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Enhancing Change Management at University Education Institutions in Egypt in the Light of Gemba Kaizen Model: A Qualitative Study

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Abstract

As university education is considered a strategic element in the educational policy and it is the most important component of education as it offers the graduates upon whom economic progress depends, the current study aims at identifying the real status of the Egyptian University Education, its goals, functions, components and problems. The current study also aims at identifying the Gemba Kaizen technique, its development, goals, principles, characteristics and strategies, as its use at university education institutions may result in overcoming the problems which face Egyptian universities and can lead to continuous improvement. The descriptive method was used. The Study findings revealed that the use of Gemba Kaizen technique helps in creating the culture of change for all individuals. Moreover, the Kaizen strategy developed the Deming Circle or the Plan– Do – Check – Act (PDCA) model as it fulfills the continuous improvement at universities and enhances their capacities. The study set up a suggested proposal to implement Gemba Kaizen as an approach to improving the Egyptian university education.

Keywords: *Gemba kaizen, university Education, PDCA.*

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Introduction: University education is considered a strategic element in the educational policy. It forms the most important component of education as it offers the graduates upon whom economic progress depends. Nowadays, the world is changing rapidly and in a way that is different than before. The spread of technology, applied education, workplace learning and knowledge economy are boosting the change. These challenges should be faced by the universities improvements and replacing their traditional ways in performance. University students, staff and administrators must have excellence in their performance and seek for continuous improvement. They want to discover innovative ways of representing performance. The institutions in general need to develop advanced approaches to measure the impact of their hold up on quality teaching.

The research problem revolves around the problems and challenges that hinder the enhancement of change management which results in the improvement of university education in Egypt. More specifically, there are many problems and challenges which affect the quality of the university education performance and the culture of change, which need to be resolved and overcome. These include: problems of admission policies and materialistic devices and equipment, and problems related to the absence of curriculum correlation to labor market. Many countries like Japan have used one of the administrative techniques which is based upon its significant change to develop their institutions, which is Gemba Kaizen approach. It is a simple administrative technique whose philosophy focuses on continuous improvement which reduces costs and Waste besides to increasing productivity. Moreover, the study attempts to enhance the change management at university education institutions in the light of Gemba Kaizen model.

The study Significance originates from the fact that university education is a basis for progress in general and economic progress in particular. The study importance stems from the point that the excellence of university education and its excellence depends on the change management process and it completely achieved through the application of Gemba Kaizen technique which have positive impacts on the graduates and their efficiency. Moreover, this topic is considered one of the vital matters which need much attention. The current paper aims at enhancing change Management at Egyptian university education institutions in the light of Gemba Kaizen model.

Many previous studies (e.g. Mustafa, 2010) indicated that Egyptian universities need to revise the educational frameworks and hierarchies to cope up with the recent developments, which is a solution to diagnose and recover the problems without using the traditional administration. Also, the study of (Farouk et al., 2007) showed that the current state of university education and university education in Egypt refers to the existence of many serious problems that face university education in Egypt, as defined by the general framework of the vision of Egypt 2030. These problems and challenges are represented in the deterioration of its quality. This represents an obstacle for improving the quality of life and enhancing the ability of the Egyptian society .Thus, Egypt will be far from coping up with the advanced countries. Undoubtedly, a qualitative leap in the quality of university education will lead to an increase in national productivity and the development of human capital stock. There is therefore a need to restructure university and tertiary education, responding to demographic changes on the one hand, and rapid and progressive dynamism in the local, regional and global labor markets on the other hand. The ability of university and tertiary education to cope up with these changes depends on three specific objectives: expanding and developing university and collective education, encouraging scientific research and satisfying the emerging needs of labor markets.

Thus, the questions of the study are represented in the following:

- 1- What are the most important features of university education in Egypt?
- 2- What is meant by change management at university education institutions?
- 3- What are the main features of the Gemba Kaizen model?
- 4- To what extent is change management enhanced at university education institutions in the light of Gemba Kaizen model?

As for study limits, the study handled university education in Egypt, change management process and its linkage to Gemba kaizen model.

For this reason, the research was to study the problems that hinder university education from enhancing the change management process which results in the process of continuous improvement. In the current paper, the researcher outlines the definition of university education, its goals, importance and problems. Then, the researcher sheds light on change management and its characteristics and principles at university institutions in the light of the Gemba Kaizen model.

University Education in Egypt: University education is a fundamental factor of a nation's development, as it is seen as central to economic growth and social development. It plays a crucial role in enhancing the quality of life and standard of living. An effective university education system enables a nation to not only to speed up its development but to construct its development process according to its people's needs (World Bank, 2000).

