The Strategy to Achieve Organizational Vision, Based on Cybernetic Systems, with Emphasis on the Use of Knowledge Management


ABSTRACT

Observation in the government section or governmental agencies have shown that organizations are focusing on specific tasks rather than thinking of the determined goals, and this makes it difficult to measure the effectiveness, unlike the performance measured in terms of the emphasis on budget, and on one hand, we cannot easily set the clear figures indicating the effectiveness of the state apparatus. In this paper, we focus on the effectiveness of the approach aimed at achieving, that means the article states how to set the achievement of the determined goals in the landscape through the cybernetic system, and in addition, using advanced technical knowledge began to design the technical complexities and applying the Kaizen strategies and deployment of the cycle of knowledge in organizations and formation the problem-solving groups, has installed the system control operator in the system in order to determine the focus of devices on the effectiveness of each period through this.

Key words: Cybernetic Systems, Strategy, Technical Knowledge.

Introduction

Cybernetics, an interdisciplinary science in the investigation of organized systems and control theory and systems theory and are so closely associated control theory and systems theory. Cybernetics is applicable both for physical system, and the social system [6]. When the system under consideration involves a ring of signals intelligence package, the role of Cybernetics Becomes more prominent. In this case, the system performance will lead to changes in the environment that changes through information and feedback signals in the system, this causes the system to adapt its behavior to change environmental conditions. The causal relationship is circular necessary and sufficient condition for a cybernetic vision [1]. Cybernetics as an interdisciplinary science is influenced in various fields of science that Game theory, systems theory, sociology, psychology and behavioral psychology, and psychology in particular neurological and cognitive psychology, philosophy and architecture are the examples to be mentioned [9]. This has led to various scientific domains, in order to explain the physical and social structure of science, to use cybernetics system. In biology, cybernetics of physical systems, living organisms, how organisms adapt to the environment and gene transfer between generations is emphasized. In computer science, it is used in order to directly control the instrument and analyze data in the analysis of engineering failures cascade, System crashes, is used for small mistakes that can lead to big losses. In mathematics Cybernetics focuses on the factors of information, interaction of a system's structure and systems and sociology explore the reasons for spontaneous events like the chaos and congestion of small [3].

Research Objectives:

1- Assess the relationship and it significant between cybernetic systems and organization effectiveness through control by group problem solving.
2- Measurement indicators of technology performance evaluation (on time delivery with the highest quality and lowest cost).
3- Measurement criteria of system performance control (rate of customer satisfaction and their confidence to organization).
4- Assess the relationship and it significant between indicators performance evaluation of
technical system by group problem solving and organizations’ knowledge management (by professionals and skilled experts).

5- Assess the relationship and it significant between knowledge management and criteria of system performance control by group problem solving.

6- Assess the relationship and it significant between knowledge management and criteria of performance control and organization effectiveness (Achieve to predicted goals).

**Literature Review:**

What is clear is that the science of cybernetics is used to fit their needs. Gritsenko and others (2003), examined Telemedicine structure with a single medical information space associated to Cybernetics, Zandi Mehran (1385), human genetic system as a cybernetic system can be studied and Patnyk (2003), used the effect offluiddispersiononcyberneticcontrolin aGeneral Theoryof Sociology was performed by Talkot Parsons. Sea right and open lander (1988).Cybernetic was studied in a view of interactive psychotherapy (Gritsenko, 2008). Cybernetic methodology for ligament and nerve was used by Tamburrinhy, Datteri (2005). Latin (1991) Cybernetics was reviewed in relation to the management network. Espinosa and Leonard (2009) analyzed Cybernetics applicable research organization. Morlidge (2009) investigated Cybernetics for designment the management systems and Melkikh and Seleznev (2008) approach to human evolution. What is Cybernetics? Cybernetics is the science that on one hand fairly study open system for information exchange between them and their environment, on the other hand, deals with the structure of these systems in terms of information exchange between the various elements [7]. Cybernetics with a unique and common view, study the complex phenomena and then analyzing the relationship between a phenomena with other phenomena in the environment, it studies the methods andhow tocontrol them.

