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Application of Two Strands version of Soft Systems Methodology to a Vietnamese Tourism company

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1. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

2. The program of advanced study of which this thesis is part has consisted of:

i) Research Methods course during the undergraduate study

ii) Examination of several thesis guides of particular universities both in Turkey and abroad as well as a professional book on this subject.

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ABSTRACT

NGUYEN VU THU HIEN **JUNE 2015**

APPLICATION OF TWO STRANDS VERSION OF SOFT SYSTEMS METHODOLOGY TO A TOURISM COMPANY IN VIETNAM

This thesis is motivated by the perceived need to assist a tourism company in attaining a successful organizational change both in its cultural and political aspects. The thesis describes the application of Two Strands version of Soft Systems Methodology (SSM) as a tool by which the understanding of a tourism company's complex activities are eased, perspectives of organisational members are revealed, and conflicting viewpoints of participants are compromised through a democratic conversational setting. Two Strands version of SSM being a more practical and iterative approach and better dealing with social, cultural and political dimensions of the problem situation which are critical in this application is chosen as research methodology. In the use of Two Strands version of SSM in tourism company a 'rich picture' is drawn and conceptual models are generated by a stakeholder group including representatives from all levels of management in the company and as well as outside customers and some social administrative staffs. Then, 'systemically desirable' and 'culturally feasible' changes have been recommended to the company. At the end, some strengths and weaknesses of SSM in this application are highlighted.

Keywords: SSM, tourism industry, two strands version of SSM, stakeholders

KISA ÖZET

NGUYEN VU THU HIEN **HAZIRAN 2015**

YUMUŞAK SİSTEMLER METODOLOJİSİNİN "TWO STRANDS" VERSİYONUNUN BİR VIETNAM TURİZM FİRMASINA UYGULANMASI

Bu tez bir turizm şirketinin hem kültürel hem de siyasi veçhelerinde başarılı bir kurumsal değişime ulaşmasını sağlamak için algılanan yardım ihtiyacından ortaya çıkmıştır. Tez bir turizm şirketinin karmaşık faaliyetlerini anlamayı kolaylaştıran, kurum çalışanlarının dünya görüşlerini ortaya çıkaran ve katılımcıların ihtilaflı görüşlerini demokratik bir konuşma ortamı ile uzlaştıran Yumuşak Sistemler Metodolojisnin (YSM) İki Parçalı versiyonunu bir enstrüman olarak tasvir eder. YSM'nin İki Parçalı versiyonu daha pratik ve tekrarlanan bir yaklaşım olarak ve bu uygulamada problem durumunun kritik soysal, kültürel ve siyasi boyutlarını daha iyi ele aldığından araştırma yöntemi olarak seçilmiştir. YSM'nin İki Parçlalı versiyonun uygulamasında şirketin tüm kademelerinden temsilcilerden oluşan bir paydaş grubu ve aynı zamanda müşteriler ve idari personel tarafından bir 'zengin resim' çizilmiş ve kavramsal modeller oluşturulmuştur. Sonra sistemik olarak 'arzu edilebilir' ve 'kültürel olarak yapılabilir' değişimler şirkete tavsiye edilmişitr. Sonunda, YSM'nin bu uygulamada güçlü ve zayıf yanları öne çıkarılmıştır.

Anahtar: SSM, turizm, two strands version of SSM, paydaş

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INTRODUCTION

In the recent decades, Tourism is considered as a biggest industry in the world economy, and generate very high profit, but in a world of complexity and change, in order for tourism organizations sustain their survival, they have to be able to cope with the fast changing environment, cut-throat competition, customer preferences, government regulation...etc. Every year, the number of tourism company is increasing, and not many of them could survive and compete with the old competitors in the market. In another hand, if they want to remain in the environment then it could be a big mistake if they ignore the whole picture but focus on the seen problems. Deal with the complexity which is keep increasing in the external environment, as well as its changes and diversity, Managers' responsibilities are to ensure that organizational processes are efficient and served by the latest technology, encourage learning in organization, employ the flexible structure with a transformational leadership skill and respond positively to changes in law and government regulations. They also need to be open to the help of business consultants and academics. There are many approaches that have been used in not only tourism institutes but also in many different kind of organization of different sectors such as: benchmarking, TQM, Re-engineering process, Balance score card, CRM,...etc. However the result is limited, they usually fail to solve the complicated problem because they are not holistic or creative enough and often very costly to perform. In order to overcome the limitation of those approach, I propose to chose SSM as a tool to analyze the tourism company because tourism is a dynamic industry with fast change in demand and supply as well as knowledge. The dynamic and diverse interest of parties in the tourism sector create a multicultural environment. SSM is a soft approach or we can say it is used as a tool of soft operation research. Operational research (OR) initially developed from social science, statistics and mathematics, it is more relevant to quantitative calculation more than qualitative. However, according to many researchers, many real problems in the societies are complex and messy because they involving socioeconomics development of poor communities and economy in general, thus they are can not be solved only by mathematic modelling. In response to these difficulties, there are many methods which are more qualitative in nature continue to be developed in order to help solving those complex problem. Those are formed soft methodology (soft operation research). Those soft methodologies usually involve the active participation of clients in exploring problem structures and searching for desirable outcome. Well-established examples are: Viable systems model, Decision trees and influence diagrams, Delphi methods, SWOT analysis, Soft systems methodology...etc. Those soft approach refers to the orientation of the approach as qualitative or interpretative rather than quantitative. In this case study, Soft systems methodology was selected due to its flexibility of its tools. SSM tools that were used in conducting the action research included Rich pictures (P.B. Checkland & Holwell, 1998) with the aim was that participants would be empowered to appreciate the importance of effective participation in the tourism value chain for improving experiences of the visitors in the destination. They would participate in designing improved tourism strategies in order to improve the performance of the company. SSM is very appropriate in the understanding of tourism situations because SSM compares the real world as it is to how it could be under different circumstances (Carlsen, 1999). Rich picture in SSM aim at understanding human activity systems in a way that is meaningful to the actors in that system (Monk & Howard, 1998). In this study, Two strands version of SSM will be employed as it was considered the most suitable for the situation in this tourism company. This version is unlike the seven- stages version of SSM because it is better in articulating some implicit aspects of methodology such as analyses of social and cultural components of a problem situation in its interactive process of inquiry. It provides systemicity - analysis of different viewpoints leading to the improvement of problem situation that ensures holism. It is flexible and concern oriented, it focuses on everyday happenings in organizations which will be more practical.

CHAPTER I: SYSTEM THINKKING

In this chapter, the brief history about system thinking will be given to answer some basic question such as What is the definition of system thinking? What it is and what it is not? What influences it bring to social science? And an introduction about Bouldling's hierarchy of complexity, systems and complexity theories are two valuable perspectives that can assist organizational leaders with the requisite knowledge and understanding of how to respond and adapt to the fast changing and unstable environment. These two paradigms are particularly useful in many areas such as organizational intelligence, organizational design, knowledge management, and corporate strategy...etc.

1. Background and Evolution of Systems Thinking

In a world of complexity and change, in order for organisations sustain their survival, they have to remain viable in the environment where there are constant shifts in technology, customer preferences, cutthroat competition, government regulation, etc. Those transformations in the way of thinking and the society itself giving a new responsibilities and challenges to the managers ; they are expected to cope with increasing complexity, change and diversity. The nature of the problems is complexity, problems are not presented individually but in fact, there are more complex interconnected problems. They are somehow related to each other. As a result, when you get into solving a problem, it could be a big mistake if you ignore the whole picture but focus on the seen problem. In dealing with all of those challenges in the fast changing , complex and dynamic environment, the managers' responsibilities are to ensure that organisational processes are efficient and served by the latest technology, encourage learning in organisation, employ flexible structure with a transformational leadership skill and respond positively to changes in law and government regulations. They also should be open to the help of advisors, consultants and academics. There are many approaches that have been used in solving organisational problems such as: benchmarking, TQM, process re-engineering, balanced score card, CRM, etc. However, the result is limited, they usually fail to solve the complicated problem because they are not holistic (i.e., they concentrate on a part rather than the whole which is the nature of the problems) or creative enough, and often very costly to perform.

A system can be described as having a purpose and made up of various interrelated or interdependent factors, such as activities and interactions, it is characterised by dynamic relationships between those interrelated components that make up a whole. The human circulatory system, the global financial system or a provincial health system are just a few examples of such complex system. The arrangement and performance of these systems' factors affect the performance of the overall system, as does its ability to receive and use feedback. System thinking means looking at the component parts and their characteristics, relationships and interconnections to better understand the whole, how organisational systems perform and ways to improve them.

System thinking is an idea that crosses many fields and disciplines and is interpreted in many different ways. One of the fathers of one type of system thinking (general system theory), Ludwig von Bertalanffy writes: 'an attempt to summarise the impact of 'systems' would not be feasible''. If one were to search for the terms separately, as in 'system' or 'thinking', the resulting list of publications would be too large for a viable literature review: the individual terms 'system' and 'thinking' are very general and can occur in numerous publications that have little or nothing to do with the notion of 'systems thinking'.

1.1 Structure of the Systems Literature

The concept of systems is so broadly usable and has been in use for so long that it is seen everywhere in scientific literature, making analysis of this vast and complicated field difficult. The systems literature can be divided into two heuristic components: knowledge-about-systems, which is *ontological*, and systems thinking, which is *epistemological.*

There exists an important difference between ontological knowledge-about- systems and the general conceptual "habits of mind" that can be derived from such knowledge (e.g., systems thinking). Knowledge-about-systems is a loose "ecology" of descriptions and predictions of systemic ontological phenomena, whereas Systems thinking is a conceptual orientation informed by this knowledge. The focus herein is on systems thinking, although some discussion of knowledge-about-systems is necessary, especially some of the more general and important systems phenomena. The term 'Systems thinking' is often found in popular books that target a general audience and in academic journals that target a specialist audience. Yet the term is less commonly used, or not used at all, by scientists in the physical, biological, or social sciences despite the fact that these scientists think deeply about systems and seek to find general principles and patterns of systems. Thus, the boundary between knowledge-about-systems and systems thinking is not clearly defined but does serve as a useful heuristic.

1.2 Relation between Knowledge-about-systems and Systems thinking

Bertalanffy states, "An attempt to summarise the impact of 'systems' would not be feasible." Therefore, Bertalanffy explains, "A few examples, more or less arbitrarily chosen, must suffice to outline the nature of the problem and consequent re-orientation''

Systems thinking is not a science, it is a conceptual framework. There is no science called systems thinking, although there are sciences called complexity, cybernetics, and nonlinear dynamics.

A heuristic is proposed that differentiates between two types of systems literature: knowledge-about-systems and systems thinking (both scholarly and popular). These two types of literature interact in dynamic ways.

The relationships among the two structures are threefold: (1) knowledge-about- systems informs systems thinking, and as systems thinking gains more analytical sophistication, it can influence the development of knowledge-about-systems; (2) there are issues with the transfer of knowledge from one domain to the other that can be called "export effects"; and (3) there are issues with the transfer of knowledge from one domain to the other that can be called “context effects.” Export and context effects are a function of contextual changes that occur when knowledge is moved from one discipline to another. These analogical mappings are susceptible to misinterpretations of systems concepts and/or the situated uses of these concepts.

Understanding the potential feedback loop between knowledge-about-systems and systems thinking helps us to understand this complex set of literatures.

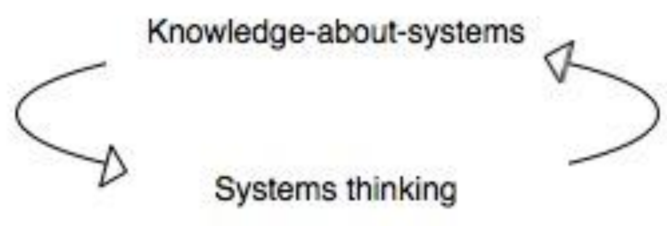


Figure 1: The Feedback Loop between Knowledge-About-Systems and Systems Thinking

Currently, a relationship exists between knowledge-about-systems and systems thinking, but there is no explicit feedback from systems thinking to knowledge-about- systems. This lack of feedback may exist because systems thinking, while popular as a notion, has not yet been properly analysed and studied in a sophisticated way, which requires empirical research, theorising, and formal learning as the result of implementation. If this sophistication occurs, then it is reasonable to predict that systems thinking frameworks will greatly influence the development of knowledge-about-systems by acting as schema upon which evolving patterns of thought can be consciously based.

1.3 Boulding’s ‘Hierarchy of Complexity’

System complexity is determined by level of agreement and certainty between cause and effect. The levels of complexity most commonly used are simple, complicated, complex and chaotic. In a simple system, for example, everyone agrees that a given action will predictably have a given effect. In a complex system, however, the dynamic and unstable nature of the relationships between different system components means that there are often many different perspectives and a high degree of uncertainty regarding the effect of a given action.

In his paper ‘General Systems Theory - The Skeleton of Science’ (1956), Boulding sets out two routes to developing general systems theory. Either you seek to develop a theory of general principles applicable to all systems, which was von Bertalanffy’s approach, or you take a complementary course, he preferred, which was “to arrange the empirical fields in a hierarchy of complexity of organization of their basic individual or unit of behavior, and to try to develop a level of abstraction appropriate to each”.