The university education in Egypt is one of the main vital educational stages. The process of giving interest to this stage is considered one of the important indicators of progress as university education serves the society, scientific research and students. Egypt's university education system is responsible for the nationalist reforms and achievements. (Mahmoud et al., 2004) asserted that university education has to replace its traditional methods in management in order to be capable of carrying out its tasks and its future programs which can be represented in the following:

- University education linkage to production, and appreciation of talents and scientific skills; to emphasize the principle of equal opportunities in the development of the individual's abilities and talents.
- Development of education and training programs in the light of global developments at the basic sciences and the findings of local technical development and research.
- Offering the necessary resources and rewards to ensure continuous education by providing the learners with regular information at various fields.
- Modernizing the universities to keep up with the development of modern sciences, whether by developing the existing disciplines at colleges or by establishing specialized colleges and universities.
- Supporting technological development and innovation processes and organizing them at the level of different enterprises and institutions.

The philosophy of university Education:

According to (Badran&Eldahshan, 2001), the philosophy of university education is

determined in the light of modern changes and challenges based on reality and perceptions related to four aspects:

The nature of knowledge:

The knowledge in the 21st century is characterized by continuous increase, expansion and permanent change, which means that it is not possible to be aware of it. However, it is possible to prepare persons to follow its movement and to have the ability to access, choose and make sure of its validity.

The nature of society: Society in the 21st century has become a wider open society with a constantly changing nature, and therefore university education is responsible for helping the individuals to follow the society change and cope up with it.

-The nature of the individual:

The nature of the individual in this century is not determined by the limits of the place. The scientific and technological development has led to the disappearance of many old borders and limitations and the emergence of new borders and restrictions. University education is required to prepare the individuals to live in this society and move freely from one society to another.

-The nature of values:

Values change continuously and new values appear at the global level. The university institution will need not only to instil some of these new values, but it is responsible for enabling the individuals to deal positively and critically with these new and universal values.

The university education goals and functions:

The modern variables have imposed on university education a set of goals. The extent of university education ability to achieve and meet these goals reflects its excellence. These goals are represented in the following:

1. Preparing graduates with high-level skills in order to be responsible citizens besides to providing them with modern information and high-level skills to cope up with the large and accelerating changes at the local and global levels.
2. Providing students with self - learning skills, and the ability to create, innovate, and to adapt to the changing life conditions.
3. Offering the opportunity for continuous learning and self-learning which enables the members of society to renew their knowledge and experience on a regular basis so that they can cope up with the scientific and technological developments at the field of specialization (Badran&Eldahshan,2001).
4. Helping students to participate at the development of their community and to encourage them to seek for continuous learning.
5. Helping persons to understand, interpret, preserve, promote, develop and disseminate national, regional and international cultures as a way to enhance cultural diversity.
6. Helping to protect and promote community values by ensuring that young people are taught upon the basic values of democratic citizenship, and on the open aspects of independent critical thinking that promotes the democratic style and critical thinking in

7.The Contribution to solve the global problems facing societies and to encourage intellectual cooperation at the international levels (World Bank, 2000).

In its first article, the act of Organizing Universities (1972) defines the basic functions of the university as "it is concerned with all aspects of university education and scientific research carried out by colleges and institutes in the field of community service and upgrading it in terms of community service; to contribute to the building and strengthening of society, forming the future of the nation and serving humanity" (Act of Organizing the universities,1972).Hence,the main objectives and functions of university education are defined in education and teaching to prepare and develop human resources, do scientific research and community service. The main guidelines of the university education educational policy are formulated in dependence on the indicators represented in; increasing the university education opportunities ; the needs of the production sectors and services of specialists, the absorptive capacity of the university faculties and the views of the committees of the university education sectors to prepare the students who are proposed to be accepted at the colleges within the scope of each committee, and the suggestions of the professional unions, and the numbers of the students who success in high school and success levels(Dahawy,2013).

Components of the university education system:

The university education system consists of three main components *inputs, processes* and *outcomes*. This can be illustrated in the following (OECD, 2010).

A) Inputs:

The inputs of university education are what give the university its basic fundamentals and determine its purpose. The quality of these inputs depends on the success or failure of the whole university system, and these inputs include a set of subsystems that interact with one another. The inputs consist of all the resources and elements necessary to ensure the quality of the educational process such as goals, human resources (students, faculty and administrators), physical resources (buildings and facilities), financial resources, policies and legislations that support the rules of work, in addition to the services that help the university to fulfill its mission Such as health services, psychosocial care for students, housing, nutrition and etc.

B. Processes:

The university education processes represent the essence of the work of the university administration and they are related to the nature of the interactions and activities in which inputs are converted into outcomes, as university is considered an open system. It is not easy to understand the nature of these processes in the university system, and we may interpret them through the so-called black box (a concept used in the study of large systems with the large number of subsystems that are difficult to count as university), but these processes can be seen as administrative functions and activities operating as subsystems within the university system.

Processes include a set of sub-systems that interact with one another to transform inputs into outcomes such as administrative and political processes, university study system, plans and curriculum, as well as the methods used to teach courses at the university.

C. Outcomes:

Outcome is the final component of all the interactions and activities of the university system. It represents the final results obtained, such as human outcomes that are capable of working and production with high efficiency, in addition to the materialistic outcomes concerning the benefits to the environment and the surrounding community.

