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Enabling User Understanding Of Business Process Topography To Improve Organisational Learning

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ENABLING USER UNDERSTANDING OF BUSINESS PROCESS TOPOGRAPHY TO IMPROVE ORGANISATIONAL LEARNING

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Abstract

In this paper we propose a new approach to organisational learning through understanding of business processes. Various factors that categorise the fundamental nature of a learning organisation exist in literature. However, these factors are often ambiguous or lacking in coherence. This paper proposes frameworks that provide a context for which these factors can evaluated as well as the means by which business processes can learned by an organisation through the judicious use of visual modelling techniques.

Keywords: Business process, Organisational Learning, Framework.

1. Introduction

Ultimately, the aim of a business process is to deliver value for customers. To be continually competitive and innovative, it is important for an organisation to learn the effects of employee's everyday tasks on its processes and vision. This paper proposes a framework to foster organisational learning through a combination of visual modeling techniques. The paper also proposes a holistic framework to aid in evaluating the learning status of the organisation. The frameworks were derived and based on a review of literature in the Organisational learning, Business process and Systematic problem solving domain. An initial study which involved interviews and observations at Excel Education was carried out.

Excel Education is an SME offering short training courses to companies and individuals. It has over one hundred members of staff, located in three branches in the United Kingdom. The company also offers Diploma courses in the UK and Information Technology courses through its partner organisations. Currently, its operations are principally defined by vertical departments rather than well defined processes. This has created an environment where each department functions on its own and without a thorough understanding of the full implications of how a task in one department contributes to the company wide vision, and its effects on other tasks in other departments. For example, the Accounts Department at Excel Education decided to receive payments from customers before services were rendered. This was done without the knowledge of other functional departments within the company. It resulted in a loss of customers, as well as creating strain in relationships between departments. The Accounts department had failed to understand how a change in their operations was going to impact on the company's ability, as a whole, to bring in and retain business.

Section 2.1 reviews relevant literature in the Business Process domain. Section 2.2 reviews literature on Organisational learning. Sections 3 describes the proposed frameworks.

In order to understand how organisational learning can be acheived through business process knowledge, it was important to review the body of knowledge around the business process domain and how successful organisations learn from their processes. This paper concludes that to stay ahead, it's not enough for organisations to run an efficient business process. They need to be more efficient at learning from them, because a company's business processes could be replicated by competition. Organisations have to learn from their process, and apply what has been learnt. Not only that, they need to do this more rapidly than competition.

2 Review of Literature

2.1 Business Process

This section provides insight into the business process domain by reviewing relevant literature on the subject mater. It provides a basis for which evaluations of the company under study were carried out and the necessary tools involved in the process.

A business process is simply how an organisation does its work- the set of activities it pursues to accomplish a particular objective for a particular customer, either internal or external (Davenport, 2005). This definition takes a look at business processes solely in terms of the interconnected series of tasks carried out to deliver value, and ignores the underlying social factors that influence its outcome. Laudon and Laudon (2007) has a more encompassing view , and defines a business process as the set of logically related tasks and behaviours that organisations develop over time to produce specific business results and the unique manner in which these activities are organised and coordinated. Both definitions agree on one thing, which is that a business process should have an outcome, which can be evaluated, such as delivering value for the customer. Hence we can draw the conclusion that a company's business process can be a source of competitive advantage. The primary importance of the business process architecture is how it directs the user to focus on value creation (Makay et al, 2008). Form influences function - that is, process design determines performance (Hammer, 2007). The following subsection addresses the issue of how to maximise value from a business process.

2.1.1 Business process Re-engineering

In the 1970s and 1980s, companies improved their processes with total quality management. In the 1990s, they attempted to radically advance them through business process re-engineering (Davenport, 2005). Laudon and Laudon (2007) states that Business reengineering organises work flows, combining steps to cut waste and eliminating repetitive and paper intensive tasks. It requires a new vision of how the whole process is to be organised. Companies can cut cost and create new avenues to deliver value to customers by engaging in re-engineering exercises. MacDonald (2007) proposes that successful innovation in these processes can lead to greater efficiency, improved

quality and service, save time, create or enhance differentiation, and thus add value to customers.

