FROM I-SHAPED TO T-SHAPED (HOSPITALITY) MANAGEMENT GRADUATES IN HIGHER EDUCATION

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Abstract
Today's hospitality management graduates need to be more than the traditional "I-Shaped" graduates of the past and more of the "T-Shaped" graduates employers are looking for (Badja et al., 2013). The traditional I-Shaped graduates who posse only deep knowledge of at least one discipline are specialized problem solvers of the 20th century in their home discipline/s and T-Shaped (hospitality management) graduates who are still grounded in their home discipline have strong communication skills across areas of (hospitality) management, technology and social sciences are decision makers of the 21st century (Spohrer et al, 2010).

On this premise, this position paper argues that the present hospitality management programme of the HEI produces I-Shaped professionals who cannot be competitive in a service centric organization/society/economy and this paper posits empirically the existing management education from I-Shaped to T-Shaped programme latter which is a shift of shape of the hospitality management education warranted due to the paradigm shift from Goods Dominant Logic to Service Dominant Logic in the dynamically changing environment that demand graduates with their ability to excel as collaborative innovators and adaptive innovators (Donofrio et al., 2010). Finally this paper recommends the HEI to produce early birds of T-Shaped professionals for (hospitality) management while not observing any major barrier present in the HEI subjected to the study for this purpose.

Key Words : I-Shaped Graduates, T-Shaped Graduates, Management Education, Goods Dominant Logic, Service Dominant Logic.

Introduction
Identification of the Issue: The traditional role of the Higher Education Institutes (HEIs) is to produce its graduates for being employed in the world of work for entry level jobs (Campbell, 2006). This role has now been extended to make entrepreneurial graduates who should be able to start their own business (Lourenco et al., 2013). In these roles, Higher Education Institutes (HEIs) produce I-Shaped professional in various disciplines such as Business management, Accounting, Engineering, Medicine, Information technology etc. I-Shaped professionals are those professionals who have got deep knowledge of at least one discipline and one system. Since they are experts in their disciplines they are deep problem solvers in their discipline.

The fitness for the purpose of I-Shaped graduates/professionals have been recently questioned with the shift of value creation paradigm from goods centric organizations, societies, economies to service centric organizations, societies, economies latter which demand a new development in education at HEIs due to drawbacks of I-Shaped education. The main criticism against the I-Shaped professionals is that they are not able to collaborate across the organization due to lack of knowledge of other related disciplines, systems, system thinking and boundary crossing collaboration skills. As a result they cannot be innovative when decision making. In other words the paradigm shift from goods dominant logic to service dominant logic has changed the shape of professionals from I-Shaped professionals to T-Shaped professionals.

Statement of the position: Spohrer et al., (2010) pointed out that "The "shape of a professional" is a way of talking about the capabilities that professionals can apply when they are solving problems and when they are communicating with other professionals as part of a project team". The depth and breadth of the knowledge and competency that the professionals have learnt at their Higher Education Institutes (Hereinafter referred to as HEIs) determine the shape of the professionals. If they have learnt deep knowledge of one discipline, they are I-Shaped professionals who are deep problem solvers but they have no competency to collaborate across the organization. Even-though I-Shaped professionals were able to utilize their knowledge in a good centric organization they are not fit with a service centric organization because they lack competency required to collaborate across the service centric organization which innovate by the service system. Innovation, a term applied almost exclusively to technologies in the past, is increasingly used in relation to service systems(IfM and IBM, 2008).T-Shaped professionals are therefore adaptive innovators in their employment or in their self-employment.

In these circumstances, it is required to study the Hospitality Management education offered by the Higher Education Institute (Hereinafter it is referred to as HEI) which is subject to this study. Hospitality Management is rather a new discipline taught at HEIs and even at the HEI which is subject to this study. The policy documents of the HEI stipulates that the graduates will be produced with knowledge and skills required to succeed in the hospitality industry. On this premise the purpose of this study is to examine the knowledge and skills referred to in the policy documents& their implementation correspond with I-Shaped education or T-Shaped education. And recommend to posit the hospitality management education of the HEI from I-Shaped to T-Shaped hospitality management education.