It is apparent that it is difficult to estimate the outcomes of the educational system accurately due to a number of reasons:

-The outcomes of the university are characterized by continuous development. The levels and quality of graduates are not fixed, but they are constantly changing according to the changes that accompany the development of science and knowledge on the one hand and the development of society on the other hand.

-The outputs of university education are not homogeneous to a high degree. Thus, it is difficult and complex to define the capacity of these outcomes and to measure the overall results of learning and its impact.

-The educational outcomes are human not materialistic. Therefore, they are not subject to price determination, in addition to the existence of some aspects such as values and trends that are difficult to measure, and thus it becomes difficult to determine the real value of educational investments for the overall outcome of education and it is hard to give a numerical value of these outcomes as a whole.

The Application of Gemba Kaizen at university education: Why?

There are many justifications beyond the adaption of Gemba Kaizen technique at university education. Hence, the reasons are diverse, which are represented in the tremendous impacts of globalization upon university education in particular. Other reasons are related to the global economic variables which affected university education in a way that it must improve its performance and efficiency. Additionally, the problems and challenges that face university education and affect its performance are considered among the major reasons for adapting the Gemba Kaizen model as an approach to improving university education, as this model focuses on the continuous improvement. These reasons and factors can be fully explained in the following lines.

First: the Globalization impacts on university education: Globalization in higher education was defined as the forces of economy, politics and society toward the stronger international integration of higher education in the 21st century. Globalization has led to the repositioning of the global economy and reframing of the transnational political landscape by (Altbach ,2004). Not only does Globalization leads to the evolution of the world-wide market, foreign direct investment and cross-border mobility of production but also it inclines world-wide culture, communications, information and knowledge to one world community (Marginson & Van der Wende, 2007). The progress in technology and movement of knowledge has resulted in the globalization process (Altbach, 2004).

Consequently, developing countries in particular need to invest in university education and training.

The impacts of globalization upon university education are diversified. For example, universities cannot be isolated from the political economic practices and processes which are involved in the process of conceptualizing globalization. It may be argued that in the 21st century, it is difficult for an educational system to stay without being influenced by global phenomena (Altbach, 2004b). Beerkens (2003) argued that globalization has impacts on university education including: a decrease in public funding, strategic effects on the labor market, the quality of national educational systems and the adoption of information technology to expand the quantity of education at a low cost. Kızıltepe (2010) indicates that university education institutions are also influenced by both local and global organizations, such as the World Trade Organization (WTO) and the General Agreement on Trade in Services (GATS). These organizations have affected the roles and functions of educational institutions both nationally and internationally.

Globalization has also enhanced the global competitiveness in the higher education market and encouraged innovation and research development with a view to improving universities' programs, offering new educational and training courses and competing to achieve a high reputation and international ranking (Knight, 1999; Beerkens, 2003). Van Vught (2009) argued that globalization has enhanced global competitiveness in the higher education market and encouraged innovation and research development. They confirm that higher education institutions have encouraged investment in research and development from businesses and industry.

Second: the Global Economic Variables: The current economic changes have led to the existence of a new world economy characterized by universality and rapid speed. Also, it is a competitive economy governed by knowledge and discipline. These changes have also transformed the economies of developing countries into capitalist market economies and linked them to the world economy. Competition in international markets; liberalization of foreign trade and opening up to global markets have increased the competition among countries. Competition, quality and excellence have become the elements that control market laws.

Economic conglomerates and multinational corporations have intensified their global competition, with the potential of each conglomerate to achieve production characterized by rapid speed, massive knowledge, meeting the needs of consumers, flexibility and rapid development to pursue ever-changing markets. The competition among these conglomerates has grown as it is not only limited to the high quality of production and the appropriate prices, but to prepare individuals and leaders and equip them with the highest technology to reach a level of quality and production at the global levels as well. This makes university education improve its performance of all its components (Bollag K., 2008).

Third: The Problems of university education in Egypt:

It is obvious that university education has a vital role in the process of development at

any country, and this has been indicated by many education theorists. There is great linkage between economic development and the spread and expansion of university education and the societal returns on university education including the spread of knowledge and culture. However, ineffective policies and reforms in university education affect development negatively, and this can be seen in the case of Egypt. Egyptian higher education in Egypt today suffers from an overall lack of quality. This can be traced back to the 1950s when there was an increasing greater access to higher education of the masses. However, this greater access, although well-intentioned, led to the poor quality of public university education today (Holmes,2008).

Moreover, there many problems associated with Egyptian universities curricula as they still contain traditional courses although we are on the threshold of the third millennium. The great emphasis on theoretical and human studies may explain the most important shortcomings of these courses and curricula. There is an absence of the university curricula linkage to society needs and labor market requirements .The university curriculum is not subject to continuous evaluation, and there is not a flexibility of the regulations to add new courses which are demanded by the labor market (**Katherine, 2011**).

