learning: the key to management innovation. *Sloan Management Review*, 30(Spring): 63–74.
- STEIN J. 1989. Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior. *Quarterly Journal of Economics* 104 (Dec.): 655-669.
- STEM C, MARGOLUIS R, SALAFSKY N, BROWN M. 2005. Monitoring and evaluation in conservation: a review of trends and approaches. *Conservation Biology*, 19: 295 - 309.
- STERMAN JD. 1994. Learning in and About Complex Systems. *System Dynamics Review* 10(2-3): 291-303.
- SUCHMAN L.1987. *Plans and Situated Actions: The problem of human-machine communications*. Xerox Corporation. California
- SWAN J, SCARBROUGH H, NEWELL S. 2010. Why Don't (or Do) Organisations Learn from Projects? *Management Learning* 41 (3): 325–344.

- TEECE DJ.1982, “Toward an Economic Theory of the Multiproduct Firm”, *Journal of Economic Behavior and Organization* 3: 39-63
- TEECE DJ. 1986. Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. *Research Policy* 15: 285–305
- TEECE DJ. 2006. Reflections on profiting from innovation. *Research Policy* 35(8): 1131–1146
- TEECE DJ. 2007. Explicating Dynamic Capabilities: The nature and microfoundations of (Sustainable) Enterprise Performance. *Strategic Management Journal* 28: 1319-1350.
- TEECE DJ. 2009. *Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth*. Oxford: Oxford University Press.
- TEECE DJ. 2012. Dynamic Capabilities: Routines versus Entrepreneurial Action. *Journal of Management Studies* 49(8):1396-1401.
- TEECE DJ. 2014. A Dynamic Capabilities –Based Entrepreneurial Theory of the Multinational Enterprise. *Journal of International Business Studies* 45: 8-37.
- TEECE DJ, PISANO G.1994. The Dynamic Capabilities of Firms: *An Introduction*. *Industrial and Corporate Change* 3: 537-556.
- TEECE DJ, PISANO G, SHUEN A,1997. Dynamic capabilities and strategic management, *Strategic Management Journal* 18(7): 509–533.
- UNGSON GR, WALSH JP. 1991. Organisational Memory *Academy of Management. The Academy of Management Review* 16 (1): 57-91
- UNITED NATIONS DEVELOPMENT PROGRAMME. 2009. *Handbook On Planning, Monitoring And Evaluating For Development Results*. UNDP. NewYork
- ULRICH D, LAKE D. 1991. Organizational capability: creating competitive advantage. *The Executive*, 5(1),77-92.
- UOTILA J, MAULA M, KEIL T, ZAHRA SA. 2009. Exploration, Exploitation, and Financial Performance: Analysis of S&P 500 Corporations. *Strategic Management Journal* 30 (2): 221–231.
- VERTERAMO S,DE CAROLIS M. 2009. Balancing Learning and Efficiency Crossing Practices and Projects in Project-based Organisations: Organisational Issues. The Case History of “Practice Groups” in a Consulting Firm. *The Electronic Journal of Knowledge Management* 7(1): 179 – 190.
- WAGLÉ S, SHAH P. 2003. Participation in public expenditure systems. note no. 69. Washington, D.C., World Bank. *Social development notes*.

- WAGLÉ S, SINGH J, SHAH P. 2004. Citizen report card surveys- a note on the concept and methodology. Note no. 91. Washington D.C., World Bank. *Social development notes- participation & civic engagement*.
- WALSH JP , UNGSON GR. 1991. Organisational Memory. *Academy of Management Review*. 16(1): 57-91.
- WANG C, AHMED P. 2003. Organizational learning: a critical review, *The Learning Organization* 10(1):8-17.
- WEBER RA, RICK S.2010. *Meaningful Learning and transfer of learning in games played repeatedly without feedback*. *Games and Economic Behaviour*, 68(2): 716-730.
- WEICK K E. 1987. Organizational culture as a source of high reliability. *California Management Review*, 29 (2), 112-126.
- WILLIAM B, RADYA E, MORIN R. 2001. Participatory Monitoring, Evaluation and Reporting: An Organisational Development Perspective for South African NGOs .Pact. South Africa
- WILLIAMS, T. 2008.How do organisations learn lessons from Projects. And Do they? *IEEE Transactions on Engineering Management* 55 (1) <http://www.nwlink.com/~donclark/hrd/bloom.html> (Accessed on 23 July 2015).
- WINTER SG. 2000. The satisficing principle in capability learning. *Strategic Management Journal, Special Issue* 21(10–11): 981–996.
- WINTER SG. 2003. Understanding dynamic capabilities. *Strategic Management Journal* 24: 991-995
- WOODHILL J. 2006, M&E as learning: Rethinking the dominant paradigm, in World Association Of Soil And Water Conservation (ed), *Monitoring and Evaluation of Soil Conservation and Watershed Development*.
- WOODHILL J, ROBINS L. 1998. Participatory Evaluation for Landcare and Catchment Groups: A *Guide for Facilitators*. Australia, Greening Australia
- WORLDBANK.2004. *Monitoring and Evaluation:Some Tools,Methods and Approaches*. Washington.D.C.,WorldBank.
- WORLD BANK GUIDE BOOK 2005. *Action for Social Advancement. Integrating learning in the monitoring and evaluation of CDD projects in the World Bank* Washington DC:World Bank
- WORLD BANK .Poverty and Social Impact Analysis <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDE>

[VELOPMENT/EXTPCENG/0contentMDK:20509352~menuPK:menuPK:1278203~pagePK:148956~piPK:216618~theSitePK:410306,00.html](#)

(Accessed on 19 March 2015)

ZOLLO M, WINTER, SG. 2002. Deliberate learning and the evolution of dynamic capabilities.
Organization Science 31 (3):39-51