As we know that systems and complexity theories are theories of organisational change that have implications for organisations. Organisations are dynamic systems of adaptation and evolution that contain multiple parts, which interact with one another and the environment. The ability of organisations to change rapidly in response to intra and inter relationships is at the heart of an adaptive organisation (Brown and Eisenhardt, 1997: 45; Morel and Ramanujam, 1999: 281). An understanding of the complexity and systems paradigms makes organisational behavior subjecting to surprises and being hard to predict, thereby making the attainment of organisational effectiveness implicit (Fioretti and Visser, 2004: 19). As a result, decision-makers are more conscious of the limits of their knowledge and abilities. This allows organisational leaders to engage in a learning process with the complex system they are facing.

In pursuit of his preferred approach, Boulding (1956) produced an intuitive, nine-level hierarchy of levels of real-world complexity, stretching from structures and frameworks at the simplest level to transcendental systems at the most complex. This is summarised bellow:

1. **Frameworks**. The geography and anatomy of the universe : the patterns of electrons around a nucleus, the pattern of atoms in a molecular formula, the arrangement of atoms in a crystal, the anatomy of the gene, the mapping of the earth, etc.

2. **Clockworks**. The solar system or simple machines such as the lever and the pulley, even quite complicated machines like steam engines and dynamos fall mostly under this category.

3. **Thermostats**. Control Mechanisms or Cybernetic Systems: the system will move to the maintenance of any given equilibrium, within limits.

4. **Cells**. Open systems or self-maintaining structures. This is the level at which life begins to differentiate itself from not life.

5. **Plants**. The outstanding characteristics of these systems (studied by the botanists) are

first, a division of labour with differentiated and mutually dependent parts (roots, leaves, seeds, etc.), and second, a sharp differentiation between the genotype and the phenotype, associated with the phenomenon of equifinal or "blueprinted" growth.

6. **Animals**. Level characterised by increased mobility, teleological behaviour and self-awareness, with the development of specialised 'information receptors (eyes, ears, etc.) leading to an enormous increase in the intake of information.

7. **Human Beings**. In, addition to all, or nearly all, of the characteristics of animal systems man possesses self consciousness, which is something different from mere awareness.

8. **Social Organisations**. The unit of such systems is not perhaps the person but the "role" that part of the person which is concerned with the organisation or situation in question. Social organisations might be defined as a set of roles tied together with channels of communication.

9. **Trascendental Systems**. The ultimates and absolutes and the inescapable unknowable, that also exhibit systematic structure and relationship.

Reviewing his hierarchy, Boulding notes that the characteristics of lower level systems can be found in higher level systems; for example, aspects of all levels 1-6 are in level 7, people. Each level, however, presents emergent properties that cannot be simply understood in terms of the theoretical constructs employed successfully at lower levels hence there is a need for new disciplines like psychology, anthropology and sociology at more complex system levels. This reminds us of the danger, for the purposes of explanation, of employing a level of theoretical analysis below the level of complexity of the empirical phenomenon that is of concern. Concluding his analysis, Boulding uses the hierarchy to point out gaps in our knowledge, especially our lack of adequate systems models much above level 4. The key problem in predicting system behaviour at higher levels of complexity is the intervention of 'the image' into the chain of causality. As we climb up system levels, brains develop which organise information intake into a knowledge structure or image. Behaviour results from the structure and setting of the image rather than directly from some stimulus.

CHAPTER II: SYSTEM PRACTICE

In this chapter, there will be explanation about how the system thinking can be useful in solving the problems, and which problem context could system thinking be adapted into. After that will be some brief explanation about five different approaches to Applied system thinking labelled as: Functionalist systems approaches, Constructivist systems approaches, Interpretivist systems approaches, Emancipatory systems approaches, Post-modernist systems approaches. At the end of this chapter, I will basically highlight what are metaphors and their associated sociological paradigms. Metaphors is used to understand organizations and their dynamics as a whole, in all perspective, in that way it helps managers to seek the way to handle the problem, each metaphor speaking in their own language about organization.

1. Applied System Thinking

1.1 Problem Contexts

Jackson and Keys (1984) define problem situations along two dimensions: *complexity* and *divergence of interests and values.* Complexity is considered as the number of components and their interactions. some components and well-defined, stable interactions showing low complexity; many components, many interrelationships, dynamic and not well-defined relationships in a dynamic environment showing high complexity. They divide divergence of observations into *unitary, pluralistic,* and *coercive,* where unitary implies acceptance of views of the stakeholders held place in the perceived problem situations, pluralist implies different views within a shared common issues, and coercive implies contradict views and differences in the power relationships between those stakeholders.

Because of research purposes, it is very useful to understand the difference between two types of complexities: *human complexity* concerned to the interrelationships between the stakeholders and the *technical complexity* concerned to the mathematical and physical.

2. Main Strands of Applied System Thinking

2.1 Functionalist Systems Approaches

Functionalist systems approaches suppose that systems are ‘objective’ aspects of real life, and the systems are largely independent of the observer, in other words different observers could see the same system and share the same objectives. The functionalist systems thinker think that using scientific methods such as mathematic, test can give a better understanding about the nature of reality. They believe that they possess expertise which can be employed to ensure efficacy and efficiency by increasing capability to predict and control. This approach is contributing both to an increase in knowledge and to the improvement of the human condition, they believe so. Functionalist approaches applications have been successful when apply to the problem situations that have considerable technical complexity, but this approach can only cope with low human complexity and low to medium discrepancy of interests. Normally, this approach is based on the following assumptions: The problem situation has been clearly defined, the goals of the decision maker(s) are known, the reserve action are found and specified; and all data needed are available; The problem should belong to technical nature, less of human aspects; and The decision maker can easily act and bring out the solution.

These approaches require the use of many quantitative approaches such as using spreadsheets, statistical analysis, computer simulations, or mathematical models, etc. They have been much successful to deal with rather highly complex physical systemic relationships than complex human or social complexity.

2.2 Interpretivist Systems Approaches

Interpretive systems approaches assume that system thinking are “subjective”. In a given problem situation, the system reflects the observer’s *world view*. It is not supposed to be exactly this form in the reality, it is rather seen as a personal conceptualisation of what the observer views as a convenient and useful representation of interrelationships of the behaviour of the system. “Interpretive systems thinkers wish to promote mutual learning and understanding through the vastest possible participation in decision making” (Jackson 2000). Although this approaches allow a certain divergence of interests and observations, but they presume there is a considerable sharing of interests of the stakeholders. This approaches can cope with diversity of interests and values and a fair degree of human complexity, but it has difficulty to deal with technical complexity. Interpretive systems approaches also known as soft systems approaches solving problem situations which are complex and dynamic, and ill-defined in terms of their human elements and social relationships; where there may be not have the set of possible actions. They are featured by structuring the problem situation, rather than by problem solving; rather than providing a decision aid to the decision maker, it is facilitating dialogue between the stakeholders with the aim of achieving a greater degree of shared perceptions of the problem situation. This approach is used to understand the different meanings that people bring to collaborative activity and to discover where these meanings overlap, and so can generate to shared, purposeful activity. Managers or researchers can be guided to find an appropriate level of shared corporate culture in their organizations.

2.3 Constructivist System Approaches

The fundamental tenet of constructivist philosophy indicates that interpretivism is about contextualised meaning, and that reality is socially constructed. The constructivist paradigm can be seen as a set of basic beliefs which deal with first principles. It defines the nature of the 'lived experience', the researcher's place in it, and the range of possible relationships the researchers have to that world and the phenomena that constitute it. The constructivist paradigm, therefore, provides the assumptions, the rules, the direction, and the criteria by which research is conducted.

In ontological terms the constructivist paradigm show that realities are constructed from vary intangible mental constructions that are socially and experientially based, specific in nature, dependent on their form and content on the individual or groups holding the constructions. This paradigm therefore assumes that there are multiple different realities among them that cannot be solved through rational processes or increased data. Because all the 'parts' of reality are interrelated, an understanding of the 'whole' may begin with a holistic investigation of any component parts. In epistemological terms the investigator and the object of investigation are assumed to be interactively interlinked so that the 'findings' are created as the investigation proceeds. In methodological terms the variable and personal nature of social constructions suggests that individual constructions can be suggested and refined only through interactions between the researcher(s) and respondents. These varying constructions, which are in their own interpretations, are then interpreted by the researcher using conventional techniques and are compared and contrasted through a dialectical interchange. Perspectives offered by the constructivist paradigm will therefore guide and inform the present study in such areas as research strategy and design, data gathering, data analysis; these will be augmented and supported, where applicable, by references to previous research.

2.4 Emancipatory Systems Approaches

Emancipatory systems approaches also take a subjectivist view of systems. However, the various stakeholders may see radically different relevant systems with different values and *boundary judgments*, and they may be in a conflicting relationship with each other and possibly their powers are also unequal, with some maybe being in a victim position. These approaches have difficulties to cope with both high technical and human complexity. 'Resolutions' of such problem situations may involve reforms and changes in the current social order. Their domain of application is mainly in public policy issues. They are seen essential to deal effectively and equitably with issues, such as poverty, health care, and the environment, etc.

These approaches claim that functionalist and interpretive systems approaches tend to accept existing inequalities of status , wealth, gender , power, authority, race, and sexual orientation, and largely neglect interests and views of those who have no voice in the decision making process and suffer the consequences. Emancipatory systems approaches aim to identify such inequalities and neglect and promote radical change to liberate and emancipate the deprived majority and create a civil society.

Emancipatory systems thinking has remained largely on a philosophical and polemic level which is in contrast to the functionalist and interpretive approaches. The exception is Ulrich's (1983) Critical Systems Heuristics. Since any systems analysis can never be completely comprehensive and furthermore is affected by the personal world views of the stakeholders with the power of decision making, critical systems heuristics provides a methodology for systematic critique for boundary judgments that are and need to be made for sound professional practice, whatever importance may be attached to emancipatory issues.

2.5 Post-Modernist Systems Approaches

In postmodern approaches, individual (or even group) identity is not clearly and unambiguously defined, rather it shifts over time and is generally considered unstable. In addition, it is primarily local circumstances and experiences of individuals, rather than larger structural conditions or positions and locations that are important in shaping these identities. This means that social classes, ethnic groups, or status groups may not exist in the manner described in social theory, and analysis of these does not provide a useful way of understanding the contemporary social world. That is, the shared circumstances or common situations of class, race, or ethnicity may not exist, and may be purely a theoretical construct that theorists attempt to impose of the social world. Shared and common identities give way to shifting and localised identities that may or may not be shaped by the individual. These identities are continually being formed, changed, and particular individuals shift in and out of these experiences and situations, thus changing their identities.

Postmodernity and Postmodernism

Postmodernism sometimes refers to the characteristics of contemporary society and at other times to a theoretical approach that is a critique of the classical or modernist approaches. In order to distinguish these two, the former is often referred to as postmodernity and the latter as postmodernism. That is, the current period can be referred to as the period of postmodernity, with the social theorical analysis of this period being referred to as postmodernism. The next section examines some of the origins of postmodernism followed by a description of the postmodern period.

The postmodern approach originally came from the humanities where "subjectivity and speculation" are interesting and insightful. The postmodern approach may consider all forms of culture to be of equal validity, and this can sometimes be a useful corrective to the exclusivity and elevation of certain types of culture. On the other hand, it can lead to trivialising culture and making it difficult to make positive statements about cultural developments. For the social sciences, the applications may be more limited.

3. Creativity and System

3.1 Metaphors and Creativity

A metaphor, most broadly, is “the application of a name or descriptive term or phrase to an object or action to which it is imaginatively but not literally applicable” (Canadian Oxford Dictionary 2004).

The evolution of the literature on metaphor in management and organisation theory displays an interesting pattern. In the 1980s, Gareth Morgan was the seminal ‘pro-metaphor’ author on the subject, exposing metaphors used in the earliest theories of management and providing evidence of their usefulness. Morgan’s initial analysis of metaphor in management and organisation theory essentially justified the existence, and moreover the utility, of using metaphor to understand organisations and their dynamics. Some of his most influential work was the identification of the early metaphors to dominate management and organisation theory (many of which are still consistently used). The major metaphors he identified are: organisations as machines, organisms, brains, cultures, psychic prisons, flux and transformation, and instruments of domination (Morgan 2006). Morgan even went so far as to state that “words, names, concepts, ideas, facts, observations etc., do not so much denote external ‘things,’ as conceptions of things activated in the mind by a selective and meaningful form of noticing the world” (Morgan, 1980). Every linguistic or conceptual tool that we use to understand the world is thus a metaphor (in this vein, the concept of an ‘organisation’ is itself a metaphor, as is the notion of ‘management’). In early research, metaphor was considered a basic, essentially static, building block or “creative form” (Morgan, 1980) to promote understanding.

In this part, we shall emphasise on systemic metaphor, which are diagnostic tools to gain insight into organisational practice or conceptual clarification and understanding of the complex network’s problem situation, and then the different types of systems methodologies to cope with these ill-structured problems that have social, behavioral, coercive, and manipulative components. Jackson added ninth metaphor ‘organisations as carnivals’ from Alvesson and Deetz. Each metaphor speaks own language about the organisation. It really helps managers have a better understanding organisation as a whole, in all perspective, in that way they can seek the way to handle the problems.

3.2 Practical Images of System Thought

a. Machine Metaphor

In management and organisation theory, the traditional approach was based upon Weber's ‘bureaucracy theory’, Fayol's ‘administrative management theory’ and Taylor's ‘scientific management’. These approaches considered organisations as if they were machines. Management by Objectives (MBO) is also used to set and achieve objectives mechanistically.

Weber’s bureaucracy theory

One main contribution to management and organisation theory was made by Weber who defined bureaucracy as an advanced pattern of organisation that evinces ‘precision, speed, clarity, regularity, reliability and efficiency’ (Weber, in Gerth and Mills, 1970). These are gained through the creation of a definite division of mission, hierarchical control and comprehensive rules and regulations.