One of the most important decisions a firm can make is not deciding how to use information systems to improve business processes but rather which business process needs improvement (Laudon and Laudon, 2007). No longer do executives see their organisations as sets of discrete units with well defined boundaries. Instead, they see them as flexible groupings of intertwined work and information flows that cut horizontally across the business, ending at points of contact with customers (Hammer and Stanton, 1996)

Hammer (2007) states that in virtually every industry, companies of all sizes have achieved extraordinary improvements in cost, quality, speed, profitability, and other key areas by focusing on, measuring, and redesigning their customer-facing and internal processes. However, the majority of re-engineering efforts result in failure. Hall et al (1993) notes that in many companies, re-engineering has not only been a great success but also a great failure. This is further emphasised in a statistic by Strebel (1996) detailing that leading practitioners of radical corporate re-engineering, report that success rates in Fortune 1,000 companies are well below 50%, some say as low as 20%. Hammer (2007) provides insight into the reasons for this failure; this includes how a company views the actual process of re-engineering itself. And states that, designing new business processes involves more than re-arranging work flows - who does what task, in what location, and what sequence.

Some of the other reasons for failure are he responsibility of the executives within the company. Senior executives sometimes encourage members to create a cross- functional process but then prevent them from altering the company's performance measurement system appropriately. Majchrzak and Wang (1996) states that they assume that simply changing their organisational structures from functional units into process complete departments will cause people to shed their functional mind sets and will forge them instantly into a team intent on achieving common goals .Sometimes, even when the

restructuring has been done, the power in most companies still resides in vertical units-and those fiefdoms still jealously guard their turf, their people and resources (Hammer and Stanton, 1999).

If carried out appropriately, business process re-engineering has the potential to provide immense value; enough businesses have successfully re-engineered their processes to provide a rule of thumb for others (Hammer, 1990). The process must be broadly defined in terms of cost or customer value and fundamentally change six crucial organisational elements: roles and responsibilities, measurements and incentives, organisational structure, information technology, shared values, and skills (Hall et al, 1993). Hammer (1990) suggests that companies must define jobs more broadly, and enable decision making by front line personnel, redirect reward systems to focus on processes as well as outcomes, re-define roles and responsibilities so managers oversee processes instead of activities, develop people, and re-shape the organisational culture.

In order to analyse a business process for re-engineering, it is important to have a clear visual model of the existing processes. The next section provides an overview on the concept of business modelling.

2.1.2 Business modelling

Sometimes called business process management, refers to the design and execution of business processes (Havey, 2005). Gibbs (2006) proposes that business modeling is the process of discovering and documenting the processes an organisation uses to achieve a certain goal or objective.

Looking at the definitions of business process modeling and that of re-engineering, it is evident that business modeling aims to document the organisations process “as is”. That is the way the process works. The benefits of this include: Formalising existing process and spot needed improvements, facilitate automated, efficient process flow, increase productivity and decrease head count, allow people to solve the hard problems, simplify regulations and compliance issues (Havey, 2005). The key is to do this completely from

the business perspective, without regard for the fact that you may be automating some or all of this process with a software system (Gibbs, 2006).

To establish the effects of business process knowledge on an organisation, an understanding of the body of knowledge surrounding organisational learning is essential. The next section provides a review on the topic.

2.2 Organisational learning

This section reviews existing literature regarding organisational learning. It does not attempt to offer a critical review but rather an overview of the subject matter.