Hence the objectives of this study are

1. To convince the fact that the shape of the current hospitality management education is I-Shaped education or not.
2. If the answer for objective 1 is I-Shaped education then to establish the fact that T-Shaped hospitality management educationis superior and to recommend to replace I-Shaped hospitality management education to T-shaped hospitality management education of the HEI subject to this study.
3.

Literature Review

I-Shaped Professionals:HEIs are used to producing I-Shaped graduates by providing a deep disciplinary knowledge. These specialists get further specialization with PhDs and may receive awards and end up with Nobel Prizes. They who are experts in their silos are deep problem solvers in their discipline. They use analytical-reductionist approach to solve problems. The main tool of the "machine age" that belongs to the industrial revolution is reductionism which became popular in the light of industrial revolution that created product based economies around the world. But the reductionist/analytic mechanistic approach was first introduced well before the industrial revolution by the father of modern philosophy, Descartes in 1637 who introduced the concept of reductionism in his book "Discourse on the method" arguing that the world is as same as a machine. The pieces of the world similar to clockwork mechanisms, and therefore the world can be understood by taking its pieces apart and the larger picture of the world can be understood by putting those pieces back together.

Organizations with I-shaped graduates create a knowledge based organization. Grant (1990) argues that knowledge is the key resource and knowledge view is the answer for the growing complexities such as diversity, emergence, be flexible and innovative in a dynamically changing environment. In contrast, Barile&Saviano (2013) argue that the knowledge of I-Shaped professionals is highly contextualized in their discipline and they cannot solve problems in different contexts which simply means they are able to solve the problem within the department but they cannot solve the problem when several departments involve in the problem making it complex because they have no knowledge of many disciplines, many systems, system thinking and communication skills for collaboration. This situation has become more obvious with the transition from goods centric economies, societies and organization to service centric economies, societies and organizations.Palaima and Skaržauskiene, (2010) stated that the "Technological changes and innovations that are based on new multiplying systems, while corporations and communication systems becomes global".Makridakis et al., (2009) pointed out that the characteristics of future organizations cannot be extrapolated based on historical data because of the environmental, economic, market and competitive conditions change unforeseen manner as same as future world cannot be forecasted in the presence of conditions such as global warming, destruction of the ozone layer and other conditions.

In this context I-Shaped professionals are not capable of interacting and understanding with other disciplines within the organization outside organization. In other words they are unable to think and act outside their silos. When they are employed or self-employed conflict arises than harmony specially when they interact in complex conditions. And therefore I-Shaped professionals who are called 20th century problem solvers are unable to be collaborative innovators and adaptive innovators in their employment or self-employment as an entrepreneur.

T-Shaped Professionals: These negative aspects of the knowledge based view of I-Shaped professionals demand new kind of professionals due to new perspective of the organization, society and economy namely, competency based view for collaboration, to be corroborated with the knowledge based view of the organization. Such professionals are called 21st century T-Shaped professionals or adaptive innovators who are still grounded in their home discipline but with collaboration skills across the many systems and many disciplines (IfM and IBM, 2008).

T-Shaped professionals or Adaptive innovators are a timely need with the transition of goods centric economies, societies and organizations to Service centric economies, societies and organization latter which is dominating in the 21st century. Goods dominant logic is the traditional way of looking the economies, societies and organizations that they create the value by two mechanisms, producing goods or producing services. Service dominant logic is the modern way of understanding economies, societies and organizations that they create value by one mechanism, service (singular, namely not services). The word

'service' is meant for collaborative process based on competences for adding value for mutual benefit between the service provider and the recipient. This is called co-creation of value which is fundamental in a service centric organization. As a result a new education and service research stream has immerged called 'Service Science, Management and Engineering (SSME) in short, Service Science, it is to study service systems and value propositions by an interdisciplinary approach which cannot be achieved working in isolation with a view to innovate creation of value for customers and other stakeholders.

Service Science demands to integrate both the knowledge and competency for collaboration to produce collaborative innovators and adaptive innovators or T-Shaped professionals who "are deep problem solvers with expert thinking skills in their home discipline but also have complex communication skills to interact with specialists from a wide range of disciplines and functional areas (IFM and IBM, 2008)".