The World Bank in cooperation with the Organization for Economic Cooperation and Development (2010) have observed that ,according to the surveys of students and graduates of the higher education and vocational education sectors in Egypt, university education has Weak links to labor markets as there is Inadequate chances for students to choose the areas of study related to professional preferences. Also.there is an increasing distance between university education and the context of social, economic and political development -the educational process at university education is far from the needs of the labor market, this was shown through two levels .First, the mismatch of the outcomes of university education with the needs of the traditional labor market through the rise of the graduates of theoretical colleges over the graduates of practical colleges. Second, the inappropriateness of education outcomes as they do not keep up with the needs of the global markets.

-The predominance of theoretical disciplines over the practical disciplines, which has caused a gap between the educational process on one hand and the demands of the labor market as well as the organizations actual needs of human resources who are skilled and well prepared due to the curricula nature of traditional universities.

In addition, the Shanghai International ranking of Universities issued in 2017 showed that the list of the top 500 universities in the world does not include except one Egyptian university which is Cairo University whose ranking was between (401) and (500) level (**Academic Ranking of World Universities, 2017**). Also, the latest reports of global competitiveness, namely the Global Competitiveness Report 2016/2017 showed that Egypt came at the (115) ranking among (138) countries at the competitive rankings(**World Economic Forum, 2017**).

Change management at university education institutions:

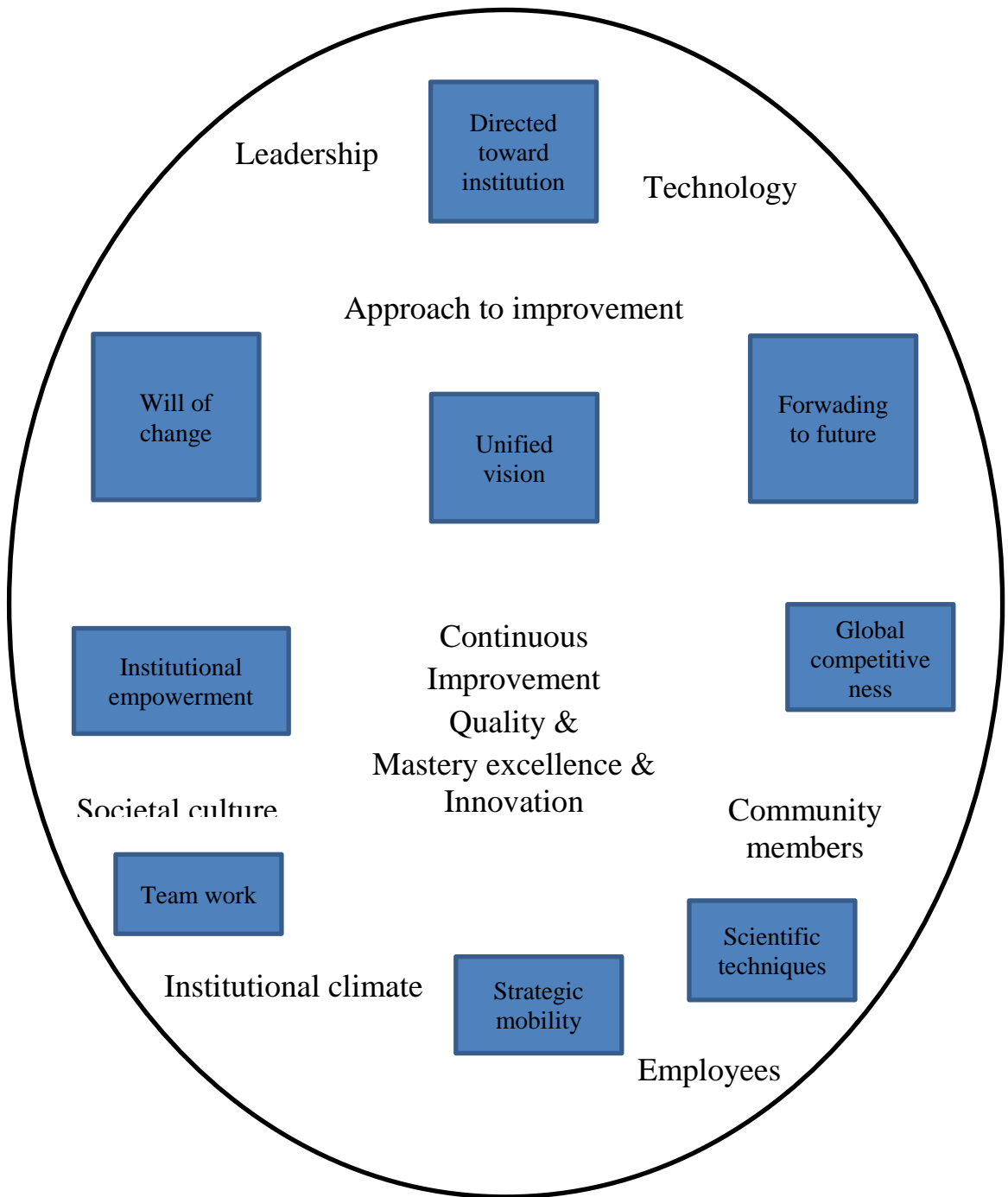
Change occurs as a result to meet the requirements and needs of present and future.

