

Kaizen implementation and its challenges in small and medium manufacturing firms: A case of Woliso Town, Ethiopia

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Abstract

In the modern world, industrial transformation receives great attention. As a result, many companies are becoming successful by implementing Kaizen as a change agent. Nevertheless, there were few pathways of continuous improvements, mainly because of abandonment of Kaizen philosophy, organizational resistance to change, lack of proper implementation and monitoring techniques, lack of employees' motivation, and scarcity of resources. The study aimed to examine Kaizen implementation and its challenges in small and medium manufacturing firms of Woliso town. The study employed descriptive research adopting a quantitative research approach—the researcher used 55 small and medium manufacturing firms of Woliso town. In addition, the study employed primary data collected through open-ended and close-ended questionnaires. The study found that most sampled firms lack awareness about Kaizen because of a lack of training opportunities. Similarly, Kaizen philosophy is considered exhaustive and routine the attitude of owners, managers, and employees in Kaizen implementation is very weak. Finally, the study recommended that it is important to provide continuous training programs for employees and managers of small and medium manufacturing firms. Most importantly, to extend Kaizen's philosophy, it is essential to incorporate it into the school curriculum.

Keywords: *Firms, Kaizen, Training opportunities*

JEL Classification: M21, O32

INTRODUCTION

Industrial transformation receives much attention in every developing country where the Kaizen approach has become successful. The growth of the manufacturing sector has transformed an agriculturally based economy into an industry-based one (Imai 1986). For instance, in labor-abundant countries like Ethiopia, Kaizen has helped develop labor-intensive industries, thereby helping such a country achieve inclusive economic growth, and has reduced production costs and the incidence of injury and machine breakdowns and delayed delivery. In the modern economy, many organizations are becoming beneficiaries by implementing Kaizen management techniques. For instance, as Bisht (2013) ascertained, Japan's companies become successful after they have been utilized Kaizen and becoming highly competitive in the global economy.

Kinds of literature support that this achievement initiates Japan to help many African countries transfer the concept of continuous product improvement.

Kaizen is a big tree that is already 70 years old, but it is still growing with newly emerging branches. In Africa, Kaizen was introduced in the early 1990s. However, the majority of business owners, managers, and workers in Africa remain unfamiliar with Kaizen. The case of Ethiopia is not different. Industrial development has been successfully achieved in every developing country like Ethiopia, where this approach has become widespread. In Ethiopia, Kaizen has been adopted and implemented in different industries and manufacturing sectors since 2009. As a result, some achievements have been attained (Ethiopian Kaizen Institute, 2011). More importantly, in Ethiopia, Kaizen is recently chosen as one of the management tools to improve and boost managerial capacity to implement the growth and transformation programs currently undertaking.

Indeed, in the view of Kaizen as a new concept and as a problem-solving tool, remarkable changes are not yet achieved. In this regard, to enhance Kaizen's progress in Ethiopia, special emphasis must be given to all stakeholders such as the government, company managers, and employees. In global business computation, the issue of the quality product takes the first place. In line with this, Kaizen as continuous improvement is a key solution. Evidence shows that, in manufacturing firms, low productivity and poor quality control have been identified as the main bottleneck for encouraging domestic investment and foreign exports.

Initially, the concept begins to spread from a single production line and a product to other lines and products within a firm. Those pioneering firms that earnestly put Kaizen into practice will see an increasingly substantial improvement in quality and productivity, and this will prompt their suppliers and customers to follow suit. Kaizen will thus spread from a few firms to many within an industry and from one industry to another (Womack & Jones 1991). However, in Ethiopia, the government introduced the Kaizen philosophy; no prior study showed Kaizen adoption and its implementation in small and medium manufacturing firms. Thus, this study aimed to assess Kaizen implementation and its challenges in small and medium manufacturing firms of Woliso town. The research questions that guided the study were: 1) What is the extent of Kaizen implementation practices in Small and medium manufacturing firms of Woliso town? 2) What are the benefits of Kaizen implementation in Small and medium manufacturing firms of Woliso town? 3) What is the perception of management and employees on the kaizen concept? 4) What are the main challenges that hinder Kaizen implementation in small and medium manufacturing firms of Woliso town?