The new perspective, competency based view is important because graduates to whom Higher Education Institutes (HEIs) teach to be employed or self-employed will have to use their knowledge and skills during next three to four decades, say, approximately into the 2050s. Even-though it is difficult to reasonably forecast their future workdays, it is probable that they will have to collaborate with experts in other disciplines. Bandyopadhyay et al., (2013) pointed out that collaboration, company-wide, inter and intra units of the organization is required to improve the results with disciplinary collaboration in a competitive environment and further stated the examples for collaboration "include when-and when not-to pursue collaboration across units to achieve goals; identify and overcome the barriers to collaboration; get people to buy into the larger picture even when they own only a small piece of it". Collaboration is a boundary crossing competencies to be developed on many skills such as communication, teamwork, networking, and critical thinking. This competency based aspect expected from the managers of an organization is becoming a part and parcel of managerial skills and therefore the knowledge developed in their discipline by I-Shaped education is not enough for an organization. It requires from managers both the knowledge and competency for collaboration across the organization. As a result, a new research stream has recently appeared relating to research both the knowledge based perspective of an organization and competency based perspective of the organization (Barileand Saviano,2013).

This new research stream and the higher education that focuses on the importance of both knowledge based perspective and the competency based perspective has endorsed a need for a new kind of professionals/executives for an organization called T-Shaped professionals who have both the knowledge and competency for collaboration across the organization.

Hanson & von Oetinger (2001) described the shape of T-Shaped professionals and pointed out that they "one who breaks out of the traditional corporate hierarchy to share knowledge freely across the organization (the horizontal part of the "T") while remaining fiercely committed to individual business unit performance (the vertical part)". These two bars represent breadth and depth of the T-Shaped professional going beyond the traditional I-Shaped professionals who represent only the depth for extensive problem solving. The horizontal bar represents the breadth of professional for many disciplines, many systems and inter-personal communication skills. The knowledge of many disciplines, many systems and inter-personal skills enable the T-Shaped professional to communicate across the boundaries of the organization in making decisions. Donofrio et al., (2010) pointed out that the breadth and depth of the T-Shaped professionals make them able to excel as collaborative innovators and adaptive innovators.

Discussion
It is first required to understand the nature and extent of T-Shaped professionals. Barille and Saviano (2013) citing IfM, and IBM, (2008) described the nature and extent of T-Shaped Professionals as follows "In a nutshell professionals are qualified as T-Shaped when they are deep problem solvers in their home discipline but also capable of interacting with an understanding specialist from a wide range of disciplines and functional areas". In this explanation the first part of the explanation is that "deep problem solvers in their home discipline" means the traditional I-Shaped professionals who have got deep knowledge of at least one disciplinary and at least one system in their discipline which is reflected by the vertical part of the letter T.

The latter part of the explanation that "but also capable of interacting with an understanding specialist from a wide range of disciplines and functional areas" means that the T-Shaped professional need capabilities to interact and resolve not only problems related to their discipline in isolation but also they are able to communicate across the organization, across the units, across the departments, across the companies and people and entities outside the organization. In this regard, the T-

Shaped professionals need boundary crossing communication skills and understanding of many disciplines and many systems together with system thinking. This role is represented by the horizontal part of the T.

Accordingly, In T-Shaped education, five components are required to be satisfied. In the vertical aspect, there are two elements, deep in at least one discipline and deep in at least one system. In the horizontal aspect, there are three components, Understanding & communication of many disciplines, Understanding & communication of many systems with system thinking and boundary crossing competencies.

Current Curriculum I-Shaped or T-Shaped ?
Let's now fit the Hospitality Management programme of the HEI subject to this study to the T-Shaped professionals model above mentioned to determine if the current curriculum is I-Shaped or T-Shaped. In this regard it is examined hereinafter the prevalence of components of T-Shaped education.

The Depth of the Programme for Hospitality Management
The depth of T-Shaped professionals consists of two elements, deep knowledge in at least one discipline and the deep knowledge in at least one system

Deep knowledge in at least one discipline*:* When looking at the depth of the programme for Hospitality management it offers 26 modules during the period of four and half years, out of which 16 modules deal with hotel operations transferring a sufficient deep disciplinary knowledge producing deep problem solvers in their discipline. Those modules are, Laundry Operations, House Keeping Operations, Introduction to Hotel Operations, Bar Operations, Food Service Operations, Introduction to Food & Beverage, Kitchen Operations, Hospitality Human Resource, Travel & Leisure etc.