Accordingly, there are several aspects which are influenced by change at university institutions. These aspects constitutes the composition of university education and they are represented in the occurring change in the workforce and organizational powers, as well as the interaction among them which results in forming the third aspect known as processes. The institutional culture as the fourth aspect forms the suitable environment for change success.

- 1- Human capital: The areas of change include the human elements (learners, staff, faculty, leaderships, administrators, employees, workers).the change here is related to the competencies mastered by human capital to change and prosper.
- 2- Organizational capital: The areas of change include all what the institution possess from administrative units and centers which facilitate and manage work inside the institution. Change requires reframing and redesigning the institutions ' elements and parts.
- 3- Processes: This aspect refers to the processes that occur due to the interaction between the human capital and the organizational capital. these processes cover the change management itself and the management of human and organizational capital. The process of interaction between the first two aspects leads to the presence of cognitive capital.
- 4- Institutional culture: It is obvious that change occurs if the institution exists in an environment characterized by a climate of institutional values that support organizational capital (Queensland Government, 2013).

Change management is a philosophy of work which is based on scientific bases, as it uses and applies the scientific approach in thinking, planning, implementing and following-up. Moreover, change management is not a reaction, but it is a planned action which has reasons, justifications and strategies.it is an administrative philosophy which looks forward to the future and it is characterized by effectiveness and motivation for the educational institution. It can be said that change management consists of a set of strategies, techniques, tools and methods which are suitable for the various suggested procedures. Change management affects university education institution positively in a way that it transfers unacceptable competitive position of any institution into a distinguished competitive position (Rosemary, 2005).this can be fully shown as depicted in Figure.1:

Fig. 1: Philosophy of Change Management



The change management process is the sequence of steps or activities that a change management team or project leader follow to apply change management to a change in order to drive individual transitions and ensure the project meets its intended outcomes. Change Management includes various processes such as change Logging, change Review, change assessment and panning ,change approval ,coordinate change implementation, change evaluation and closure and emergency change handling(Rosemary ,2005).

The Seven principles for effective change management:

In order to be able to deliver more desirable outcomes, university education institutions have to take into account seven change management principles. These principles are represented in the following (Gordon Stanley,2006):

- Start with the end in mind:

This means that individuals or stakeholders know what they want to achieve and they have to own a clear vision of how much better things will be if the contemplated initiative is successful. This represents the key to effective alignment and core project communications.

- Understand the institution's culture:

It is obvious that stakeholders' attempts to understand the institution culture takes long time, and this constitutes a good factor before embarking on a change initiative. Any undertaking that doesn't align with, act on, or uphold the institution's values will likely encounter resistance.

- Communicate, communicate, and communicate:

The same information needs to be communicated in various ways and via numerous techniques to create the critical mass of knowledge needed to make the message matter.

- Walk a mile in the shoes of those whose roles will change:

The employee experience should be treated the same way as the customer experience. Therefore, it's important to understand every step of the employee's change journey and how it could affect his or her day-to-day work.

- Create win-wins and align incentives:

Find ways for the university, departments, and individuals to benefit from the envisioned changes.

- Embrace relentless incrementalism to help achieve radical change:

Starting with a bold goal in mind and taking small steps relentlessly can build organizational capital.

- Individuals won't get what they don't measure:

Stakeholders and leaderships in particular have to be aligned on the project's vision and change management success criteria from the start.

Characteristics of change management:

Change management is distinguished by several characteristics represented in the following(Burnes ,2009):

- It includes several stages and processes which have a start and an end. These stages and processes have a general aim which is development and improvement. Every stage or every process has its minor goals, and this reflects that change is planned work with clear goals.

- All strategies and plans employed at the stages and processes of change are chosen according to regulations and needs of the educational institution. This shows that change is actual and applicable.
- It is directed toward achieving the needs of learners, staff, and society and labor market. Consequently, it achieves the principles of total quality and sustainable development.
- The processes and goals of change management do not achieve the aspirations and needs of a particular group inside the institution or outside it, but it meets the needs of the whole members.
- Transparency, justice and validity.
- Positive response to the current position and its changes which are used as opportunities for development and innovation.
- Continuity is considered one of the main features of change management. As a change is a response to the different cultural variables, hence it still occurs.

Gemba Kaizen Technique:

The visual administration or what is called in Japanese context Gemba Kaizen is considered one of the techniques of change which has been recently used in various administrations. It is a continuous practical model to run the daily events and incidents in their place and time, and the success of this administrative model depends on reality and transparency at the administrative relationships at work (THESSALONIKI, 2006).

Gemba Kaizen: a historic perspective:

The Gemba Kaizen idea dates back to the 1980s, particularly in 1984 by the Japanese expert Masaaki Imai who stated that kaizen strategy is one of the most important concepts at Japanese management and the key success of the Japanese competition. As for its early historic roots, Kaizen appeared in 1950 in Japan when the government confessed that there was a problem at its management system at that time besides to the lack of the workforce. Consequently, it began to solve this problem in cooperation with workforce unions. Imai applied kaizen philosophy to improve competency, productivity and competitive ability at Toyota in 1986. Accordingly, and after the increasing productivity and competitiveness of Toyota, the idea of kaizen has become not only a part of the Japanese manufacturing, but it has been applied at the majority of aspects as well. It is considered the key indicator of improvement and success (Imai, 1986).