2.2.1 Learning Organisation

The concept of organisational learning did not emerge until the 1980s (Wang and Ahmed, 2003). Since Cyert and March (1963) first used the expression and particularly since Argyris and Schon (1978) the concept of organisational learning has been used in several ways (Curado, 2006). Various authors have differing views on what constitutes a learning organisation. Crossan and Berdrow, (2003) Cited in Curado (2006) supports this, and notes that the organisational learning process remains a black box to all researchers. Glynn et al (1992) defined organisational learning as a process whereby organisations understand and manage their experiences (Wang and Ahmed, 2003). However, these experiences could be negative or positive, if it negatively impacts the organisation, then surely that would not be considered as a possible outcome of organisational learning. Wang and Ahmed (2003) expanded this view and suggested that a learning organisation questions existing product, process and system, identifies strategic position, applies various modes of learning, to achieve sustained competitive advantage .Jensen (2005) suggests that as a test of when organisational learning has occurred, three steps could be observed; a phase of cognition, a phase of changed behaviour, the third stage is measurable changes in form of improvement of results. A learning organisation is one that is organised to scan for information in its environment, by self-creating information and promoting individuals to transform information into knowledge and coordinate this

knowledge between individuals so that insight is obtained. This definition fits nearly all organisations, and by this token, all organisations are learning organisations (Jensen, 2005).

Therefore to understand the concept of organisational learning, it is important to know at what point organisational learning actually occurs. Organisational learning occurs when individuals within an organisation experience a problematic situation and inquire into it on the organisations behalf (Argrys and Schorn, 1996 cited in Wang and Ahmed, 2003). This differs from the statement given by Jensen (2005). Learning occurs when an organisation synthesises and institutionalises people's intellectual capital and learning, their memories, culture, knowledge systems routines and core competences (O'Keefe, 2002).

It however becomes clearer when we look at different types of learning. Single loop learning is merely improving what the organisation is doing already (Jensen, 2005). A common question asked during in the single-loop stage is, "Are we doing things right?" (Yeo, 2007). Double loop learning is a more comprehensive inquiry and questions the underlying organisation policies and objectives (Argyris, 1977). Yeo (2006) states that double-loop learning contributes to organisational members' capacity to enlarge their responsibilities, enhancing their responsiveness to things around them in turn . At this stage, employees find themselves asking, "Are we doing the right things?" (Argyris and Schon, 1996). In triple-loop learning there is a greater awareness of problem-solving dilemmas in the collective consciousness of employees, Triple-loop learners are likely to ask, "Is rightness supported by mightiness (collective efforts) and vice versa?"(Yeo, 2007). Hence, looking at the various types of learning shows insight on how organisations differ in their learning activities. However, for an organisation to be called a learning organisation, it should conform to certain characteristics. These characteristics are reviewed in the next section.

2.2.2 Making an organisation a learning organisation

Organisational learning is stored partly into individuals in the form of experiences, skills, and personal capability (Wang and Ahmed, 2003). These experiences are not always positive. Wang and Ahmed (2003) supports this and notes that individual learning is not necessarily positive nor contributes to the learning of the organisation.

Although organisational learning occurs through individuals, it would be a mistake to conclude that organisational learning is nothing but the cumulative result of members learning (O'Keeffe, 2002). However most researchers consider that organisational learning is the product of organisational members' involvement in the interaction and sharing of experiences and knowledge (Curado, 2006).

The underlining theme here is collaboration, hence for organisational learning to occur, there has to be collaboration. Organisational learning differs from individual learning, in several respects. First it is a collective event. As a result organisations learn only as fast as the slowest link (O'Keeffe, 2002). Jenson (2005) stated that the qualitative difference between a learning organisation and other organisations is shown to be the co-ordination and co-operation that individuals perform in a close working relationship. Employees may come and go and leadership may change, but organisations memory preserve behaviour (O'Keeffe, 2002). Tetrick and da Silva, (2003) cited in Curado (2006) suggested individual learning is essentially a cognitive process and organisational learning is mainly a social process .Hence, a manager or employees understanding of his or the business process alone would never amount to organisational learning. Of utmost importance would be the relationships between tasks in the business process and how they affect the customer and the environment. Surely, collaboration of individuals alone will not lead to a learning organisation. Other characteristics still have to be applied. Nonaka and Konno (1998) suggested that in order to promote learning in a particular learning space, a sense of purpose, trust and respect must be observed (Yeo, 2006).