Deep knowledge in at least one system*:* Many systems relate to major services required for the organization. Hospitality management system also relates to many service systems, these systems include communication, transportation, healthcare, banking, food & other supplies etc. Even-though adequate number of modules are offered to transfer a deep disciplinary knowledge to develop analytical thinking and problem solving, no set of modules are offered to transfer a deep knowledge of at least one system so that the T-professionals would be able to develop analytical thinking and problem solving in that system. In the absence of offering modules for deep knowledge of at least one system, one side of the depth/vertical line of the T-Shaped professional has become paralyzed in the programme tested.

The Breadth of the Programme for Hospitality Management
It is now worth to look at the breadth of the programme of hospitality management of the HEI under this study. The breadth of T-Shaped professional consists of three elements, the understanding and communication of many disciplines, the understanding and communication of many systems and boundary crossing communication skills/collaborative skills.

Understanding & Communication of Many Disciplines: In this aspect what is required is not the deep knowledge of many disciplines but the understanding & communication of many disciplines. This is required to make effective decisions with boundary crossing competencies. When analyzing the understanding and communication of many discipline required for T-Shaped professionals, this programme offers four other disciplines, 1. Business Management by offering two modules, Business Management & Strategic Management. 2. Accounting by offering Introduction to Financial Accounting & Corporate Finance. 3. Marketing by offering one module Marketing Management together with an elective, Strategic Marketing and 4. Entrepreneurship by offering Small Business Management & Essentials of Entrepreneurship. Accordingly, there are sufficient number of disciplines taught during four and half years, despite of the fact that these modules have not been specifically designed for hotel operations. They are shopped from others experts of the HEI. 40% of total credits have been allocated in this regard. In these circumstances, the understanding & communication of many disciplines developed by the programmeis satisfactory.

Understanding & Communication of Many Systems and System thinking: The next aspect of the breadth of T-Shaped professionals is their understanding and communication of many systems and system thinking. In this regard what is required not the deep knowledge of many systems but the understanding and communication of many systems. This is required to make effective decision making with boundary crossing competencies. In the examination of the programme under the study it is found that no set of modules required for this purpose are offered.

This aspect is also paramount because T-Shaped education develops system thinking and decision making. In other words, I-Shaped professionals solve problems by the traditional approach, analytical approach otherwise called reductionist approach which understands the nature of complex phenomena by reducing the whole into parts on the philosophical position that a

complex system consists of the sum of its parts which are independent and therefore separable for the purpose of understanding the complexity. The changes in the environment with the transformation of production based system to service based system, the reductionism is opposed by holism.Barile and Saviano (2011) point out that the reductionist approach investigates parts in isolation from the context in linear and mono-directional manner in search of the cause and effect of the phenomena but some cases the outcome derived from such investigation is inadequate or totally unsuitable. In other words the problems continue. Watzlawick et al, (1974) argues that the problem arises because of inadequate approach which is unable to effectively deal with the problem and transform them into opportunities required for a change.

Jackson, (2003) pointed out because of inadequacy of traditional scientific method, reductionism in solving complexity inherent in the biological and social systems, the holistic approach emerged as a reaction to the reductionism. The holistic approach views that the nature of complex system cannot be reduced into parts on the philosophical position that the complex system consists of more than the sum of its parts which are interdependent and therefore inseparable from the context for the purpose of understanding the complexity. In other words, complex system is to be understood as a whole system because one is able to get a meaningful understanding and a valid knowledge by looking at the whole picture but not breaking it to parts (Flood, 2010).

The understanding of a complexity of phenomena by reducing into parts is becoming an inadequate approach for an organization in the twenty-first century with a dual paradigm shift in organizational theory (Gharajedaghi, 2006; Skarzauskiene, 2010). The first paradigm shift is the transformation of the view of organization from the mechanistic organization to the view of socio cultural organization latter which is perceived as a unit that interacts with the environment, in other words socio cultural organization influences the environment and is influenced by the environment.