Kaizen philosophy has become a common strategy in Japan. It is used in management and in popular culture as well. Kaizen has formed a foundation on which any institution or an organization is built. It can be said that Kaizen represents a natural and common way of thinking in Japan as managers and workers often do not make a conscious effort to think "Kaizen. Hence, persons just think the way they think - and that way happens to be Kaizen! (Wilson, 2012)

Gemba Kaizen Definition:

Kaizen refers to improvement. The process of improvement includes all persons at any institution. This concept emerged in Japan, as the Japanese have realized that kaizen is a

strategy to attract customers due to its focus on continuous improvement (Imai,1986) . This philosophy assumes according that Imai ‘ ‘our way of life – be it our working life, our social life or our home life – deserves to be constantly improved’ ’ (Imai,1986,p.3).

As for its significance, Kaizen stems from the Japanese words ‘Kai’ and ‘Zen’, which translate roughly into to break apart and investigate and to improve upon the existing situation. Kaizen is a Japanese term that means continuous improvement, taken from words 'Kai', which means continuous and 'zen' which means improvement. Some translate 'Kai' to mean change and 'zen' to mean good, or for the better. The Kaizen Institute defines Kaizen as the Japanese term for continuous improvement. It is a scientific method which depends on quality control so that persons do their tasks without defaults. Kaizen philosophy implies that persons should never be satisfied with what was accomplished last week or last year (THESSALONIKI,2006) .

Gemba Kaizen is considered an essential part of lean management concept which focuses on getting rid of waste and the sources of loss regularly, and this is the main philosophy of Gemba Kaizen. The word 'kaizen' means time management, while the word 'Gemba' means place management. Thus, Gemba Kaizen concentrates on the beneficiaries' status in the first place. The beneficiary items here are the inputs and outcomes of the administrative processes at any institution.

There are many concepts that are associated with the Gemba Kaizen term such as Gemba, Gembutsu and Muda. The word ' Gemba' is the actual position of the institution where the defaults and problems occur in addition to change and improvement. Thus, Gemba Kaizen is A set of managerial tools that are internationally used to make the processes of the institution at the first level globally. The word ' Gembutsu' refers to the real tangible object in the work position such as equipment, tools and etc. The word 'Muda' refers to the un useful activities that do not give any added value for the institution, and kaizen in this case attacks every muda that exists in gemba or work position (Joshi,2013).

At the university education context, Gemba kaizen refers to persons' awareness that Improvement begins with the admission that their institution has problems, and this requires change. Thus, the term kaizen mainly focuses on continuous improvement process in which everyone at the institution has a role in a team work to challenge the status quo. As presented by Imai, Kaizen is an umbrella concept that embraces different continuous improvement activities at the institution as depicted in the following figure.

Customer orientation
Quality control circles
Automation
workplace TPM

Total Robotics System
QC
Discipline in the

Kamban
improvement
Zero defects
activities
improvement
development

Quality
Just in time
Small group
Productivity
New product

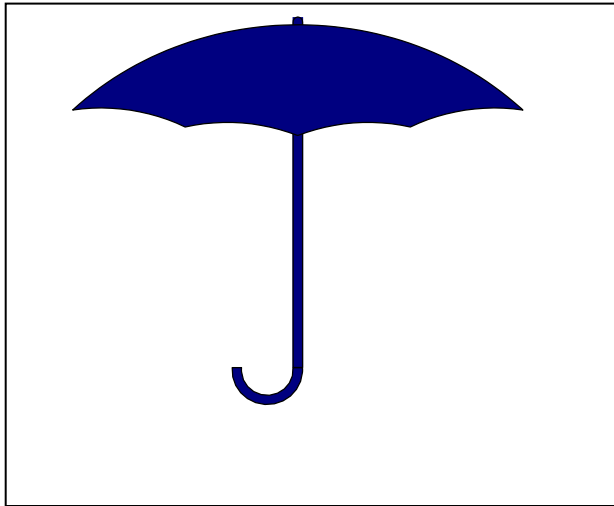


Figure 3. The kaizen –umbrella concept.

The philosophy of Gemba kaizen:

It was previously mentioned that kaizen refers to the continuous improvement. The word 'improvement' here is meant by a process which includes certain steps. As a result, the improvement process begins with identifying a need, and the need becomes clear when persons at any institution recognize a problem. Gemba Kaizen puts an emphasis on problem-awareness and it can lead to the identification of problems.