In addition to co-operation and co-ordination of individuals, (Jensen, 2005) suggested that learning takes place as a natural and necessary activity, and through incremental changes and not abrupt bumps. Employees possess know-why and not just know how. Some researchers have noted that a focus on merely continuous improvement lacks vigour in the real world (Wang and Ahmed, 2003). Garvin (1998) proposed that the learning organisation is characterised by its ability to perform five main tasks; systematic problem solving, experimentation, learn from past experiences, learn from others, and transferring knowledge (Curado, 2006). Since collaboration is between individuals, the values, characters of these individuals cannot be overlooked. Culture serves as a sense making mechanism that guides and shapes the values, behaviours and attitude of employees (Wang and Ahmed, 2003). Edmondson (2008) suggests that organisations should focus on designing and executing a business process by learning and using the best knowledge, enable collaboration, routinely capture process data to discover how work is really being done, and they study this data to find ways to improve the process. O'Keeffe (2002) highlights seven characteristics of organisational learning; Learning antecedents, environment of innovation, perceived need and learning mechanisms, executive challenge and learning processes, cultural imperative of resourcing learning, organisational wide learning and the learning organisation.

In identifying whether an organisation is truly a learning organisation; it is however unclear if a broad view of the concept should be adopted, and all the characteristics reviewed need to be applied to every context or challenge the organisation faces. (Garvin et al, 2008) identified three factors that impede organisational learning; "First, many of the early discussions about learning organisations were paeans to a better world rather than concrete prescriptions. Second, the concept was aimed at CEOs and senior executives rather than at managers of smaller departments and units where critical organisational work is done. Third, standards and tools for assessment were lacking. Without these, companies could declare victory prematurely or claim progress without delving into the particulars or comparing themselves accurately with others".

3 Proposed framework

From the review of literature, it is clear that Organisational Learning is influenced by four forces: People, Environment, Process, Technology and a frame work can be derived; the author calls this the PEPT framework. This is shown in the diagram Fig 3.0. It is important however, that a company's business process be visually mapped in a way that is clear for all the stakeholders to understand. Fig 3.5 proposes a frame work to model a business process that is clear for all stakeholders and can foster learning.

Fig. 3.0. PEPT framework on Organisational learning. Source (Author)

An organisation's learning status is influenced by these forces. Each of the forces is directly proportional to the other forces as indicated by the dotted circle. Each force has an internal and external component. Factors relating to each force are shown in the text on the diagram. The rest of this section looks at each force in more detail.

- People: This refers to the stakeholders within and outside an organisation. Stakeholders within an organisation would typically be the executives, management, and employees. Stakeholders outside the organisation includes suppliers, outsourcing companies, distributors, dealers , partners and even customers and the type of relationship an organisation has with them. Understanding how external processes work and their effect on the organisation's vision and strategy is key to success. Factors attributed to this force are shown in Fig 3.1.

Fig 3.1. Attributes of the "People" force. Source (Author)

- Environment: this has a huge impact on a company's ability to become a Learning Organisation. From the diagram in Fig 3.2, the environment is looked at internally and externally. The internal environment is within the company itself, while the external environment looks at Government regulations, competition, environmental and social factors.

Fig 3.2. Attributes of the "Environment" force. Source (Author)

- Process: like people and environment, it is also important to consider the processes that foster organisational learning. Processes are often the source of innovation in many companies. How an organisation learns from its processes and the processes of its partners, distributors, suppliers, are very important especially when some of these processes are outsourced. The influencing factors of this force are shown in Fig 3.3.

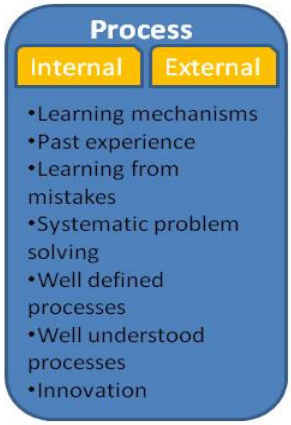

Fig 3.3. Attributes of the "Process" force. Source (Author)

- Technology: in an organisation, technology could be the driver, pushing the company towards becoming a learning organisation. Alternatively it could support existing processes. Like the other forces in the framework, technological force is both internal and external. External could for instance be a company's decision to use social networking sites such as Face book or Twitter to foster collaboration.