The second paradigm shift is the transformation of the method of understanding the parts of a system from analytical thinking to system thinking. The analytical thinking views the variables of an organization as independent variables. Accordingly, a problem in an organization is resolved identifying the part in isolation that created the problem. That part is regarded as an independent part of other parts of the organization and it is focused in resolving the problem. The interrelation of that part with other parts is ignored. This approach is inappropriate because the breakup of that part is not a cross section of the organization.

In contrast to I-Shaped professionals, T-Shaped professional are able to understand and communicate with many systems with system thinking. A system can be described as "a combination of two or more elements, when every element of the whole influences a behavior of other elements and the behavior of each element influences the behavior of the whole (Bertalanffy, 1969; Forrester, 1975; Skarzˇauskiene, 2010). Badinelli et al., (2012) point out that the word "System" in general means the interconnectedness of entities for achieving a particular objective but it does not emphasize the importance of system thinking which disrupts the traditional thinking.

Hence, the present programme of hospitality management produces I-Shaped professionals with analytical thinking (traditional thinking) and problem solving. The analytical thinking views the variables of an organization as independent variables. Accordingly, a problem in an organization is resolved identifying the parts in isolation that created the problem. That part is regarded as an independent part of other parts of the organization and is focused in resolving the problem. The interrelation of that part with other parts is ignored. This approach is inadequate in complex problems because the breakup of that part is not a cross section of the organization as stated earlier. In other words, when an elephant is broken up you do not receive a bunch of small elephants. The solving of the problems and making decisions of an organization by breaking up of parts of an organization cannot effectively resolve the problem or making the decision because analytical thinking is unable to identify the cause of the issue in a complex situation.

Boundary Crossing Competencies: Another aspect of the breadth of T-Shaped Professional is the boundary crossing competencies. This programme offers the following three modules, Communication and study Skills 1 & 2 and Introduction to Computers that contemplate to transfer some communications skills. The breadth of T-Shaped professionals that depicts by the horizontal part of T represent boundary crossing competencies which can be developed by teamwork, communication, networks, critical thinking, global understanding, project management etc. These collaborative skills are very much broader than the communication skills taught by the programme The collaborative skills contemplated by T-Shaped education enables the professional to share the knowledge across the boundaries, inter units, inter departments, inter companies and outside entities and people with whom T-Professional has to interact when performing his/her duties in the employment or self-employment.

Conclusion
HEIs traditionally produce I-Shaped professionals who are deep problem solvers in their disciplines. With the transition from Goods Dominant Logic to Service Dominant Logic, I- Shaped professionals became 20th century professionals and new kind

of professionals called T-Shaped professionals immerged as 21st century professionals who have been widely recognized in the last decade (Hansen, and von Oetinger, 2001; Spohrer et al., 2007; Spohrer et al., 2010).With wide recognition of T-Shaped professionals, HEIs start producing T-Shaped professionals in all the disciplines such as Business Management (Bajada&Trayler, 2013), Software Engineering (Boehm &Mobasser, 2015). Mechanical engineering, Electrical engineering, Product design and Entrepreneurship (Oskam, 2009) Medical education (Donofrio et al., 2010) and Sustainability education (Barile et al., 2015) and so on.T-Shaped professionals compared with I-Shaped professionals are outstanding in their employment and self employment by being adaptive innovators due to capabilities for problem solving and decision making because of deep knowledge of at least one discipline, deep knowledge of at least one system in their depth and in their breadth they have understanding and communication of many disciplines and many systems together with system thinking and the boundary crossing communications skills. Hence it is recommended to posit the present incomplete I-Shaped hospitality management education to T-Shaped hospitality management education to be early birds for producing T-Shaped professionals. When considering the facts that the availability of approximately 5400 classroom hours & Independent hours including practical hours, state of art kitchen, classrooms and other infrastructure facilities and skilled academics including academics recruited from the industry and skilled non-academic staff etc, there cannot be impossibilities to introduce 21st century education for hospitality management in the HEI subject to this study. However, "Educational innovations are vulnerable becausethey are often reliant on the efforts of one or twopeople. Interdisciplinary programmes are even harder to organize, and more expensive to initiate and maintain,than conventional ones"IfM and IBM., (2008).

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