- Problem Solving

Where there are no if problems do not exist, it is far to improve. When persons recognize that a problem exists, Gemba Kaizen is already working. The real issue is that the people who create the problem are often not directly inconvenienced by it, and thus tend to not be sensitive to the problem. As for Gemba Kaizen philosophy, identification to a problem requires solving it. As soon as persons solve the problem, they surpass a previously set standard. This results in the need to set a new, higher standard and is the basis for the Kaizen concept(Imai,2012).

- Standardization

The significance of setting a previous standard lies in the improvement which depends upon it later. There must be a precise standard of measurement for each person at institution. According to the Gemba Kaizen strategy, persons are required to make constant efforts to improve upon a standard. For Kaizen, standards exist only to be surpassed by better standards. Gemba Kaizen is really based on constant upgrading and revision. Standardization is a way of spreading the benefits of improvement throughout the institution.

- The Suggestion System

It is known that Gemba Kaizen covers the all parts of the institution beginning from the tasks of laborers till the maintenance of machinery and facilities. Gemba Kaizen has a role to play. Accordingly, it is important for management to understand the workers role in Kaizen, and to support it completely. One of the main vehicles for involving all employees in Kaizen is through the use of the suggestion system in which everyone gets involved in solving problems. The suggestions introduced by each worker represent a reflection of the department head's kaizen efforts. It is a goal of departments Heads, Deans, managers and supervisors to come up with ways to help generate more suggestions by the workers(Imai, 2012).

- Gemba Kaizen: the three pillars:

According to M. Imai, there are three pillars of kaizen housekeeping, waste elimination and standardization. Imai confirmed that in order for the management and employees to be ensured success on activities on these three pillars, they are required to put into consideration that there are three factors should be taken account . These factors are visual management, the role of the supervisor and the importance of training and creating a learning organization(**Imai,1997**).

1- Housekeeping:

Housekeeping is a process of managing the work place , known as "Gemba" (workplace) in Japanese, for improvement purposes .as proposed by Imai , the word "Gemba " means "real place", where value is added to the products or services before passing them to next process where they are formed (16). To achieve suitable and right housekeeping, the 5S methodology is used. The term "5S" refers to five Japanese words which imply that their practices at any institution or organization lead to clean and manageable work area. The five Japanese words are seiri, seiso, seiton, seiketsu and shitsuke. The equivalent English words of the 5S's are sort, straighten, sweep, sanitize, and sustain. The 5S evaluations fulfill orderliness at the work area at any institution and they make persons careful and keen on the improvement of their institution. The significance of the 5S can be represented in Creating safe working environments and cleanliness. Also, the use of the 5S can lead to revitalizing Gemba , improving individuals motivations , reducing physically strenuous work, creating a sense of belonging and love for the place of work for individuals who belong to the institution(**Imai,1997**).

2- Waste (Muda) elimination:

In Japanese, the word "muda" Muda means waste. Muda is any non-value-added task. Hence, any resource which does not add value for the institution processes forms Muda and it needs removed. Muda in university education may include, for example, Signature approvals, bureaucracy, Walking or routing documents, and etc.In Gemba Kaizen philosophy, the aim is to eliminate the seven types of waste (7 deadly wastes) caused by overproduction, waiting, transportation, unnecessary stock, over pro Because eliminating muda costs nothing, muda elimination is one of the easiest ways for the institution to improve its Gemba's operations.

3- Standardization:

It is obvious that Standards set by management should be reviewed in a constant way. There should be continuous collecting and analyzing data on defects, and encouraging teams to conduct problem-solving activities. In this case, the standards will be in a proper form, and if deviations occur, the individuals realize that there is a problem. Then employees will review the standards and either correct the deviation or advise management on changing and improving the standard. Accordingly, Imai developed the PDCA cycle (plan-do-check-act), known as Deming cycle to be used and employed in kaizen philosophy. It is a never-ending process and is a basis for continuous improvement, as depicted in figure (2).



Fig. 3 PDCA Cycle

The management plans, each employee follow the plan activities and inspectors check, and the management correct or secure every step. It is evident that there is a systematic work in which every person follows his task or his own PDCA cycle (Imai, 1997). Linked to this, Kaizen PDCA cycle could be explained in the following examples:

- PLAN refers to selecting the theme, understanding the objectives, and analyzing the data in order to identify root causes;
- DO is the process of establishing countermeasures based on the data analysis;
- CHECK is confirming the effects of the countermeasures; and
- ACT is to establish or revise the standards to prevent recurrences, and reviewing the above processes and working on the next steps

Conclusion: The current research adopts the PDCA cycle in which all stakeholders know their tasks and can improve the work continuously. Linked to this, the first step (P= plan) refers to understanding the objectives of the institution and its working units. This step is usually operational in every organization and task. Planning must be clear, accurate, and

complete through every academic principle and should be systemic. In the second step (d=do) , the plan turns into is practice or it becomes allowable to do the following plan according to the purposes and along the short and long working period of each plan. Particularly, only carry out the plan if one knows that it will be effective. The third step(c=check) is very vital as it refers to evaluation and benefit checking which are important processes for the plan. C-Check is the step for comparing between P-plan and D-doing. At this step, there is an evaluation and checks for all learners, staff and university administrators. This step checks the working result level. If higher than assigned P-plan, it shows that it has reached the set goals. If it is lower than assigned P-plan, it shows that it is not able to reach a set goal. After three steps of P-DC, one will get an evaluation result to A- action or adjustment step. If this result is higher than the assigned goals then adjust the goals higher for the next operation for it to be challenging.