Fig 3.4. Attributes of the "Technology" force. Source (Author)

The next section looks at a proposed frame work showing steps for visually mapping processes to foster learning.

3.1 Frame work for visually modeling a business process to foster learning

This section looks at a proposed framework for visually modeling a business process in a way that fosters organisational learning. Certain factors had to be taken into account in developing the framework.

- The framework must be simple and clear enough for employees and managers to understand
- The framework should visually show where problems exist within the process and provide a visual method for stakeholders to easily evaluate these issues.
- The framework should be robust enough to allow for the development of systems if required by technical experts.
- The framework should allow for the involvement, communication and input from all stake holders

Two business modeling techniques and one problem solving tool, based on their advantages were combined to produce this framework. The two modeling techniques employed are UML and RAMSEES. UML is robust and systems can be developed to support a business process based on this technique, however, it is too technical and complex for managers and employees to understand. On the other hand RAMSEES is simpler to understand but inadequate in comparison to UML in developing systems. Once the processes have been visually modeled, TRIZ is used to analyze problems within the business process. TRIZ is an acronym for theory for inventive problem solving in Russian . developed by Genrich Altshuller in 1948, TRIZ is now used by companies such as 3M , Ford and Motorola for problem solving.

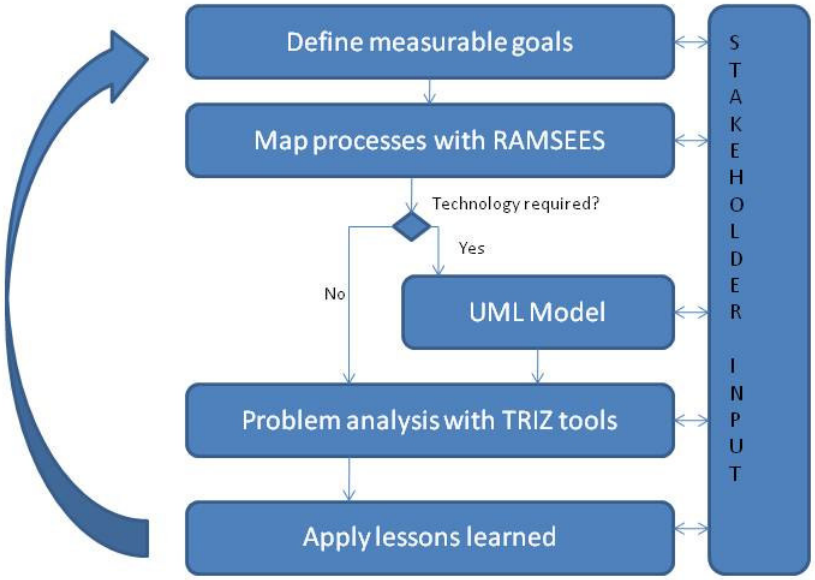

Fig 3.5. Framework for visually mapping a business process to support learning. Source (Author)

The figure above represents the proposed framework. The first step in the process is establishing goals for all stakeholders, evaluations for all stakeholders involved have to be based on the overall goal of the process. The next step is to visually map the process, this standardises the process for all stakeholders and visually show the dependences within each task. RAMSEES is used here because it is relatively simpler for management and employees to understand (see Appendix). From a system development view UML is used to map the processes (see Appendix). At this stage a clear map of the processes is

produced, however the visual map does not indicate the pain points within the process. TRIZ is used here to systematically identify the problems within the process and visually show this and their interaction with the process, and this is communicated with all stake holders (see Appendix). Lessons are learned by applied to the process.

4 Conclusion

It is essential for organisations to be more efficient in learning from their processes and apply lessons learned. Several factors that determine an organisations learning status exist in literature and it is important to organise these factors in a clear and consistent manner. The PEPT frame work provides an easy method for organisations to evaluate their learning status based on its People, Environment, Processes, and Technology. However, the framework needs to be rigorously tested and the results evaluated to determine its effectiveness.