Cybernetics makes it clear that the phenomena associated with the environment within or thebe spoke and intensity of these relationships, roles, forms and degrees of complexity [8]. Cyber systems are known as advanced systems in the world and are considered as technical and human brain-inspired systems, so that is able to evaluate the system's factors within their control and monitors all these factors and in case of deviation of the control measures to meet the objectives. Cybernetics is the study of the phenomenon of communication and control in animal and machine, including any kind of system. Cybernetic control network through a feedback mechanism with respect to the characteristics, circumstances, and objectives, is a system controller (set) [9]. This action led to through the return in the behavior of the information. Cybernetic systems are composed of various components of the system which are the necessary conditions for the emergence of this type. Communication, control and feedback are the most important elements for the creation of cybernetic systems.

Communication: Communication is the basis of a cybernetic system in such a system, data elements and system components must be exchanged between the system and the outside environment. Exchange of information between system and environment ensures survival of the system [2]. Control requirement is receiving the information in the operating system, and control signals are in put into the system other system will be transfer red to other systems. All stages of cybernetic system require data transfer between components within the system and between the environments of the system. The better communication and exchange of information within the system more done, more order and less chaos in the system crystallized [5]. Distribution and spread of information and communication in cybernetic organization increases the safety coefficient of organizations and the organization will never deal with sudden and unexpected circumstances. In other words, the free flow of information and long-range vision will be available for the organization. Therefore, changes in the organization before it is mandatory and unavoidable, may be predictable [6].

Control is one of the most important components of a cybernetic system that takes place with the aim of maximum efficiency and minimum consumption of material and energy. Control system is in order to increase and decrease the entropy or irregularity. Therefore, the control of information is required to be able to control the way information is vital [9]. Other concepts related to control, survival and evolution of the system. So that the control mechanisms are designed to increase stability and prevent erosion survival of systems. Each system consists of four types of control, stabilization control, execution, tracking and optimization can be applied. Stabilization control is performed to increase the survival of the organization, the control program to ensure the correctness of programs, and to facilitate the encounter tracking control system with unpredictable conditions for optimal control and optimization. Requirement to implement an optimal control system is a control tool. Principles and elements developed, programs, rules and standards, including appropriate measures are controlled [7]. Armed with these standards systems, operating systems are automated manner. Feedback, mechanism, processor signal that a backspin, in its cybernetic control system, a control system requires input and output data in the form of feedback will be done. In this case, the chain of cause and effect there is a causal cycle and will form a closed cycle. When
feedback input increases, the type of feedback is positive and a negative feedback reduces the input. Negative feedback ensures system stability against external changes, while positive feedback gives the ability to change the system [6].

Negative feedback is often used in a cybernetic system. Quality of outputs in a cybernetic system is determined by the feedback. The feedback control system is in direct contact with the signal this way, it is clear that the output quality is not enough to change the system, the feedback is activated, and again, the quality is the same and the cycle continues [2]. Cybernetic systems have commonly some features that system activity will decline if they lose those characteristics. The main specific features of cybernetic systems, is openness to this type of system, so that the system is capable of exchanging data with the environment. Life of the cybernetic systems in terms of information exchange between the system and the environment continues [1].

Otherwise, the feedback also loses its meaning and the control systems tops. Another feature is that the cybernetic control system not only in static mode, but also during movement and improvements are also discussed. This study essentially reveals facts and relationships that might otherwise remain unexplored and unknown [3]. Common language is one of the other features of this type of system. Communications and Cybernetic Systems will form the basis of information exchange. Exchange of information between system components and its hierarchy and the system environment, also provides the survival of such a system and it would not occur, except with a common language between all levels of the system. An example of a cybernetic system of physical: Foot temperature (thermostat), the most common physical cybernetic systems are used to regulate the temperature. Information flow between the system and get feedback from the control unit, the system is on or off. For the system is defined as the first jet to ambient temperature at a particular grade.