Fayol's administrative management theory

Fayol (1949) divided industrial activity into six categories. Concentrating on the managerial he believed it was a process of planning, organisation, command, co-ordination and control. The plan of action promotes the use of the company's resources such as raw materials, personnel, tools, capacity and the selection of best methods to use for achieving objectives. Fayol argued that control as a managerial element works on people, actions and things in organisations. Fayol also listed 14 general principles of management based on his experience which are as follows: Division of work; Authority and Responsibility; Discipline; Unity of command; Unity of direction; Subordination of individual interest to general interest; Remuneration of personnel; Centralisation; Scalar chain; Order; Equity; Stability of tenure of personnel; Initiative; Esprit de Corps.

Taylor's scientific management

Another strand in the machine metaphor, scientific management theory, was pioneered by Taylor (1947). Taylor's primary concern was to increase the rate of ‘surplus’ productivity via greater effectiveness in production and increased pay for workers through the scientific method that tried to find the optimum pattern of performance even for the most routinised work.

Management by objectives

According to Koontz and Weihrich (1988), in MBO objectives constitute a hierarchy within which end results and overall objectives should be supported by sub-objectives. Multiple objectives may cause a conflict in the organisation and this what MBO aims to prevent. According to Drucker (1955), in an enterprise all members make a particular effort and do something different but they must contribute to the overall aim of the organisation. Hence, the manager must know what business aims require from him in terms of performance and his superior must know what he has contributed to the aims. If these requirements are not fulfilled managers are misdirected.

b. Organism Metaphor

In this section on the organism metaphor, we will be analysing the discovery of organisational needs, the discovery of other organisational needs, the significance of the environment, and adaptation processes of organisations to their environments (organisations as 'open systems'), and the population-ecology view of organisations. The primary aim in the organismic metaphor is become survival.

Discovery of organizational needs

In management and organisation theory, human relations theory viewed organisations as made up of human individuals with their social and psychological needs. Mayo (1933) and Roethlisberger and Dickson (1939) considered employee morale, special status, special privileges, a ‘sense of belonging’ and understanding human attitudes to supervision as being highly influential factors on the performance of employees and on the improvement in productivity. Mayo and his colleagues discovered the phenomenon of the ‘Hawthorne effect’ which in this instance led to increased productivity being ascribed to giving more attention and care to employees (‘being noticed by others’) (Mayo, 1933). The Hawthorne Studies revealed the influence of social behaviour and the effect of work groups on performance and productivity. Mayo, and Roethlisberger and Dickson argued that each employee is a unique person and brings his beliefs, way of life, hopes, and skills to the work situation, whereas the work situation puts particular pressures like law and rules on individuals to behave in a certain way. So, the satisfaction and dissatisfaction of an employee are results from the requirements he brings to the work and the demands of the work.

Basic human needs were analysed and located by Maslow (1954) in an ascending order of priority. Herzberg (1968) modified Maslow's need approach in his two factor theory and suggested particular job satisfaction factors (motivators) concerned with job content. The existence of these factors produces feelings of job satisfaction and motivates people. Herzberg also suggested particular job dissatisfaction factors (hygiene) concerned with job context. These extrinsic factors do not motivate employees yet their absence lead to job dissatisfaction, thus they must exist. Both motivators and hygiene factors can be related to Maslow's need hierarchy (Herzberg, 1968).

McGregor's (1960) commonly known Theory X and Theory Y focuses our attention on the nature and behaviour of people. He considered Theory X as the traditional view of direction and control and Theory Y as the integration of individual and organisational goals.

Selznick (1948), in his structural-functionalist perspective on the study of organisations, considered them as ‘co-operative systems’. They had formal aspects, seeking efficiency and effectiveness in goal-attainment (economic purpose, formal structure) but also informal aspects because their members had different interests which did not necessarily coincide with the objectives of the whole organisation. Parts of the organisation may resist actions that do not serve their own purposes. Selznick called this ‘recalcitrance’.

Organizations as ‘open’ systems

Biologist von Bertalanffy (1968) considered the living organism as a model in order to comprehend all complex ‘open’ systems. His ‘General System Theory’ was dedicated to understanding all types of complex systems such as biological, natural and social. He distinguished closed systems from open systems, believing that in a closed system there was no material exchange and no relationship with the environment. In an open system by contrast, there is a continuing process of input, transformation and output which enables the system to maintain its existence in a steady state. So, open systems have a capability of regulating themselves and adapting to the environment by converting their processes and structures.

Tavistock researchers is one of the first groups of theorists to apply systems ideas to organisations and to use those ideas in practical. Their key notion was of the organisation as a socio-technical system --a term that was invented in the 1950s by members of Tavistock Institute of Human Relations in England (Trist et al., 1963; Emery and Trist, 1965). The Tavistock group discovered that there were interactions between technological and social aspects of the work organisation that needed to be considered together in the design of organisations.

It is worth considering one final type of theory in this sub-section on organisations as open-systems and that is contingency theory. In particular we will look at the studies of Burns and Stalker (1961) and Lawrence and Lorsch (1969) which are worthy of being noted because they illustrate the adaptation process of organisations to their environments. Burns and Stalker found that there was no one single model of management system that provides a harmonious relationship with its environment. In different environmental conditions, organisations need different managerial structures. Lawrence and Lorsch improved the modern contingency approach with their differentiation-and-integration model. Their early research focused on ten organisations in three different environments (stable, moderate and unstable). They discovered that successful firms in each environment have a particular degree of differentiation and integration.

c. Brain Metaphor

This metaphor emphasizes the learning, decision-making, and information processing capability of the organization.

Organisations as information-processing systems

This idea places most emphasis on the capability of the organisation to communicate and learn, and focuses on decision-making, organisational design and information-processing. It draws upon cybernetics.

Simon (1947), who analysed the relationship between individual and organisational decision-making, claimed that individuals cannot achieve objective rationality because;

- People usually have incomplete information about the exact consequences of decisions.

- Individuals are incapable of connecting correct values with outcomes in the time available.

- Individuals are only capable of considering a limited number of alternatives in decision-making.

On the basis of these reasons Simon argued that individuals and organisations make their decisions based on limited rationality. But organisations may regularise individuals' behaviours, select individual objectives, establish standards, hierarchy, rules, programs, plans and operating procedures and train their participants' skills in order to approach more closely objective rationality. Simon's account showed that narrowing the number of factors to be considered and having specialists, who support decision mechanisms, increase the limited information-processing capabilities of their participants to some extent (Simon, 1947).

Galbraith built on Simon's view and attempted to show how organisations could be made more rational through certain design strategies. He identified uncertainty as a key variable in the design of organisations and defined it as the difference between the amount of information required to perform the task and the amount of information already possessed by the organisation (Galbraith, 1973, p.5).

According to Morgan (1986) the learning character of organisations, to make them like brains, is mostly emphasised in the cybernetic negative feedback principle. This notion was derived from Wiener (1948) whose core idea was that a system was capable of regulating its behaviour through processes of information exchange involving the use of negative feedback. Ashby (1956) and Clemson (1984) also emphasised that a system was capable of returning to the same equilibrial state via negative feedback. According to Morgan (1986) a continuous process of information exchange between a company and its environment will be created, if the organisation is capable of monitoring and observing important aspects of its environment, relating this information to the operating norms that control the system behaviour, discovering significant deviations from these norms and initiating appropriate transformations. In this way, the organisation learns in the sense of discovering and modifying discrepancies and operates in a self-regulating manner.

Beer (1979, 1981, 1985) has gone further than anyone in applying cybernetics to management and in his 'viable system model' sets out the invariant rules which he claims ensure the viability of an organisation. For Beer, a system is viable if it is capable of responding to environmental changes even if those changes could not have been foreseen at the time the system was designed. A system can achieve and maintain viability through achieving 'requisite variety' --a concept derived from Ashby (1956). The variety of a controller must be equal to or greater than the system which is being controlled. In order for managers to control organisations, and organisations their environments, Beer suggested 'variety engineering'. He argues that managers can cope with the high variety of their operations and organisations can cope with the high variety of their environments by either reducing the variety of the environment (variety attenuation) or increasing their own variety (variety amplification) .

Organisational learning

In their work on organisational learning, Argyris and Schon (1978) drew attention to the distinction between 'single-loop learning' and 'double-loop learning'. In 'single-loop learning' members of the organisation accomplish participative inquiry, detect mistakes, create new strategies in order to compare performance and correct undesirable deviations. But in 'double-loop learning' members of the organisation also question and modify the assumptions of organisational objectives and policies. Morgan argued that organisations should be open to changes occurring in the environment and be capable of challenging norms and standards.

Organisations as holographic entities

Morgan considered the holographic character of the brain to be relevant to designing organisations that are able to learn and self-organise like a brain. He evaluated four crucial and interrelated principles of the holographic organisation:

- Redundancy of functions
- Requisite variety
- Minimal critical specification
- Learning to learn

The learning to learn principle enables organisations to have self-regulation and control via single- and double-loop learning. This learning assists organisations to guide themselves according to operating norms and values and to question the assumptions underlying organisational objectives and policies.

d. Culture Metaphor

In looking at this metaphor we concentrate on showing culture as an autonomous force that shapes individuals and their organisations, patterns of corporate culture and subcultures within organisations (culture as an internal variable); how patterns of culture are developed and sustained; and how organisations are socially constructed realities.

In his research, Child (1981) argues that each country has its own distinct development of knowledge, ideologies and rituals. These separate national cultural attributes are reflected in social institutions by their members whose cultural values are developed in different cultural contexts. National cultural differences create distinctive philosophical characteristics of organisations that evolved in different cultural contexts. For instance, Pascale and Athos (1981) argued that Japanese employees and organisations dedicate themselves to the development of a company, world culture and the welfare of society. This is achieved through groupism (subordination of self to the objectives of a collectivity), co-operation and harmony (collaborative efforts), strong work ethic (full enjoyment of work, longer working hours), high personal savings, a sense of fulfilment of their obligations, conformity (being different is most uncomfortable), close and long-standing interactions between individuals, avoidance of disgrace and achievement of self-respect through service.

Corporate cultures and subcultures

Although organisations are embedded in an external cultural context, they are themselves culture producing systems that possess their own patterns of beliefs, operating norms, cultural artefacts, language, rituals and ceremonies. The emergence of organisations as shared meanings is dependent upon these symbolic processes that enable them to have ‘taken for granted and routinised’ activities (Smircich, 1983a; 1983c).

Van Maanen and Barely (1985) identified four attributes in the emergence of culture in organisations:

- Ecological context
- Differential interaction
- Collective understandings
- Reproductive and adaptive capacity

Van Maanen and Barely (1985) portrayed reasons for the emergence of subcultures in organisations. They believed that the seeds of organisational subcultures derived from segmentation, importation, technological innovation, ideological differentiation, contracultural movements and career filters.

Organizational reality

Culture as a process of reality establishment enables us to comprehend objects, actions, events and situations in different ways. Garfinkel and Sacks (1986) showed that social reality is constructed by individuals through the operation of rule-like activities. Individuals make their assumptions and decisions on the basis of their 'taken for granted' knowledge, instinctively, in order to make a specific activity sensible to themselves and others. The reality arises as a result of 'skillful accomplishments' of individuals which are based upon interpretations and actions. According to Weick

(1977) and Smircich (1985), individuals are proactively and unconsciously involved in creating realities through interpreting and enacting a meaningful relationship with the world. Since individuals have enacted the reality of the everyday world, we should understand culture as a dynamic process of reality construction.

e. Political Metaphor

In considering this metaphor, we will be analysing the political character of organisations. This deals with issues of interests, conflict and power.

Exploring interests

According to Fox (1966) and Burrell and Morgan (1979), in the unitary view of organisations, an organisation may be viewed as a 'well integrated, co-operative system' (team) (Burrell and Morgan, 1979) that tries to achieve a common objective through individuals. In the pluralist view, an enterprise may be viewed as a 'loose coalition' that comprises individuals and sectional groups with divergent interests. Here, parties autonomously bargain and compete for a share in the balance of power. In the radical view of organisations, an organisation is seen as made up of antagonistic interest groups that contradict each other.

In the exploration of interests, our concern focuses on the 'loose coalition' character of organisations. According to Bacharach and Lawler (1980), pluralist organisations comprise divergent interest groups and individuals who pursue their goals in isolation from other interest groups. Morgan (1986) classified these interconnected interests of individuals as:

- Task interests, connected with the employee's work.
- Career interests met are connected with the employee's aspirations.
- Extramural interests which are connected with the employee's values, beliefs, preferences and personality.

Although divisions in organisations fragment their general interests, there is often a dominant coalition that maintains equilibrium within the organisation. Further, Bacharach and Lawler (1980) argue that interest groups often participate in a coalition with other groups. The criterion is the 'subjective utility' that sub-unit expects to get from working with other groups. The organisation as a whole tries to achieve a consensus through recognising the diversity of objectives of its members. The development of coalitions that lead to joint action by two or more interest groups in organisations often brings to the foreground different conflicting interests (Bacharach and Lawler, 1980).

Analyzing and managing organizational conflict

Burrell and Morgan (1979) show that in the unitary view of organisations conflict is regarded as infrequent and transient factor which can be controlled through managerial action. In the pluralist view, it is considered as an inherent and dynamic element. In the radical view, it is regarded as an inevitable factor that causes radical change in organisations.