Additionally, there are some questions should be issued at every step. The university education institutions' stakeholders see these steps as steps for change and improvement. They are aware of the idea that improvement comes via improving the processes or improving the processes outcomes. Consequently, everyone should know his tasks and at which step they are performed.

1- Plan- the change :

This step refers to the top management roles at the institution, and this cover the following:

- identification of the need to implement change
- definition of the current process and the opportunities for improvement
- Planning of the way by which the effectiveness of the change is monitored.
- The existence of data (the documentation of goals and objectives).

2- Do- implementing the change :

This step is the process of implementing change, in these steps; the stakeholders carry out the change or new practice and document the activities of implementation.

3- Check-monitoring and reviewing change:

It is the step in which the top management participate at the process of reviewing and monitoring change according to the plan. There should be a comparison of the results in terms of the original goals and objectives of the plan. This step is very vital as it is used continuously at the whole steps of improvement.

4- Act-revising and planning how to use learnings :

In this step, the stakeholders revise and plan how to use the leanings. The following questions are taken into account

- "What will you do with the leanings – adopt them, abandon them, run them through another PDCA cycle again to test?
- Revisin effectiveness of the change? And
- What can be done to improve the process further?

It can be said that the four steps *plan, do, check and act* constitutes the main stages of Gemba kaizen methodology. By carrying out these steps, university education institutions will be able to enhance change management philosophy and individuals can reduce the problems resulting among the administrative levels at any institution.. According to the PDCA cycle, the change is a process which is cyclical in which employees know their tasks to implement change , which results in achieving continuous improvement.

Recommendations for enhancing change management at university education institutions in the light of Gemba Kaizen model:

As change management aims at achieving development and improvement via exploiting all the changes as a means to achieving continuous improvement, Gemba Kaizen model is based on the idea that there is an opportunity for enhancing change at any institution which results in continuous improvement and development. Although there is a problem represented in the culture of change for the top management and other stakeholders to adopt this model, the enhancement of change management philosophy at university education institutions may lead to full success of this model at any institution. The following are some recommendations which should be followed in enhancing change management at university education in relation to Gemba Kaizen model.

- Using innovative and new alternatives to solve the fatal problems which cannot be solved via following traditional ideas that lead to the decline of the level of outcomes.
- The satisfaction of top management with the importance of change management as they are considered an ideal model for the employees
- The existence of a clear vision for the process of change and understanding what things are required, and this is accompanied by continuous improvement.
- The participation of stakeholders at all levels at the process of change and they are required to have the desire to change for the best and introduce suggestions for improvement and development.
- Improving the employees' competencies which result in improving the institution outcomes.
- Setting up new strategies to develop the competencies of the members of the institution.
- Developing the values of the institutional work, e.g. loyalty and belonging to the institution.
- Developing the employees' competencies at the fields and areas of evaluation and monitoring.
- Enabling the employees to be effective partners in managing the institution.
- The emergence of self-learning culture for all members at the institution.
- Changing the employees' beliefs toward their role, the learner, educational programs and institution, and linking that to society.
- Getting rid of the tasks which forms a type of waste or do not give an add-value.

- There should be Focus on the beneficiary (the student) in addressing the basic needs (community, labor market).
- The continuous improvement is a responsibility of everyone at the institution, and it is limited to not a particular group or administrative level.
- Continuous improvement and focus on improving processes. As continuous improvement achieves high-quality results, while focusing on outcomes without attention to processes can lead to failure. Results do not stem from space, but they are the result of processes. Therefore, it is necessary to adopt a follow-up system to implement the procedures for the development and academic renewal of faculty members in Egyptian universities.
- The principle of delegation of the most important things that save the time of the staff member by giving some tasks to others to carry out and then devote to what is most important. This can lead to avoiding the mistakes.
- The university should have an innovative approach that encourages students to take the initiative to deal with situations instead of waiting for them. They should have the ability to act and behave in a reactionary manner by investigating the small ideas to acquire new habits and skills.
- There should be a highly committed top management, to both change and rapid improvement.
- The need for highly trained and experienced facilitators for the stages of change represented in assessment phase, the event, and the follow-up.
- Spreading Kaizen culture and its linkage to the change management culture in a way that they both enhance improvement and development continuously.
- Enhancing the culture of teamwork such as problem-solving groups and functionality and execution groups to deal with the changing and unusual situations.
- Encouraging the innovative ideas and initiatives proposed by the employees.
- Getting rid of waste facilitates the change at the institution.
- Professional team education and preparation.
- Clearly defined roles of the participants; process owner, team leader and co-leader makes change more easy to be achieved, this results in continuous improvement and saving time and effort.
- Commitment to follow-up and sustain the improvements made.

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