The system will start up and sends the output to the environment. However, the feedback from the environment, if the control unit determines the ambient temperature was ideal and the system must be temporarily disabled, it can be done. It is made of two different metals such as brass and steel blade welded or riveted over. [5]. At low ambient temperatures, thermo uric, Heater completes the electrical circuit. Electric heaters generate heat due to electrical flow occurs and the ambient temperature rises. Linear expansion coefficient than iron because brass is in expansion mode, the iron rice further expands thermoduric bends (getting feedback). When the temperature reaches a certain value, it contacts temperature blade copper cut-off of electrical circuit opens (control unit). Once again, the temperature is low; the first condition is thermoduric and is connected to the circuit again. There thermoduric can result in an electrical heating circuit temperature is almost constant. You can see how a cybernetic system thermoduric physics simulation, control elements, feedback and communication systems make it possible to turn up [7].

**Shape. 1:** Feedback and Control system in Thermo uric

**Model Of Research:**

The most transparent system cybernetic can be named human organisms so the existence of irregularities in the functioning of all body systems there are the internal and external factors which act to disturb the order of the human body and there by attempt to eliminate redundant variables. It is interesting to know that the more these variables are harmful to the body, the more control of their action
and reaction will severe and this will make man aware of the presence of such hazardous to the body [3]. Cybernetic can be used in non-sophisticated devices such as heaters today that will control the production of semi-complex and complex structures by installing the most at such as vehicles and robots, and the like. In this article the author has

Tried cyber design organizational structures, especially in government and public sector, such as banks and other institutions to use. Such a system should be used as a model for the development and deployment of the following factors that may be considered sufficient [9]. Performance evaluation index of the technical system (the technical system, including technology, manufacturing processes and the systems that are required to achieve the objectives); delivery of services or goods to clients or customers, enhance the quality of services or goods and reduce the price or cost of product offerings (services or products) to customers or clients [6]. Control of system operation: These indicators include: the consent of the client or clients; Trust the Machine (Trust is measured by the amount of loyalty to specific machines only for the index structures that are active in competitive situations) And for the government(through the optimism and pessimism reduction can be measured by the device)Reducing the size or volume of the core operational tasks in the queue, byre moving operators or employees doing the main tasks in the queue (The use of a complex technical system or advanced technical knowledge will eliminate or reduce the need for simple or low-skilled workers in the lineup), in other words, the use of advanced technology would replace it rather than line operators or employees[2].

Applying complex technical knowledge to set up and deployment cycle and determine the required amount of the complex technological systems to meet the objectives of Vision(measure of effectiveness), the staff or operators removed in line with the actual proficiency-based training skill organizations are able to increase technical knowledge [8]. This section includes the following: Use the educated experts to assess the achievement of the objectives of the system, expertise as well as technical knowledge of experts, organizations constantly monitor the slightest deviation in the event of the specified path using the evaluation index system based on applying technology to solve knowledge management is still too. Thus, in a competitive and dynamic environment conditions are still too highly likely that other competitors are using new technology and taking advantage of innovation product market is expected to assign a larger share for them, because of the dynamic of how knowledge management can help organizations to maintain the in competitiveness or survival [3]

Main hypothesis of Research:

There is Significant Relationship between Cybernetic and effectiveness through Control by Group Problem Solving and the use of Knowledge Management.

Methodology:

In this study we used the method analysis-descriptive and it is a kind of applied and we were used of questionnaires and field method for collecting needy information. To show of the application results of this study has been effort that use of service and industrial sections as a society in the competitive conditions. Therefore we selected national bank, Asia Insurance, dairy and foodstuff manufactory factory, and also plastic industry in industrial town of Guilan province as a society and then we used of sample volume relationship with limited society to apply kolomogroff examination and to make sure of data normalize. In this study we select 164 units for sample (Statistical society is 382 units).We use of sample random method for questionnaire explanation and to be determined the exact of case study units. We used of correlation method for data analysis to apply structural equation and lizerl software. 30 Number of questionnaires were distributed among the sample units. The results was indicative the high validity of the questionnaires. We used of Cronbach's alpha to assess the reliability. The rate of the alpha has gained more than 75% for all of variable (Independed variable, depended variable, moderating variable).