According to Pondy (1967), conflict as a dynamic process in organisations should be understood as resulting from four categories together: Antecedent conditions of conflictual behaviour ; Affective states; Cognitive states; Conflictual behaviour ranging from passive resistance to active aggression. In the analysis of organisational conflict, Pondy (1967) identified three types of conflict models among sub-units of organisations: Bargaining model; Bureaucratic model; Systems model.

In the identification of events within a conflict episode, Thomas (1976) systematically examined five main events, namely frustration, conceptualisation, behaviour, other's reaction and final agreement or lack of agreement.

Exploring power

According to Burrell and Morgan (1979) and Morgan (1986), in the unitary view, power is largely neglected and replaced by leadership, control and authority. These guide the organisation to achieve its desired objectives. In the pluralist view, power is regarded as a stabilising factor that settles conflicts of interests in the organisation. The organisation includes different power holders who achieve their influence by deriving power from a plurality of sources. In the radical view, it is considered as an unequally distributed phenomenon that causes domination.

Bachrach and Baratz (1962) considered that power took two distinct forms. The first form involves direct control over the other. The second form refers to securing compliance through threat of sanction or deprivation (coercion). Lukes (1974) argues that this ‘mobilisation of bias’ in power results in rules, procedures and beliefs that operate to the benefit of certain persons (decision-makers).

f. Psychic Prison Metaphor

This metaphor is based upon the idea that organisations are created by conscious and unconscious processes of the human psyche. There are two sections in this part. First, how organisational members are trapped by preferred ways of thinking, and second how organisations are trapped by unconscious processes.

The trap of preferred ways of thinking

The psychic prison metaphor indicates that people in organisations may become trapped by false images, beliefs and unquestioned rules. These cognitive traps make members resistant to change and lead them to cling to favoured ways of thinking. Morgan categorised these traps as follows: Success; Organisational slack; Processes.

The trap of unconscious processes

According to the psychic prison metaphor, the reality of everyday life and the essence of daily business are based upon the structure of the human 'psyche'. This idea is derived from Freud (1957a,b), who believed that humans repress and prevent their desires and instincts from becoming conscious. This gives rise to ‘unconscious’ processes. He noted that humans seek to control their desires and whims in order to live in harmony with others. So the development of culture has a direct relationship with the repression of individuality and the human unconscious. This metaphor suggests that through uncovering the unconscious processes and control patterns that trap people, we will comprehend and cope with the consequences of our actions and behaviours.

Repressed sexuality

Freud (1953), in the exploration of human ‘infantile sexuality’ (libidinal desires and satisfactions), argued that unconscious processes and childhood experiences are preconditions of humans' adult personality. Repression creates the basis for the various kinds of defence mechanisms. In the light of this view, we may argue that repressed sexuality has a profound impact upon shaping corporate policy, work relations, organisational ethos and individual behaviour. These unconscious concerns of individuals indicate that we may resolve many organisational problems at the interpersonal level.

Patriarchal family

The patriarchal family notion produces the idea that organisations are built upon the characteristics of the male sex (Morgan, 1986). According to Coward (1983), this dominance of the male sex is derived from the ‘sovereign’ patriarchal power and authority of the father in the construction of the family. So society, political and social groupings are inevitably influenced by this patriarchal theory.

Death and eternity

According to Becker (1973), anxious humans try to repress their pessimistic or grimmer thoughts through denying the truth of death and hiding it in their unconscious. The overall aim of this dismissal and rejection of death rests in creating a 'manageable world'. Humans escape from mortality via creating shared values, beliefs and norms (culture).

Tension

According to Klein (1957), the human child develops defence mechanisms (e.g. counter force, fixation, projection, idealisation and repression) against 'persecutory anxiety' derived from fear of death and annihilation. These defence mechanisms have a profound impact upon the adult personality. Bion (1961), who analysed group behaviour in organisations, suggested that under difficult conditions groups sacrifice their tasks to be performed and spend all their time and energy protecting themselves against tension. According to the psychic prison metaphor, destructive impulses such as fears and threats within the unconscious mind of people may become included in structures, processes and cultures of organisations.

Transitional objects

Winnicot (1958), who analysed 'transitional objects' such as dolls, rabbits, toys and thumb puppets in human development emphasised that these transitional objects create a link between a child's internal and external world ('me and not me'). Objects having this significance play a key role throughout human life, but their forms normally change, for example into skill and power. Humans cling to these objects or qualities in order to maintain a sense of identity.

In the light of this view, the psychic prison metaphor explains that these transitional objects which are embedded in the human mind, affect organisational arrangements, attitudes, creativity, innovation and the identity of the organisation.

Shadow and Archetype

Jung (1959) argued that the 'collective unconscious', as part of the 'human psyche', has never existed in consciousness and has never been acquired individually. Its content comprises 'archetypes' which show definite forms in the mind. According to Jung, the 'shadow' refers to unrecognised and rejected desires of humans which play a critical role in personality development.

g. *Flux and Transformation Metaphor*

This metaphor encourages managers to believe that organisations are in the process of constant transformation.

Organizations as self-producing systems

This idea of autopoiesis is based upon Maturana and Varela's (1980) work that stresses that all living systems are organisationally 'closed', 'autonomous' and 'self-referential'. Maturana and Varela's work presents the view that all living systems are organised in such a way that all their parts or 'components' and processes mutually and continually create processes and components, thus building an autonomous and self-producing existence.

Mutual causality

Maruyama (1963), who analysed the nature of mutual causal processes, found that each process is formed by a closed loop, in which one element's action is started by itself or by other elements outside the loop and influences all other elements in the loop, and finally causes an extra change in the first element. He divided these mutual causal processes into two major types: ‘deviation-amplifying’ and ‘deviation-counteracting’.

Chaos and complexity perspective

Morgan (1997) argues that complex, ‘non-linear’ systems or organisations are characterised by ordered and chaotic multiple internal interactions and highly turbulent external contexts. These fluctuations and disorders that produce unexpected events and relationships push an organisation into instability and create opportunities for movement into a new order and adaptability to the changing conditions. One final point which was raised by Morgan is related to the fact that the chaos manager should live with ongoing transformation and emergent context as a natural state of affairs. In the process of shaping critical parameters, the chaos manager should benefit from the characteristics of holographic self-organisation.

h. Domination Metaphor

The dominant character of organisations will be analysed through three major contributions made by Marx, Weber and Michaels that seem, according to Morgan, to constitute the main elements in the development of this metaphor. Then, our exploration focuses on how organisations dominate their employees, on international politics, and on the world economy.

Organizations as instruments of domination

According to Marx, the state does not represent the general interest but the specific interests of the dominant class, which uses bureaucracy as a vehicle to exercise domination over other social classes. Marx, who gave particular emphasis to economic structures and ‘contradiction’, argued that in the capitalist mode of production organisations allow one group of people to accumulate capital and generate economic surplus through exploiting their employees.

Baran and Sweezy's analysis of ‘monopoly capitalism’ builds on and modifies Marx's position. According to Baran and Sweezy (1966, p.62), ‘monopoly capitalism’ is a system made up of giant corporations operating in an environment including smaller firms which are really incapable of countering the big firms. Although large firms set prices and are not limited to the given market price, they worry about the challenge to high profits set by competition.

In Marxist theory generally, it is argued that the growth of organisation and competition, the increasing complexity of machines, the maximising of profit, and the centralising of capital in fewer hands through bureaucratisation --all these alienate and degrade workers and generate antagonism and struggle between ruling class and working class. This gives rise to a fight against managerial authority through individual and collective resistances such as refusal to take orders, breaking machinery, sabotage and unofficial strikes (Braverman, 1974; Friedman, 1977). Weber argued that although bureaucratisation is the most efficient form of organisation, it constitutes a kind of domination and threat over individual freedom, especially as bureaucratisation masks its dominating character by representing itself as a rational and democratic organisational form.

The domination metaphor emphasises that both white-collar and blue-collar workers are faced with the risk of physical and mental breakdowns. The sources of these tensions and stresses are ambition, relations at work, frustration, anger and powerlessness.

i. The carnival metaphor

The carnival metaphor is using to indicate at least two aspects of organization which is hidden while using other metaphors. Normally, in the time of holding a carnival show, there is no formal order of things. Instead, they encourage diversity, creativity and ambivalence. Thank to that, we can easily see the fragility of social order which is endured in each organization and also to acknowledge the existence of other aspects and voices which are usually marginalized or suppressed. The meaning of carnival is bright and be light, and present the place where people spend their time to enjoy the life, music, dance, etc. If we pay attention to playfulness, irony, sex, etc, we can explain much more about organizations. Of course, in the other hand, critics would see the overemphasis placed by the metaphor of carnival on the “irrational” views of organizational life as trivialising. Organizations are very important social institutions and our well-being depends on the well functioning of them.

These metaphors have been broadening to help the managers to be aware of the problem that inform their thinking and to enable them to pay attention to some alternative assumptions about their management styles as well as their own organization. Certainly, readers will feel more familiar with some metaphors and the vision presented of the world they inhabit than others.

CHAPTER III: THE DESCRIPTION OF SOFT SYSTEM METHODOLOGY

1. SSM's Literature Review

Checkland's system thinking and system methodology have been developing for more than 40 years since 1970s. Undoubtedly the greatest contribution of his work is his Soft System Methodology (SSM) which plays an important role in the field of contemporary system practice. It is one of the most developed Systems Methodologies in terms of its theoretical frames and philosophical meaning. It is also one of the most widely used in the UK and in other parts of the world (Mingers and Taylor (1992); Ledington et al, (1997); Macadam and Packham (1998); Macadam et al (1990); Macadam et al (1995), Rodrigues-Ulloa (1994a, 2003); Wilson (1984, 2001) amongst others. During the 1970s, Checkland and his colleagues at Lancaster University questioned the use of hard systems thinking to real-world situations and started to test a new methodology that shifted the systemicity from the real-world to the process of enquiry itself.

SSM itself particularly well to dealing with complex situations, where those involved lack a common agreement on what constitutes the problem, and that needs to be addressed. In such situations, there may exist many different perspectives, values, and beliefs around what aspects of the situation are most important and how to point them out. Those various aspects perceived as problematic and normally very highly interrelated. It is important therefore to develop a comprehensive understanding of those interrelationships between the various aspects of the problem situation. As a systemic methodology, SSM aims to aid its users in developing an improved understanding through an interactive learning process.

Checkland (1985c) categorises the systems movement into two streams. First is hard systems methodology, also known as system engineering, predicted on the goal-seeking model and mainly concerned with how to achieve known ends, with prediction, control and optimization of result. A system is then designed to achieve the formed objectives. This approach is useful at the operational level, particularly when consensus exists on goals and objectives as well as on the means to get there. With most real-world problems, such conditions are very rarely exist . Second, there is the soft systems methodology, formulated on a model of human behavor based on a prescriptive stance, as well as on how we should do it, emphasizing participation and learning processes. Most real-world problems fall in this category. To understand the difference between 'soft' and 'hard' the researcher should make sense the principles and presuppositions which these two kinds of system thinking respectively comply with.

SSM distinguishes itself from hard systems approaches in the way it deals with the notion of 'system.' Common to hard systems approaches is an understanding of systems as ontological entities, i.e., entities existing in the real world. As such, in hard systems approaches when one speaks of a computer system, an information system, or a transport system, one refers to these as bounded entities with a physical existence which can be formally described or designed to fulfil a given purpose.

In contrast, SSM treats the notion of system as an epistemological rather than ontological entity. If we look for example at a particular organisation as a system, we can describe this organisation as a system to make a profit, or a system to transform raw materials into a commercial product, or a system to provide jobs to the local community. Depending on what perspective we take, we will have a very different understanding of this particular organisation.

With the development of system practice, Checkland's system thinking becomes more and more clear and profound. In his second book, Soft Systems Methodology in Action, he summarized his system thinking as seven points as below.

> (1) System thinking takes seriously the idea of a whole entity which may exhibit properties as a single whole ('emergent properties'), properties which have no meaning in terms of the parts of the whole.
>
> (2) To do systems thinking is to set some constructed abstract wholes against the perceived real world in order to learn about it.
>
> (3) Within system thinking there are two complementary traditions. The 'hard' tradition takes the world to be systemic; the 'soft' tradition creates the process of enquiry as a system.
>
> (4) SSM is a systemic process of enquiry which happens to make use of system models. It thus subsumes the hard approach, which is a special case of it.

(5) To make the above clear it would be better to use the word 'holon' for the constructed abstract wholes, conceding the word 'system' to everyday language and not trying to use it as a technical term.

(6) SSM uses a particular kind of holon, namely the so-called 'human activity system'. This is a set of activities so connected as to make a purposeful whole, constructed to meet the requirement of the core system image

(7) In examining real-world situations characterized by purposeful action, there will never be only one relevant holon, It is necessary to create several models of human activity systems and to debate and so learn their relevance to real life (Checkland, 1990).

2. Emergence of SSM

Checkland's Soft Systems Methodology (SSM) arose in the 1960s and experienced an ongoing process of modification. Initially SSM was a nine stage process (Checkland, 1972), the it became a seven stage approach (Checkland, 1981), and then represented as a two strands model (Checkland, 1988; Checkland and Scholes, 1990). Checkland's (1981; 1982; 1983; 1987, 1999) SSM assumed that the notion of organisation is problematical because even there is a determined on goals, processes, procedures and criteria for evaluate performance in organisations, there will be many different appreciations of the nature and the objectives of the organisation based on the diverse interests and values of individuals and sub-groups. In order to maintain its existence the organisation should build up a harmonization among individuals and subgroups

(Checkland, 1981, 1999; Checkland and Holwell, 1998). SSM favours the ‘paradigm of learning’ rather than the ‘paradigm of optimisation of goal’ of hard approaches. Hard approaches assume that the performance of a system can be optimised by pursuing systematic processes in which goals are fore set, the system can be modelled, and the behaviour of the system can be controlled and predicted in terms of determined goals with maximum efficiency and effectiveness. However, SSM ignores the modelling of the system. It encourages a systemic learning process in which the system as a whole gets attention or different perspectives in the organisation are analysed and debated that bring about meaningful action and ongoing improvement for the whole system.