How each employee understands the importance of their tasks in relation to the organisations processes and its effect on the company's vision and customers is essential in an organisations ability to learn, innovate and establish best practices in its processes. Therefore, it is important to visually map these processes in a manner that all stakeholders understand. This can be achieved by the combination of RAMSEES, UML and TRIZ, however more work needs to been done in testing this method.

The Author intends to study further

- The effect of the proposed frameworks on an SME and evaluate the results.
- Refine the factors that define the forces in the PEPT framework, especially with regards to technology.

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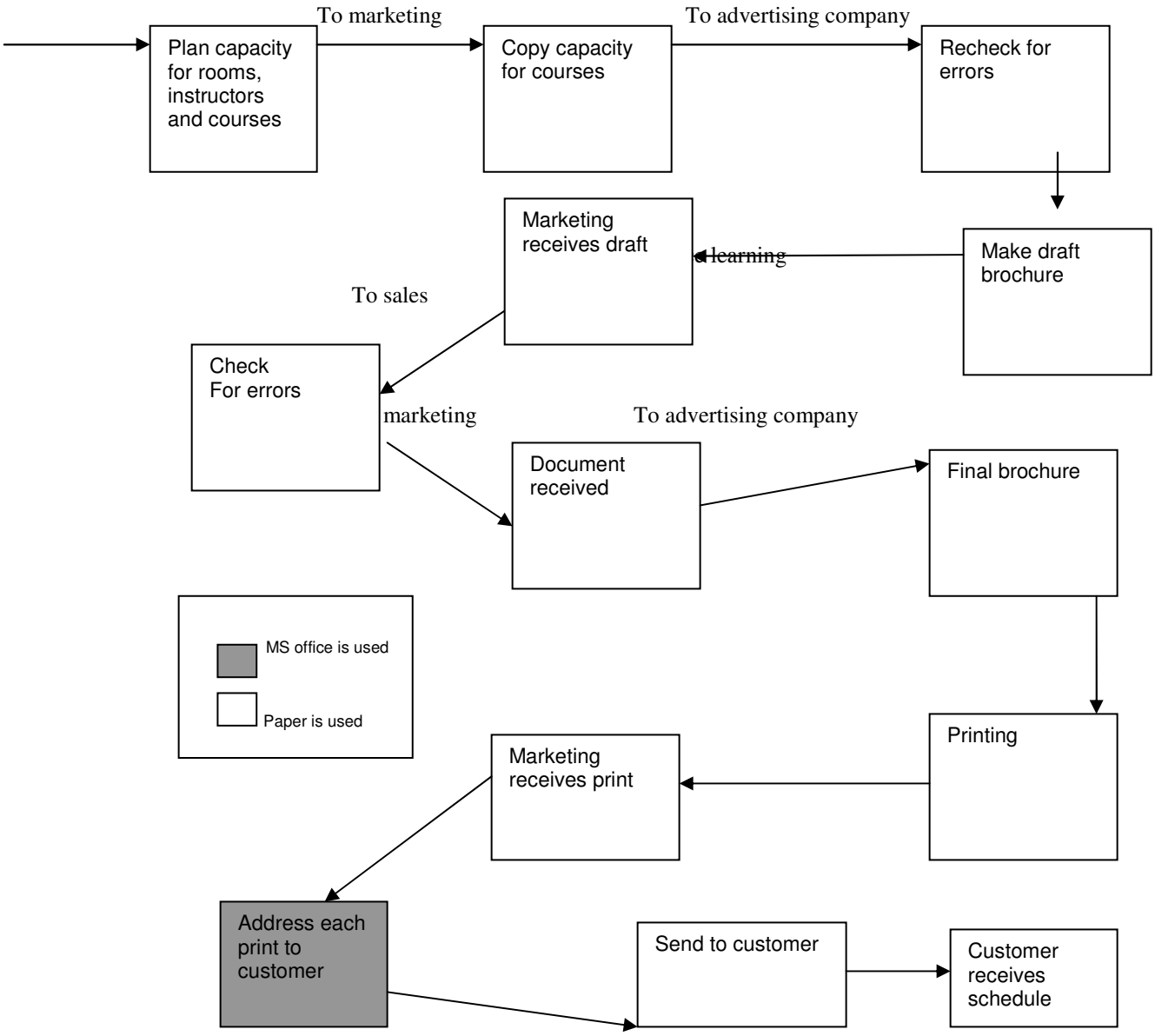
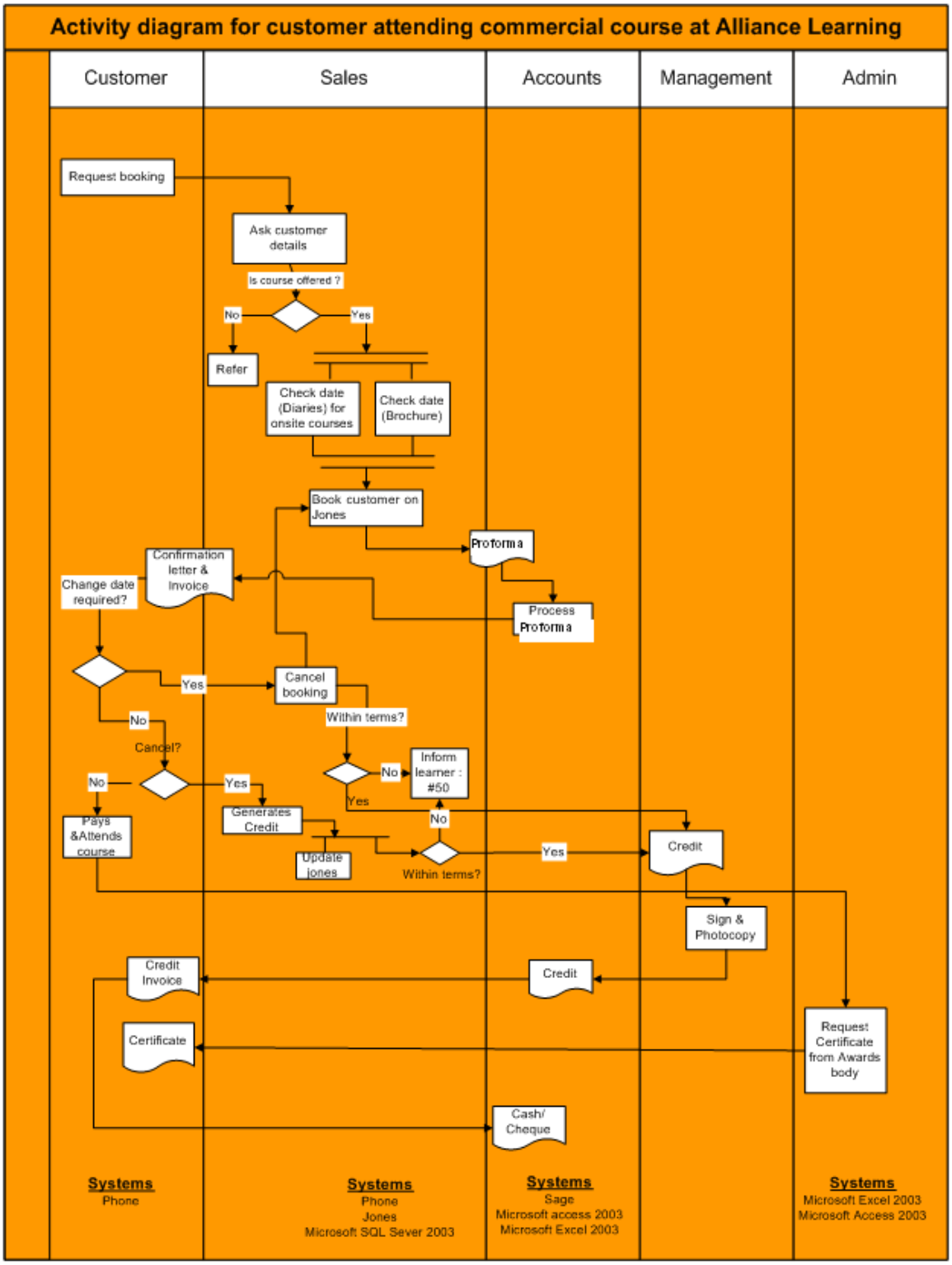
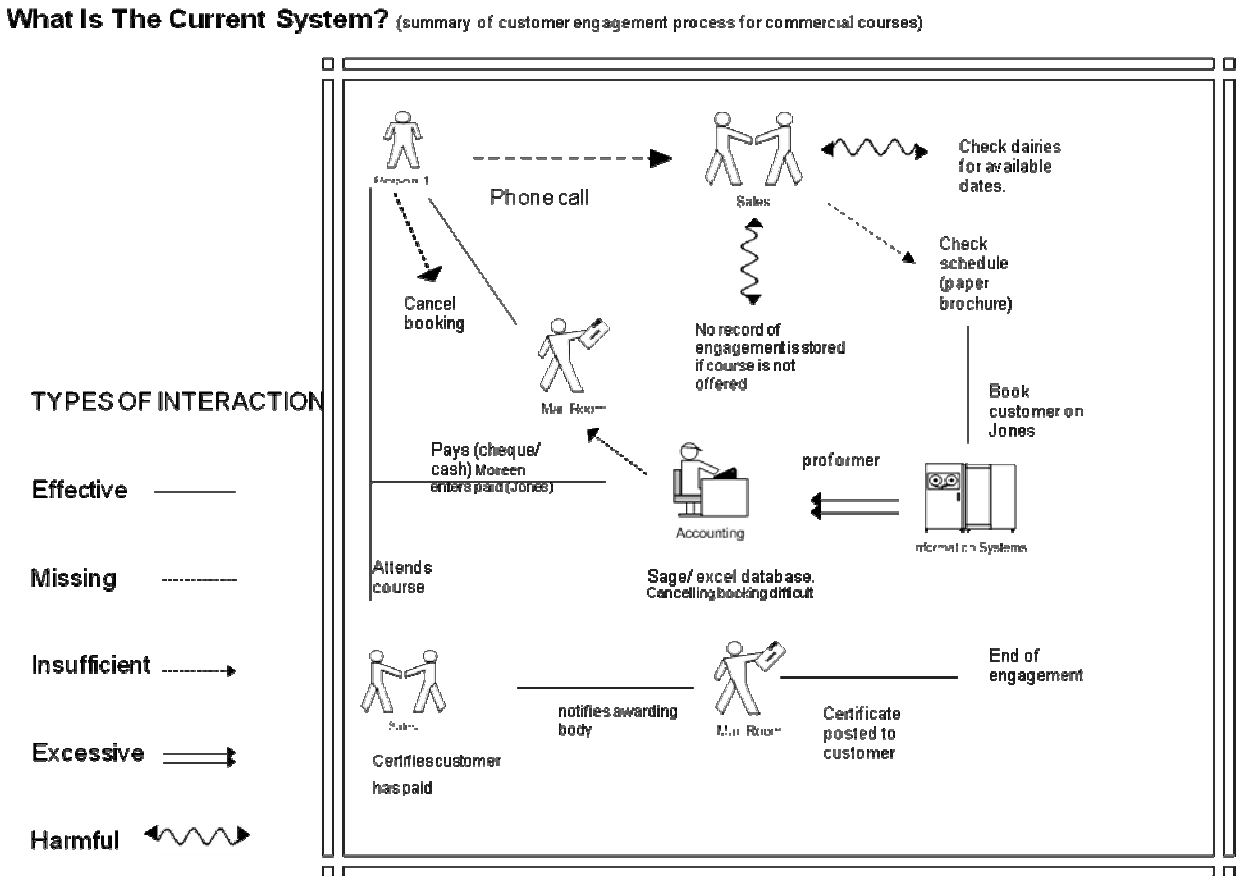
Appendix



Example - Mapping a customer prospecting process using RAMSEES.



Example - UML Activity diagram of the booking process



Example - Applying TRIZ to visually show problems in a process