Conclusions:

Based on use of Lizerl software and make structural equation was determined that there is significant and positive relationship between the entire variable said and also Due to being small of P-Value of alpha amount that it's rate has considered 0.05 , all hypotheses were accepted . Results of the statistical analysis shows that there is significant relationship between kaizen strategies and knowledge management and index of system control by group problem solving. Also there is significant relationship between customers confidence and satisfaction with effectiveness (its index is predict goals). Therefore we can claim that has been approved the main hypothesis of this research, namely there is significant relationship between cybernetics systems and effectiveness.
Diagram 1: Conceptual model of research and author's research and educational experiences

<table>
<thead>
<tr>
<th>Classification</th>
<th>P-Value</th>
<th>SD</th>
<th>Average</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.00935</td>
<td>0.693</td>
<td>4.460</td>
<td>On Time Delivery</td>
</tr>
<tr>
<td>2</td>
<td>0.00992</td>
<td>0.676</td>
<td>4.340</td>
<td>Enhance The Quality</td>
</tr>
<tr>
<td>3</td>
<td>0.00951</td>
<td>0.829</td>
<td>4.130</td>
<td>Costs Reduction</td>
</tr>
<tr>
<td>4</td>
<td>0.00493</td>
<td>0.841</td>
<td>4.375</td>
<td>Customer Satisfaction</td>
</tr>
<tr>
<td>5</td>
<td>0.00939</td>
<td>0.719</td>
<td>4.358</td>
<td>Customer Confidence</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
<th>P-Value</th>
<th>SD</th>
<th>Average</th>
<th>Cybernetic Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0493</td>
<td>0.841</td>
<td>0.375</td>
<td>Technical Knowledge</td>
</tr>
<tr>
<td>2</td>
<td>0.00939</td>
<td>0.719</td>
<td>0.358</td>
<td>Technical System</td>
</tr>
<tr>
<td>3</td>
<td>0.0363</td>
<td>0.770</td>
<td>4.250</td>
<td>Technical Knowledge in Technology design</td>
</tr>
<tr>
<td>4</td>
<td>0.0129</td>
<td>0.723</td>
<td>4.332</td>
<td>Relationship between Technical Knowledge and Technology Performance</td>
</tr>
<tr>
<td>5</td>
<td>0.0294</td>
<td>0.708</td>
<td>4.163</td>
<td>Supervision by Group problem Solving</td>
</tr>
<tr>
<td>6</td>
<td>0.0119</td>
<td>0.829</td>
<td>4.050</td>
<td>Effectiveness (Evaluation of Predict Goals)</td>
</tr>
<tr>
<td>7</td>
<td>0.059</td>
<td>0.907</td>
<td>4.013</td>
<td>Relationship between Kaizen Strategies and Satisfaction and Confidence Indexes</td>
</tr>
<tr>
<td>8</td>
<td>0.0283</td>
<td>0.921</td>
<td>3.992</td>
<td>Relationship between Satisfaction and Confidence with Effectiveness</td>
</tr>
</tbody>
</table>

Therefore we recommend all organizations that are in competitive conditions with their technical knowledge promotion should proceed to reduction or elimination basic technical knowledge and lack of skills of manpower in line section, and replace advanced system. Also provide the necessary training to available individuals in line section up to increase their skills and they become an expert for design of advanced technology. So organizations that are in competitive conditions should lead to the formation of cybernetics systems with implementation of downsizing system and they should have enough attention to continuous monitor of performance with formation group problem solving. At the end they should put pattern of activity in environment for their organizations achieve to predict goals based on the use of cybernetics.

References