In this empirical study in tourism sector in Vietnam, my research methodology will focus on the ‘Two Strands’ Model of SSM that first appeared in Checkland and Scholes’ (1990) *SSM in Action* rather than the Seven-Stage learning process which appeared in Checkland’s (1981) *Systems Thinking, Systems Practice*. The reason for this is that the seven-stage version of SSM emphasised the systematic appreciation of the process in which SSM reflected the ordinary day to day activities of the organisation. Or we can say, the ‘Seven Stage’ model of SSM provides a well-designed sequential process for the investigation. It allows the practitioner to shape reality in terms of what is done. The iteractive characteristic of the process of inquiry in this version of SSM is not fully represented. Some aspects of SSM became neglected such as social, cultural and political dimensions of the problem situation which are in fact very critical in the case analysis of a tourism company where many stakeholders such as government, shareholders, tourism managers, hotel managers, receptionist , tour guides, tourists and staff possess vastly different authority, power, values, behaviours, perceptions, knowledge, emotions, beliefs. In addition, the relationships in terms of information exchange among these stakeholders are frequent and many. However, 'Two Strands' model of SSM is better articulates those implicit aspects of methodology such as analyses of social and cultural components of a problem situation by a process of inquiry, interview. It provides analysis of different viewpoints leading to the improvement of problem situation that ensures holism. It is flexible and concern orientated. This version of SSM focuses on everyday activities in organisations and is more practical. Today's managers in organisations are more likely to take action according to their own sensation, personalities and values and don't want to make decision according to guidelines of a methodology. If we had applied seven stage of SSM we would not have clearly analysed very different viewpoints of participants of the case.

2.1. Two Strands Model of SSM

This model of SSM has two types of analysis: a stream of cultural analysis and logic based stream of analysis.

2.1.a Stream of Cultural Analysis

Cultural analysis includes three types of investigation: Analyses One, Two, and Three and rich picture building.

Analysis 1 deals with the roles of client, problem-solver and problem-owners. The problem-owners are stakeholders who hold interests in the perceived problem situation.

The problem-solver is the one who wants to do something about the perceived problem situation. The client is the one that leads to the inquiry phase. Plausible problem-owners are chosen by the problem-solver. A high number of stakeholders will allow the problem-solver to generate a comprehensive analysis of the problem situation that is shaped by the viewpoints of would-be problem-owners. This also enriches the designation of relevant systems deriving from the rich picture supporting the logic based stream of analysis.

Analysis 2, which called social system analysis, reveals the playing part that institutionally define social positions, norms that are typical and expected behaviours of an individual or group, and values that are standards by which a performance in a position is appraised. These three components are constantly changing and have a close relationship with each other. They are socially constructed and reconstructed by individuals and groups (Checkland and Casar, 1986).

Analysis Three is concerned with how power is gained and employed. This can be explicit or implicit based on a wide range of commodities such as skills, talent, control over organisational resources, experience, and personality (Stowell, 1989). These three analyses should constantly be revised and improved in the implementation. It is also suitable to integrate them to a rich picture that help select insightful relevant systems, ensure open deliberation, and inform feasible changes in the logic based stream analysis.

Rich Picture helps discover about the problem situation. Although there are no guidelines to draw the rich picture they are like cartoon in nature allowing the practitioner to appreciate the social and cultural features of the problem situation pictorially. Completing three analyses above will help build the rich picture. It is assumed that the complexity of human relation and activities such as issues, conflicts, and multiple interacting relationships should be revealed by pictures.

2.1.b Logic Based Stream of Analysis

Logic based stream of analysis includes naming, listing and selecting relevant human activity systems, defining selected relevant human activity systems (root definition) and modelling selected relevant human activity systems (conceptual models), comparing conceptual models with the problem situation in the rich picture, and then recommending changes to improve the problem situation.

In designating, listing, and selecting relevant human activity systems Checkland (1981) assumed that the practitioner should use the rich picture that offers insights into the problem situation. They are not reflections or models of anything in reality but they are concepts based on the world-views of individuals and groups. They enrich and shape the structure of debate about a perceived problem situation. Relevant human activity systems allow the practitioner to go beyond the conventional departmental boundaries in the organisation. This helps facilitate debate within the whole organisation to question the existing problem situation from different standpoints. The selected relevant human activity systems should be concluded into root definitions.

In defining selected relevant human activity systems Checkland and Scholes (1990) assumed that the practitioner should make clear definitional expressions in order to construct SSM's root definitions. In practice, there is a tendency to confuse the input that is transformed into output with the resources needed to carry out the transformation process. A root definition should express a purposeful activity as a transformation process. A well-formulated root definition should meet components which make up the mnemonic CATWOE:

- C—Customers: Beneficiaries and victims of the transformation process.
- A—Actors: Those who would undertake the transformation process.
- T—Transformation: Conversion of input to output.
- W—Weltanschauung: World-view that makes this transformation meaningful.
- O—Owners: Those who could cease the transformation.
- E—Environmental Constraints: Components outside the system as given.

In recent years, element root definitions can be used in the following form: do P by Q in order to contribute to achieving R. This form answers three questions: What to do (P), How to do that (Q) and Why do that (R)? The use of P, Q and R prevents Q from being confused with why. This forces the researcher to examine reasons for (R) for doing (Q) and to summarize the core transformation in a root definition.

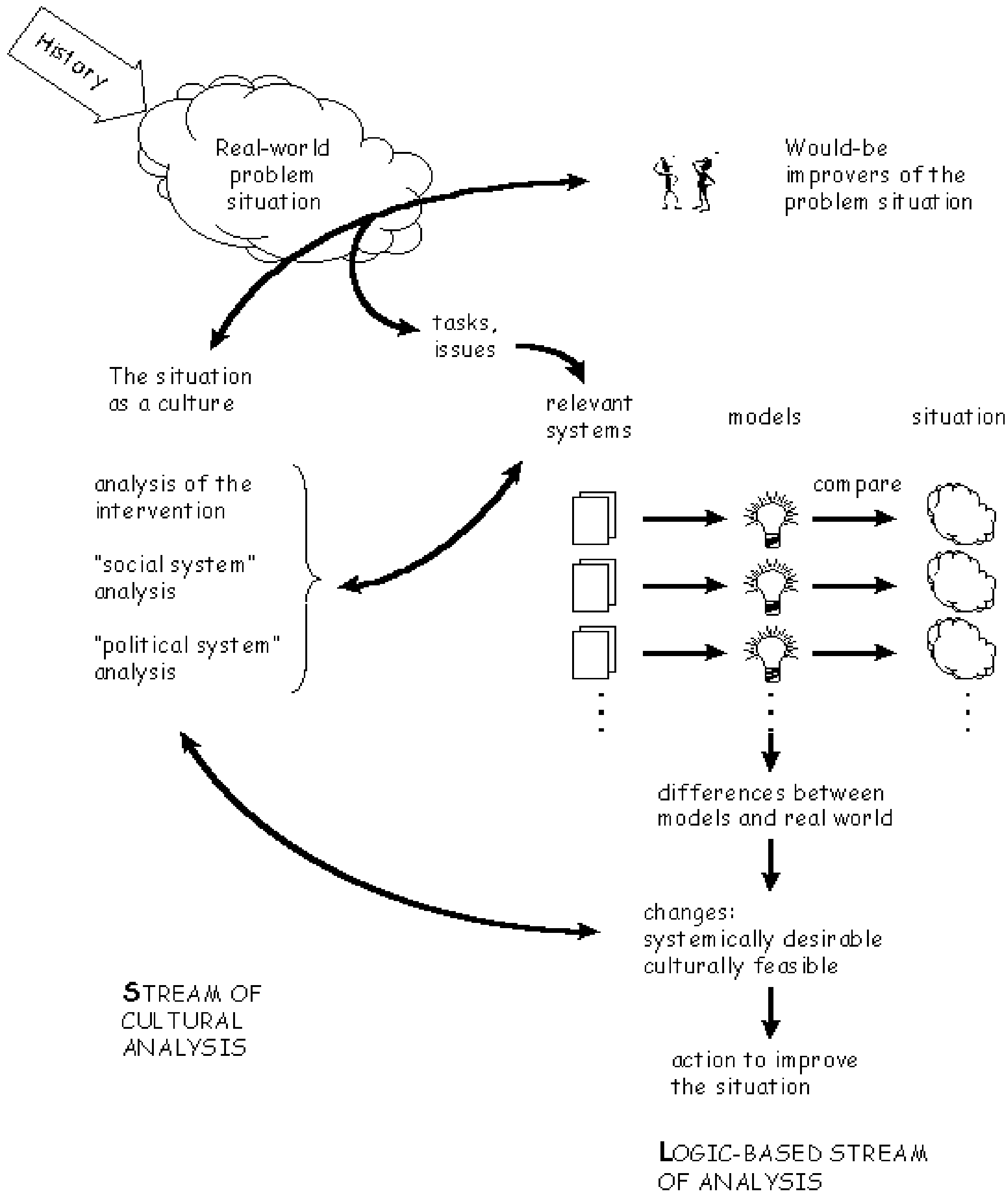
Checkland (1981) assumed that it is helpful to consider two types of root definitions: primary- task and issue-based. The primary-task root definition refers to officially announced tasks that draw or form the organisational structure. The issue-based root definition refers to existing problems.

In modelling selected relevant human activity systems Checkland and Scholes (1990) emphasised that the practitioner should not describe real-world arrangements but organise the activities to be undertaken on the basis of background knowledge and experience in order to accomplish the transformation.

Checkland (1981) preferred that purposeful activity models conform to Miller's (1968) 'magical number' 7 ± 2 essential individual activities to carry out the transformation. Verb statements concerning operations as well as monitoring and control are keys to build these 'purposeful holons.' In the process of building conceptual models Checkland and Scholes (1990) provided a logical procedure in which verbs in the imperative mode are used, activities that could be done right away are selected, dependent activities are connected through arrows until all activities are accounted for, overlapping arrows are eliminated, and monitoring and control are added. Proper monitoring and control specifies criteria for efficiency (whether the transformation is being carried out with a minimum use of resources), efficacy (whether the means chosen actually works in producing the output), and effectiveness (does transformation meet the long term aim?) (Forbes and Checkland, 1987).

In comparing conceptual models with the perceived existing problem situation in the rich picture Checkland (1981, 1999) suggested four ways: informal discussion that highlights main discrepancies between models and the rich picture, formal questioning that involves a matrix in which activities, whether they exist or not, the way it is done, the way it is judged and comments are considered, scenario writing that activates human activity systems in the mind or on paper to understand how it is expected to behave in the future, and modelling the real world according to the conceptual model in order to stress significant differences that might stimulate debate.

In making recommendations, Checkland (1981, 1999) categorised changes as structural, procedural and attitudinal. Structural changes are changes in the task responsibility or roles. Procedural changes are changes in the processes of informing and reporting and work activities. Attitudinal changes are changes in perceptions, expectations and behaviours. They have to be systemically desirable, changes should be the outcome of debate initiated by root definitions and conceptual models and culturally feasible, changes can only be implemented if they are perceived as meaningful to the basic assumptions, values, norms, and artefacts of a system in which the modification will occur.



Fingure 2: Two strands version of SSM

CHAPTER IV: APPLICATION OF SSM TO TOURISM COMPANY

Vietnam has an annual increase of 13 percent in the tourism field. The development is fast, but it remains a long way to reach the desired development services. The population is conscious of the benefit tourism gives, and knows that its development would contribute to the increase in employment.

But the tourist companies encountered difficulties to reach final tourist, because of small qualified staff in marketing and lack of expertise in information technology. The difficulties in recruiting are high and we could note that universities have a great lack of means. Today, companies, just like formation establishments, do all they can with their means. The Department of tourism of Hô Chi Minh City simply admitted that it cannot improve its Internet site, for the reasons above, and it does not have, for the moment, the means to send a team member in formation. Thus, the companies wait until things change by themselves.

In addition, the language trainings and the English master are still very weak in certain areas. Most of young Vietnamese speak English, and tourist guides speak perfectly several languages. However, apart from the tourist paths, in public transport in particular, it is more difficult to be understood in another language by Vietnamese.

1. Company Overview

Bao Son Travel (BS Travel) is a member company under Baoson Group, a leading economic group in Vietnam with 17 member companies, operating in various fields of

Hospitality, tourism, Real Estate to exploit and development of recreational areas, tourism areas, and the resort. The Baoson Group originally is not specialised in tourism so that their management method seemed to be old and slow compared to other leading tourism companies in Vietnam. The personnel in the company are also mostly assigned or transferred from another sector to work in this new sector, so that they do not have much expertise and knowledge about tourism management.

2. Application of SSM to Tourism Company

The main reason for choosing SSM as a tool to analyse the tourism company is that tourism is a dynamic industry with fast change in demand and supply as well as knowledge. The diverse interests of parties in the tourism sector create a multicultural environment. SSM is a soft approach that assists the practitioner in leading accommodation between different and conflicting viewpoints based on various values and implications among participants to implement agreed changes. In terms of SSM, the problems in the tourism sector are very complex and dynamic. There are high numbers of sub systems such as tour operator, travel agencies, hotel, restaurant, transportation, tour-guide, government, local attraction, public relation are all closely concerned about quality of services in tourism. They frequently interact with each other. SSM favour cultural and political metaphors. In this study, the cultural and political issues (e.g., norms, values, power, and interests) are of paramount significance so that I chose SSM as a dominant tool to make this application. Beside that, I much more prefer qualitative approach than quantitative approach because I think survey making can create a big biases compare to the reality. Interview and direct communication approach can be much better because with direct observation, the biases can be eliminated. Furthermore, social scientists in social inquiry should rely much more on worldviews as expressions of meaning and explanations of located patterns not primarily on numbers so as to generate insightful accounts of social reality. The single method of quantitative research is ill-equipped although generating perspectives should be employed together with qualitative method. The qualitative method is inevitable in understanding the constructed character of social life. However, there is no royal path to perfect knowledge although the mixture of two is essential. The ultimate goal is to make advancements in knowledge and human well-being (Romm, 2013).

The application of SSM includes a stream of cultural analysis and logic based stream analysis focusing on a tourism company in Vietnam, which is operating in the North – Capital Ha Noi.

Before the enquiry, I have given a brief introduction about SSM to those who involved in the process of application. They are Mr. Nguyen Tuan (Inbound Tour Manager), Mrs. Mai Thanh (Outbound Manager), the receptionist (one man and one women), staff working in the company (a women from accounting department, a man who is IT assistant, a girl who is manager assistant, a driver, and two tour guide), and some of the tourists who used the services provided by the company. They were very much interested in the project because this kind of qualitative research has rarely been done in Vietnam. However, some foreign researchers in large institutions might conduct such work. It was almost impossible to explain to them fully SSM but I did my best to give them the main features of SSM, in order to make them understood the aim of this project. The difficulty was related to translating them SSM in Vietnamese and talking them in Vietnamese because most of them had a poor English understanding. They can speak and understand English but when it came to academic English; it was very hard task to get them to understand. In addition, I contacted the company from Turkey via Skype, phone and email. I only visited the company twice when I came back to Vietnam in last January so the process took long time to complete. I was not very much surprised the managers in the company were unfamiliar with new methods of modern management, they had a very little knowledge about the terms such as: values, norms, and power. They did not have informal meeting in discussing about critical problems or generating creative ideas. They often had formal short meetings on Monday mornings every week. But in my observation, those meetings were simply about evaluating the performance of the previous week and making a decision on what needs are to be done in the current week.

Another difficulty that I faced when gathering information was that people in the company did not tell me much about their actual work; I could understand that business secrets were very important for them, especially in Vietnam. Furthermore, the trouble was that Turkey and Vietnam had five hour difference in time so that I had to spend a lot of time to contact each member of the tourism company, explain briefly about some special notions of SSM such as : norms, values, rich picture building, relevant human activity systems listing, conceptual model building , models and rich picture comparing, also feasible and desirable change making in structures, procedures, and activities. This stage became a burden for me. However, many thanks to everyone, I got over it.

In the next part, I will initially explain a stream of cultural analysis of the company and then the logic based stream analysis. Afterwards the rich picture will be drawn and then relevant human activity systems will be listed. Following that will be the comparison between the models and the rich picture; the last step will be about the proposal of feasible and desirable changes for the company.

2.1. A Stream of Cultural Analysis of the Tourism Company

In the stream of cultural analysis, there were three main examinations of the problem situation that were conducted and a rich picture was drawn. In this process, I called managers, staff, as well of some customer of BS Travel in order to determined clients, problem owners, problem solvers, and to understand roles, values, norms and power issues in the company. This process also became very difficult to implement because most of the interviewees did not want to share much information about their working process. In particular, the top level members, such as managers were very resisted while the lower level member seemed to be more friendly and open to me. I needed to be very careful in this process to make sure that biases organization member have could distort the information gathered.

Three types of investigation

2.1.1. Intervention analysis or role analysis

This analysis was about reflecting upon the application of SSM to the problem situation. ‘Rich picture’ (informal drawing) was developed. This examination was found useful to think of the intervention structurally as entailing three roles: they were ‘client’, ‘the problem owner’ and ‘the problem solver’.

In the company, this analysis was made as follows:

a. The client(s): Mrs. Mai Thanh and Mr. Tran Tuan, they were outbound and inbound managers of the company. They had high inspiration and knowledge about management. So that they were very keen on a new way that could help solve the management problems in the company.
b. The problem solver: Hien Nguyen and Mr. Tran Tuan (inbound manager, because inbound tourist present more than 80 percent revenue of the company so that Mr. Tuan’s Power in the company are very strong), the company staff and tourists (customers).
c. The problem owners: BS Travel inbound tour operator department, staffs in the company.

2.1.2. Social system analysis

This analysis focused on roles, norms and values in a problem situation:

a. Roles were the positions held by each person in the company including inbound manager, outbound manager, receptionist, accountant, tour guide, department crew, secretary, and tourists.

b. Norms were expected behaviours in the tourist company such as acts that were accepted by Vietnam National Administration of Tourism. The expected behaviours of the staff in tourism company were professional attitudes such on knowing how to smile, serving customers and attracting others, willing to satisfy all the need and requirements of individual customer, continuing to learn to become expert in the field (e.g., 7 out of 10 customers did not know exactly where they want to go when they come to your company) assisting customers, and convincing customers at your discretion and being honest and reliable.

c. Values that constitutes good or bad behaviour in roles included the following attributes in the tourism company:

   - People in the company had an exceptionally strong common focus on the mission of the company.
   - Receptionist was friendly and hospitable.
   - Effective working environment was flexible and clean.
   - Tour representatives were patient with the customers
   - Tour guides were understandable, punctual, friendly, knowledgeable, interactive, humorous, and flexible.
   - Employees had commitment to work.
   - Managers had autonomy in making decisions.
   - Managers were responsible for sustainable tourism management having environmental concerns.

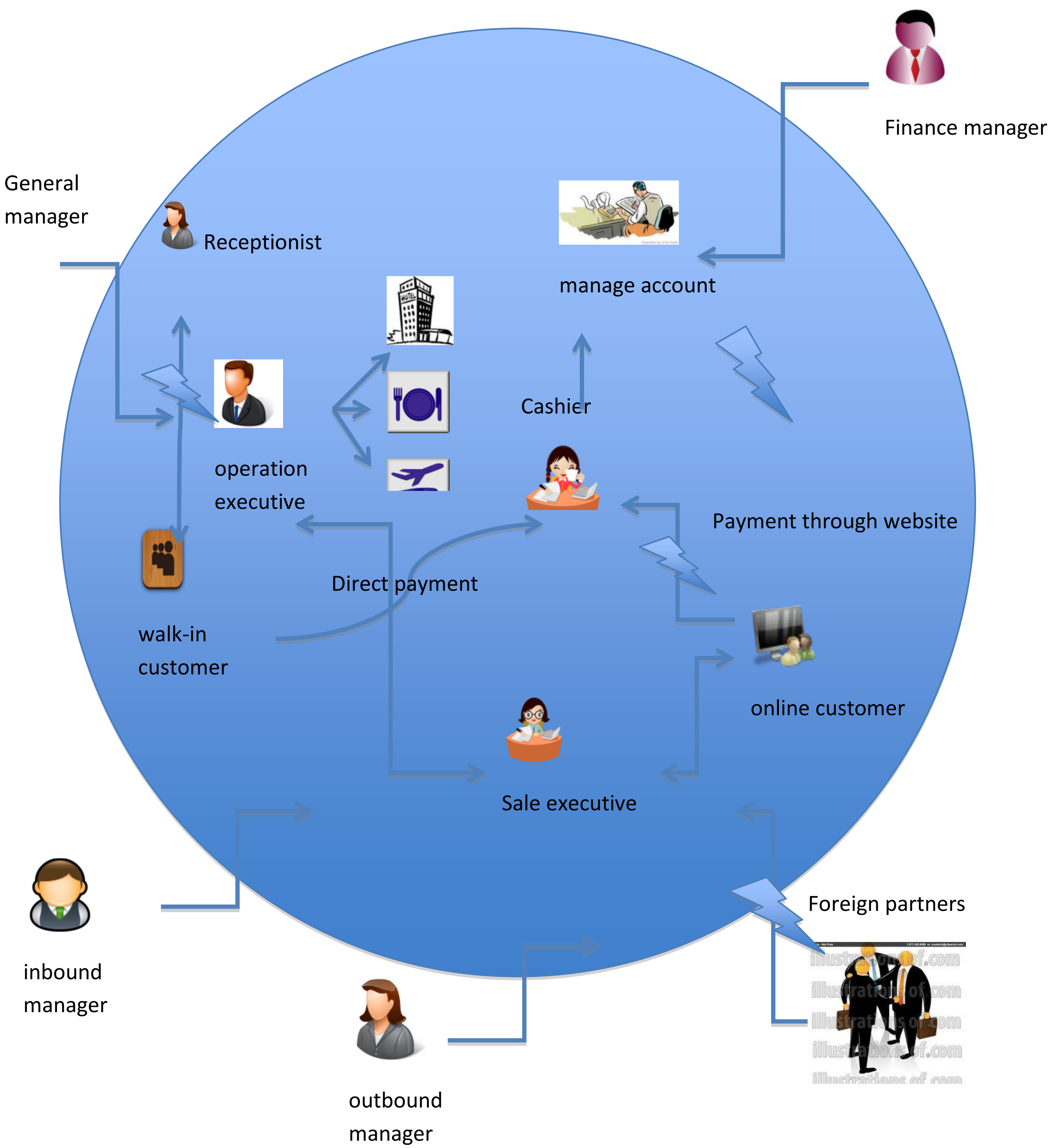
2.1.3. Political analysis

This examination answers the question related to power distribution in the company which uses question such as what are the embodiments through which powers is expressed? How are they obtained, used, protected, preserved, passed on, and relinquished through what mechanism?

In the company, the power was decentralised from the board (owner of the tourism company). The power was used by the manager of each department. Almost of the employees in the company were not hired by formal procedures, they could be relatives to the board or advised by some managers in the company. This was usual in Vietnam. The inbound manger, for example, had power of making all decisions concerning the operation, but could not fire anyone who did not meet work requirements. The firing decisions should be made by the board. They had meeting within the department every week but meeting with the top managers may be arranged once a month. The inbound manager had more power in the company because his department generated more revenue for the company and he had a degree from a foreign university. He did not delegate his power except to outbound manager. If both of them were out of the office, all issues needing their approval would be put aside until they were available, which was slowing down the whole work process. In addition, all high employee performance would be evaluated and rewarded by the end of the year.

2.1.4. Rich picture

Figure 3: Rich picture



Finance manager
General manager
Receptionist
manage account
Cashier
operation executive
Payment through website
Direct payment
walk-in customer
online customer
Sale executive
Foreign partners
inbound manager
outbound manager

2.2. The Logic Based Stream of Analysis of the Tourism Company

In the logic based stream of analysis, the relevant systems were named, listed and selected below. Then those selected relevant systems were defined in root definitions and modelled. Afterwards, those conceptual models were compared with the problem situation in the rich picture. Finally, systemically desirable and culturally feasible changes in structure, procedures and attitudes were recommended.

2.2.1. Designating, Listing and Selecting Relevant Systems of the Tourism Company

These human activity systems were listed by the problem solvers and problem owners during interview. Tourism operations included a wide range of activities which were concerning with tour agency's staffs, hotel managers, restaurant managers, tour guides, local personnel, etc. All of the human related activities have been observed and listed bellow:

1. A system to improve customer satisfaction.
2. A system to provide adequate and skilled labor forces which specialized in service industry such as tourism, hotel management, restaurant management, etc.
3. A system to improve inbound tour operation.
4. A system that maintains rules and regulations of Vietnam State concerning the Administration of Tourism.
5. A system to make customer have an easy access to the website to see available services, make booking and payment online (especially foreign tourists).

6. A system to educate tour guide in health service, assisting tourist if any accident can happen during the trip the tour guide need to have some medical knowledge.
7. A system to create harmonisation among departments in the company
8. A system to improve customer relationship
9. A system to decrease decision trafficking deriving from large company structure.
10. A system to adapt ready changes in order to compete with other tourism agencies.

2.2.2. Defining and Modelling Selected Relevant Systems

In this step, I sent the list of relevant systems to everyone in the interview circle and asked them to draw up the issues in an order of importance for the company. At the end, three relevant systems of the tourism company were chosen. The first relevant system was to make an easy access to online booking and payment. This issue was only recognised in the interview with some of the lower level employees. However, they could not have chance to bring it in the meeting of the company because they had fear of saying something new to the managers who had tendency to follow the old approach and resist to change. The second relevant system was to improving employment process to have better skilled employees who have better knowledge and experience about the sector. This idea was generated by the interview with the customers. The interesting thing was that the employment process in the company was not effectively working because the employees mostly had university degrees other than tourism sector. Some of them were good at foreign languages but lacked professional skill in tourism management. The third relevant system was to improve inbound tour operation. This idea was made by almost of the staff in the inbound department. It is important because the revenue from this department present 80 percent in the total revenue, but the service offers still had no development, advertisement activities were weak and there were more and more competitors stepping into this sector, if the company do not pay enough attention to this sector as well as have no new ideas, the profit can drop in the future.

The selected relevant systems in the list above were 2, 3, and 5. However, the conceptual model building process became a very hard task for me because I did not have much knowledge in the sector. So, I spent almost a half year to discuss issues with those who were experts in the sector. I myself was busy with the work at the university as well as my part time job at night. My interviewees were in Vietnam so that the time zone difference became a major problem for the communication between us. They also were very busy with their own jobs; therefore they seemed to neglect to help me. However, I called and emailed them all the time and waited for them to engage in this process. Fortunately, at the end I managed to complete the process.

The following were root definition and conceptual model which was developed for the relevant system number 2: a system to provide adequate and skilled labor force with specialism in service industry such as tourism, hotel management, restaurant management, etc.

Root definition

A system to recruit new employee(s) for the company, by using available manpower channels and suitable steps, guided by wishes of the company itself, requirements of the position, recruiter's subjective experience, agency practices and legislation, in order to fill an open position with a suitable employee. The system is owned by the company human resource department, within the constraints of time, availability of candidates. It is needed because there needs to be an employee in the open position for the company to do business.

C: BS Travel

A: Recruiter (human resource managers)

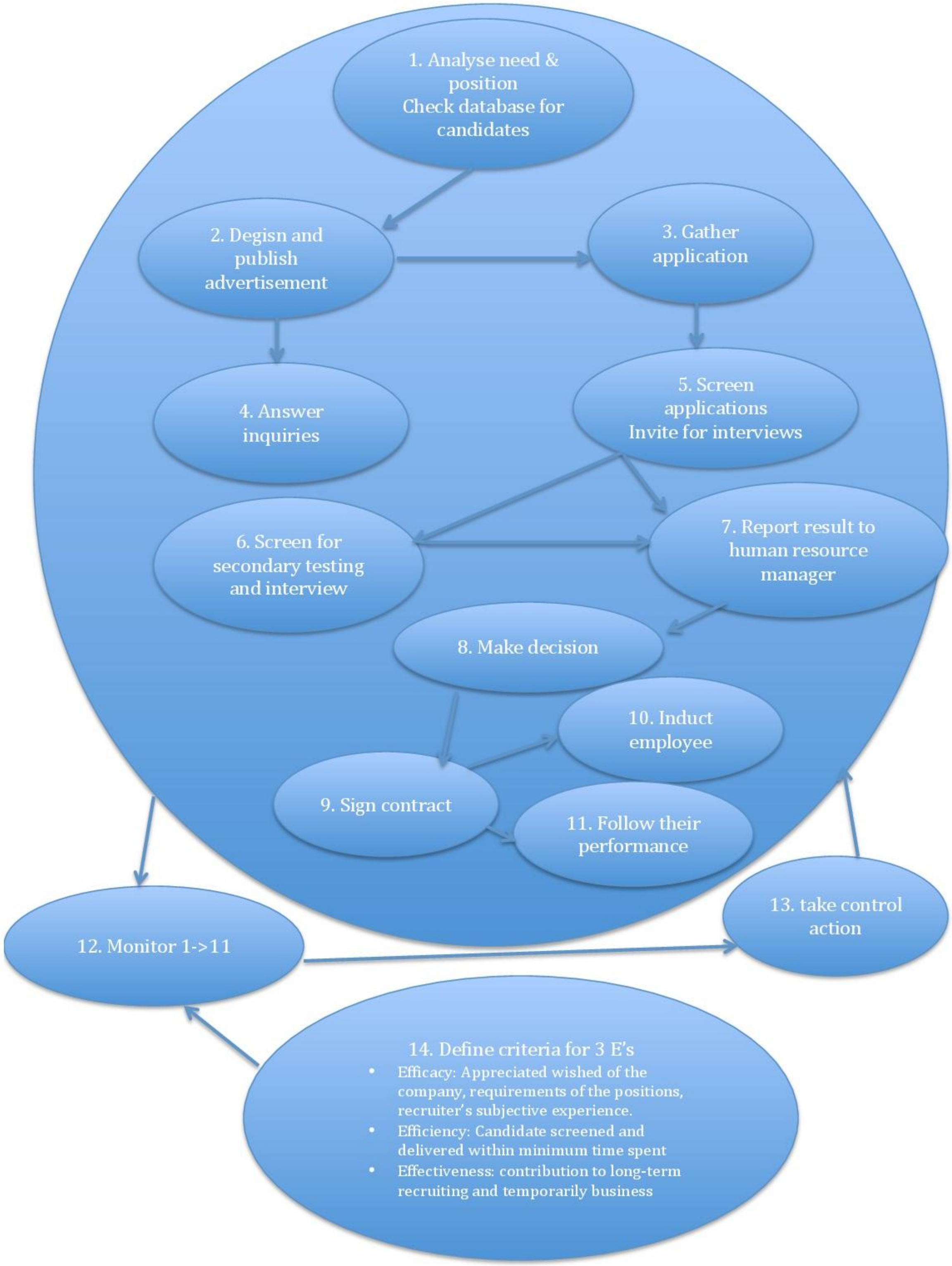
T: Need to recruit suitable employee=>that need met

W: desire or demand of the company to hire skilled employee

O: BS Travel

E: Recruiter time, capabilities and availability of the candidates as well as compensation guidelines.

Figures 4: conceptual model of root definition 1


1. Analyse need & position
Check database for candidates
2. Degisn and publish advertisement
3. Gather application
4. Answer inquiries
5. Screen applications
Invite for interviews
6. Screen for secondary testing and interview
7. Report result to human resource manager
8. Make decision
9. Sign contract
10. Induct employee
11. Follow their performance
12. Monitor 1->11
13. take control action
14. Define criteria for 3 E's
Efficacy: Appreciated wished of the company, requirements of the positions, recruiter's subjective experience.
Efficiency: Candidate screened and delivered within minimum time spent
Effectiveness: contribution to long-term recruiting and temporarily business

The followings were the root definition and the conceptual model which were developed for the relevant system number 5: A system to make customer have an easy access to the website using available services, making booking and payment online (especially foreign tourists).

Root definition

A system owned by the company which allow the customer to do the booking at anytime, anywhere by their own very easily and can check the status of the booking at anytime. An online customer registration and guidance system with secured payment gateway can minimise the unsatisfactory of the online-customer due to lack of efficient customer service team, undeveloped payment system (online) by providing facility for online booking and online purchase as well as training service team to assist customer at anytime needed.

C: Tourist, BS Travel

A: Company management

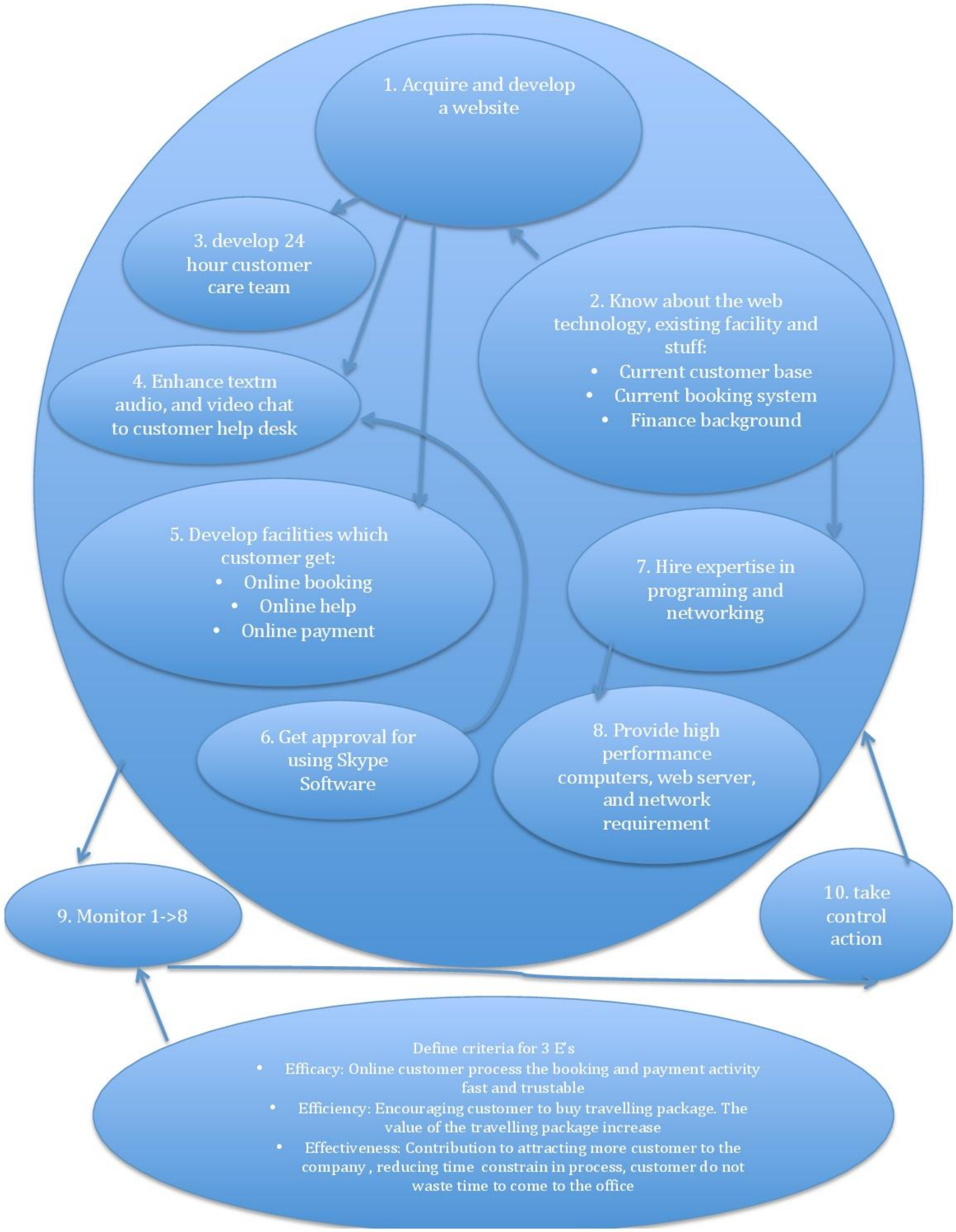
T: Difficult access → easy access to do online booking and purchase

W: Customer can get package detail from the website. With the customer guiding system customers are directed online web, as well as offline from information desk.

O: BS Travel, company management

E: Customer service office and company website

Figure 5: conceptual model of root definition 2



The followings were the root definition and the conceptual model which were developed for the relevant system number 3: A system to improve inbound tour operation.

Root definition

A system to improve inbound tour operation, which is currently weak due to poor tourism product, traveller program overlap, advertising capabilities, marketing and market expansion is limited in many ways, by improving relations and communication with foreign partner, creating more attractive tour program, more training for staff in inbound department and invest in marketing activities.

C: Tourist, BS Travel

A: Company management board, inbound manager

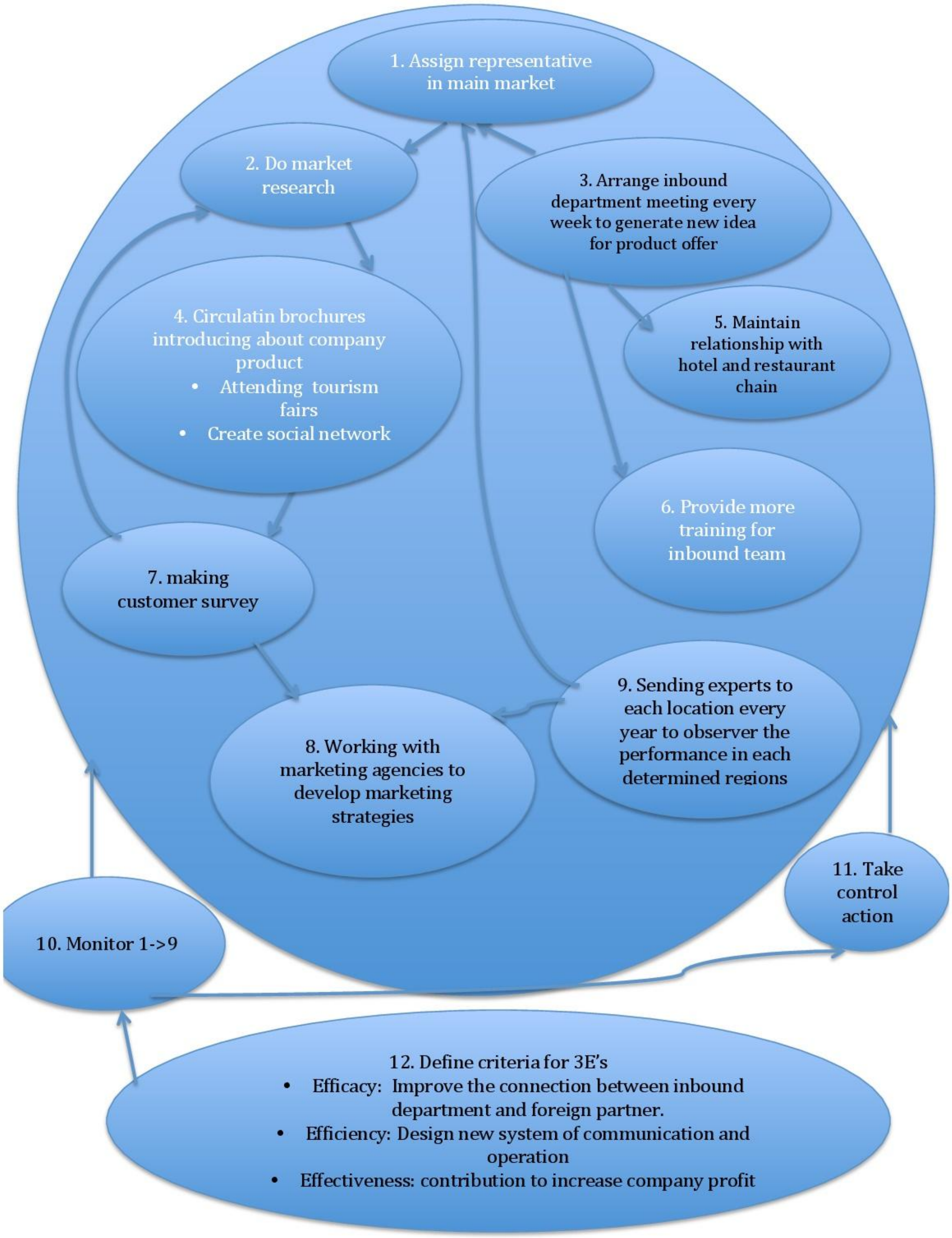
T: Low number of tourist→ high number of tourist coming every year

W: find more partners in most popular region, creating more attractive tourism product, increasing service, invest in marketing activities.

O: BS Travel, inbound manager

E: Investment fund in marketing activities, time, effort of inbound department's staffs, customer interest.

Figure 6: conceptual model of root definition 3


1. Assign representative in main market
2. Do market research
3. Arrange inbound department meeting every week to generate new idea for product offer
4. Circulatin brochures introducing about company product
• Attending tourism fairs
• Create social network
5. Maintain relationship with hotel and restaurant chain
6. Provide more training for inbound team
7. making customer survey
8. Working with marketing agencies to develop marketing strategies
9. Sending experts to each location every year to observer the performance in each determined regions
10. Monitor 1->9
11. Take control action
12. Define criteria for 3E's
• Efficacy: Improve the connection between inbound department and foreign partner.
• Efficiency: Design new system of communication and operation
• Effectiveness: contribution to increase company profit

2.3. Comparing Conceptual Models with the Perceived Existing Problem Situation in the Rich Picture

In comparing conceptual models with the perceived reality in the tourism company we have used the formal questioning method. In the matrix in the left- hand column the activities in each model and the links taking place are listed, then each activity exists or not in the real situation, how it is done, is it culturally feasible and systematically desirable or not will be questioned. Lastly, in the comment part, the ideas about changes are listed.

The Matrix of comparing the real-world situation of the Three conceptual models

Activity	Exist or not in real situation	How is it done	Desirable	Feasible	comments
1. Analyse need & position Check database for candidates	yes	Standardise recruitment request form. Database for candidate is limited(only internal source)	Yes Yes	Yes Yes	Automate request form electronically and tie in advertisement. Look for candidate from external source as well as from competitors

2. Design and publish advertiseme nt	No		Yes	Yes	Advertise widely in tourism university, on internet, career website to attract more potential candidates
3. Gather application	Yes	Candidates bring the document to the company	Yes	Yes	Improve the process by designing the system that allows candidate to send the application online, by email, it is better way to review all the application and reduce time.
4. Answer inquiries	No		Yes	Yes	-Assign assistant to answer email and phone call to ask about the job position from candidates so it can reduce the number of unwanted candidate.

5. Screen applications Invite for interviews	Yes	Application considered individually	Yes Yes	Yes Yes	Applicants should be considered for effectiveness of the process Assign the interview board with member from each department
6. Screen for secondary testing and interview	No		Yes	Yes	Process second interview and do some testing to chose the best candidate who has needed skill and is better than others
7. Report result to human resource managers	Yes	Paper work	Yes	Yes but hard due to communication	Reduce the time waiting for response from the board is necessary through bringing them into meeting Board needs to delegate the power to human

				problem	resource managers so as to select candidate
8. Make decision	Yes	Made by board of director	Yes	Yes	Human resource manager should have the right to make decision after meeting with related department
9. Sign contract	yes	1 year	yes	yes	The trial contract should be made for 3 months. If employee is not suitable, company can have time to search for another
10. Induct employee	yes	Assign an advisor to them	yes	yes	Job rotation should be used so that the company will work with different departments to understand whethet the whole system is working or not

11. Follow their performance	yes	Inquiry after every month working	yes	yes	Automated feedback channel should be set up so measuring can be updated weekly
Links					
1-2-3; 1-2-4; 3-5-6-7; 7-8-9-10-11					

Table 1: The matrix for comparing the First conceptual model with a real world situation

Activity	Exist or not in real situation	How is it done	Desirable	Feasible	comments
1. Acquire and develop a website	yes	Too simple but writing too	yes	Yes	-The website need to be more colourful, have more pictures and be presented in a

		complicated			simple way so that all types of customers can easily understand it
2. Know about the web technology, existing facility and stuff: • Current customer base • Current booking system • Finance background	No		Yes	Yes	Hire IT expert to work unofficially (he can work at home and main task is to take care of the website) Provide him with training for first months at the company campus
3. Develop 24 hour customer care team	No		Yes	Yes	Hire part time employees for night shift or outsource call

					center
4. Enhance text audio and video chat in customer help desk	No		Yes	Yes	Provide audio or video chat so customers can feel safer and they will find the company reliable
5. Develop facilities customer get: • Online booking • Online help • Online payment	No		Yes	Yes but hard because it need time and money	Work with an IT company to buy and set up the programme with secured payment and effective booking

6. Get approval for using Skype Software	yes	Only use to talk to partner	yes	yes	For customer assisting purposes, Skype can be used as a call center
7. Hire expertise in programing and networking	no		Yes	Yes	A foreign expert who has proficiency in English language and an understanding in tourism industry should be employed
8. Provide high performance computers, web server, and network requirement	no		yes	No—it is too costly (they said)	The board should invest into its purpose of being in tune with technological developments. This is necesary to cope with the fast changing demand and facilitate the communication
Links					

1-3-4-5; 2-1; 6-4; 2-7-8					

Table 2: The matrix for comparing the Second conceptual model with a real world situation

Activity	Exist or not in real situation	How is it done	Desirable	Feasible	comments
1. Assign representative in main market	No		Yes	Yes	A local employee can be hired or a Vietnamese worker who can speak both Vietnamese and local languages can be sent
2. Do market research	No		Yes	Yes	An agent who does the survey in tourism preference can be hired

3. Arrange inbound department meeting every week to generate new idea for product offer	Yes	Every week formally	yes	yes	Informal meeting is also necessary. Reward employees who can bring new useful ideas into the meeting
4. • Circulate brochures introducing about company product • Attend tourism fairs • Create social	Yes Yes yes	Every year the same Rarely Only	Yes Yes Yes	Yes Yes Yes	The brochures need to be updated by season and translated into local languages along with English It is important to attend all tourism fairs, take notes, and report to the manager There is a need to advertise in other social network such

network		Facebook			as youtube, twitter, and instagram
5. Maintain relationship with hotel and restaurant chain	Yes	By email and phone call only	yes	yes	There is a need to arrange the meeting with them to discuss how to find the best way to increase customer satisfaction as well as benefit for both sides Invite them to some dinner to generate harmonization
6. Provide more training for inbound team	yes	Once a year	yes	yes	Training every 3 month is necessary because tourism industry always changes with customer needs

7. Make customer survey	yes	Tour guide did after the tour	yes	yes	Customer surveys can be conducted on the company website or customers can be called after the trip.
8. Work with marketing agencies to develop marketing strategies	no		yes	yes	The company does not have a marketing department so hiring outside marketing agencies is important to reach more customer
9. Send experts to each location every year to observe the performance in each determined regions	no		yes	yes	It is highly necessary because the local partner may cheat on the company to make more profit. It reduces the company reputation
Links					

1-2-4-7-8;3-1-5-6;9-1-8; 8-2					

Table 3: The matrix for comparing the third conceptual model with a real world situation

2.4. Recommending Systemically Desirable and Culturally Feasible Changes in Procedures, Attitudes and Structures to Improve the Problem Situation in the Tourism Company

In light of comparison stage, all changes have been listed below under the categories of procedural changes (change in process and work activities), attitudinal changes (changes in people's perception of the situation), and structural changes (changes in task and role responsibilities), but only those of both systemically desirable and culturally feasible have been recommended to the company.

2.4.1. Changes in Procedures

- The current Customer service is not efficient and customers are disappointed with the support for customer service. Online customers also need call company customer service and have to get the information. Customer service does not work on time and it is very difficult to catch a customer service office in rush hours. So we need to recruit experienced customer service officers as the customer service staff. There should be a 24 hours customer service, especially for online customers.
- There are brochures and hand bills to promote the travel package which are kept

on a corner of the reception. Walk-in customer only gets the chance to at least read brochures. Company use news paper which is the only media to advertise the company and their packages. But there are such powerful visual and audio Media going to customers. Besides television and radio, web page advertisements are currently also very powerful. So it is required to use television, radio and internet to advertise the company travel packages.

- There should be a procedural change in the company customer service Department. Currently they work 8.30 am to 5.30 pm on weekdays and 9.00 am to 2.00 pm on Saturday. All customer service employees enable for over time and employee entitle hourly payments for Sunday. According to the new system the company implements 24 hours customer service unit. So the Working shifts should be designed as Morning, evening and night.

Morning: 6.00 am – 2.00 pm (Provide transport to office)

Evening: 2.00 pm – 10.00 pm (Provide transport to home)

Night: 10.00 pm – 6.00 am (Provide transport for both ways)

- All customer service employees should cover 8 working hours. Employee allow to come 15 minutes late form shift in time and 15 minutes early from shift out time. If the work hours lower than 7.30, it calculates as a half day and if work hours lower than 4 hours, it calculates and full day leave. Late coming and early going hours calculated as late hours which could be effect to employee’s salary at the end of the month.

- The number of meetings can be increased in the company, within each department or between departments in order to generate new idea for the sustainable development of the company.
- An online website can be purchased so that all the activities such as registering, booking, payment can be made online to reduce the paper work and communication time.
- Bureaucracy at the company should be reduced.
- Hiring process should be performed strictly to make sure the right people will be chosen for the required positions.
- The information about the functioning of other agencies can be obtained.
- A special fund can be formed concerning the needs of making advertisement.
- The company can outsource online customer call center to reduce the cost of operating.
- The survey to evaluate customer satisfaction should be applied to customers during and after the trips to respond promptly to the customers' needs

2.4.2. Changes in Attitudes

- The number of tourism should not be increased.
- The Administration of tourism can eliminate new opening agencies that do not have sufficient capabilities to work as tour operators.
- There should be organising training and workshops for company staff to develop

their skills. Tolerance and hospitality are essential when working with customers. Work no time and provide what the customer expected helps keep commitment.

- Company should take all the customers as the potential.
- Make sure not skipping any telephone calls.
- Company secrets should be respected by all the employees.
- All the employees need to respect all types of customers and treat them with the same manner.
- The hygiene issues in the office as well as in hotel and restaurant need to be strictly followed.
- Environmental protection is also a responsibility for a tourism agency; the company should pay attention to this issue in order to contribute to the sustainable development of the tourism industry.
- Employees need to encourage self-learning and learn the ways to adapt to many cultures.
- Tour guides who have to work professionally should be able to assist tourists in any situation.
- The employees as well as managers should hire the needed person instead of preferring relatives or supporting someone just because of personal relation.
- Encourage all types of employees to express their perspectives freely in meetings without fear.

2.4.3. Changes in Structure

- Currently they have single office for their businesses. If we can increase the number of branch offices in main cities, it will be more effective to attract more customers and can provide very effective customer service.
- Some of the departments are too wide, it can be narrowed by dividing them into two different departments, for example, domestic tour still work under inbound department, it could be separated to work more effective.
- Power should be decentralised because tourism is a dynamic environment, all the decision should be made quickly and effectively at own locations.
- The company can train personnel through internship.
- The company can hire new employees through university recommendation.
- IT expert should be hired (part time or full time) to maintain the effective work of the company website and social network activities.
- Each department should cooperate with IT expert to understand the whole system work.
- Marketing agency should be hired to improve advertising activities.
- Employee can work part time or flexible times can be arranged.

CHAPTER V: CONCLUSION

As we have seen in this paper, by using a system based methodology such as SSM, we have been able to see the different perceptions of all participants in a module's design. I have concluded some of the strength and difficulty in my application as below.

- SSM places an emphasis on human activity systems. The methodology provides a way through which the complexity of such human interaction can be described, investigated and understood. After the problem situation has been understood then the methodology allows the identification of change that is both systemically desirable and culturally feasible. SSM encourages learning and understanding of organization problem and bring out the optimum solution.
- The root definitions allow a description of the defining features of a system, in particular the transformation which defines the purpose of the system. Building a conceptual model based only on this root definition allows the modeler to view the system from differing viewpoints and to describe system processes that achieve the desired transformation. This gives clarity of thinking to the modeling process which can be quite revealing when compared to the real systems which have evolved over time. Furthermore, the hierarchical structure of the conceptual models allows the emergent properties of sub-systems to be seen as they contribute to the emergent properties of larger systems (the 'emergence and hierarchy' stream of SSM activity).

- Soft Systems Methodology is often described as a process of learning and investigation. For each of the systems which is described by the conceptual models had to be given to external monitoring and control from the perspective of the three 'e's of efficacy, effectiveness and efficiency.
- The difficulty while using this application is the biases can occur because the participants do not want to share the real information (maybe because of the fear saying something that the managers do not like). I also have not much knowledge about the sector so that the conceptual building stage had became very difficult for me. Beside that, the participants have been very busy doing their own job so interview conduct stage usually interrupted. SSM become a totally new approach for the company because they have never heard about it before, so that they doubt the effectiveness of this approach being used to solve company's problem.

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