LITERATURE REVIEWS

The concept of Kaizen includes both the humanities and the sciences. It is human-friendly and participatory. It is a collection of ideas and insights that many managers and workers from firms in the manufacturing and service sectors have created and refined through observations and experiments carried out over several decades in Japan and other parts of the world. Kaizen improves productivity in a step-by-step, incremental, progressive manner. It has been used primarily in the manufacturing sector and applied to health, education, public administration, and other services and applied to micro and small enterprises and medium and large firms. It can be applied to offices, retail shops, service counters, machine shops, workshops, and garages, even for everyday life (Otuka et al., 2018).

It was in the early 1960s' that small and medium firms were considered as change agents. In the modern economic world where global completion is becoming complex, economic transformation and development attract the attention of many researchers as a key plan. From my experience, in Africa, Ethiopia, as a newly emerging economy, gets much recognition worldwide. So, for its bold journey of economic transformation, Ethiopia suggests small-medium manufacturing firms as a change agent. To achieve this objective, Ethiopia considers Kaizen as a remarkable change agent. Farris (2006); Ethiopia Kaizen Institution (2013) describes the benefits of Kaizen as improvement of profit, customer satisfaction, sources of innovation, enhancement of self-development, source of motivation for employees means of improvement for teamwork, means of reducing waste, and tool for proper use of time.

In Ethiopia, nowadays, both manufacturing and service sectors are tried to implement the Kaizen philosophy. For instance, according to MOI (2015), the following results were achieved from the selected industries of both organizations that have successfully implemented Kaizen. Accordingly, productivity improvement accounts for about 37.20%; waste and defect reduction accounts for 55.26% and 31.30%, respectively; cost reduction accounts for about 6% to 60%; searching time reduction accounts for 95%; industrial accidents were reduced 49.5% to 15%. Similarly, before the implementation of Kaizen, employees were faced many problems to solve. However, post-implementation, employees were solved 50.3% of the identified problems using soft basic Kaizen tools and techniques.

The main challenges of Kaizen implementation, particularly in Africa, are the lack of skilled workers and the lack of companies' forward and backward integration to control business networks. Indeed, most people argued that Kaizen's concept is new for many individuals (Titu et al., 2010). Of course, the case of Ethiopia is not different. For instance, the fact that the concept of Kaizen as a tool for change and improvement yet not included in academic curriculums like higher institutions, vocational schools, even in secondary and primary schools of Ethiopia is another major challenge in Ethiopia.

In addition, Bulsuk (2011) identified the following major challenges of Kaizen, especially in an emerging economy like Ethiopia: 1) Kaizen is seen as a short-term project. The emphasis here is on long-term improvement. Although the concept of Kaizen is quite simple to understand, it is difficult to master and will need time before all employees fully understand it. The main problem with implementation is that companies often expect a quick turnaround and visibility in KPIs within a year. When it doesn't appear, write Kaizen off as a failure; 2) Overemphasis on tying Kaizen to KPIs: Kaizen can only succeed in places with a true desire to improve. While it is important to tie Kaizen to KPIs, over-emphasis on it would ignore the fact that improvements are often incremental, not revolutionary. Kaizen is like a snowball rolling down a gently sloping hill – it gathers momentum and increases in size as it comes down; 3) Kaizen has implemented in a heavily bureaucratic organization: Lack of commitment is only one of several common reasons why Kaizen implementation fails. Kaizen will never succeed in an organization bogged down by a bureaucratic mindset, filled with rules and procedures with people who would resist any sort of change; 4) Management does not support kaizen initiatives: The importance of support cannot be over-emphasized: management mustn't be just fully on board, but essential that they want to embrace Kaizen's long-term commitment to the organization fully. They need to pass on their enthusiasm and demonstrate that they are continually looking for new and better ways of doing things. Kaizen is about everyone improving everything, not just a group doing all the work. Similarly, the failure of Kaizen is also often seen in companies that

implement Kaizen as a secondary activity. In addition, Kaizen will never work if people do not implement its full suite of tools and concepts, with sufficient training given to take advantage of them.

In the present day, the issue of Kaizen as a tool of change through continuous improvement receives the attention of many researchers. As a result, various studies have been undertaken in different countries to identify problems facing the implementation of Kaizen and the potential benefits received by enhancing Kaizen in production. Therefore, for this study to determine the gap in literature and knowledge, the following section summaries empirical study was done by past researchers.

Taye (2014) examines the practices and challenges of kaizen implementation at Entoto Polytechnic Cluster College in Woreda, three enterprises of Gulele sub-city in Addis Ababa, Ethiopia. The results of his research indicated that the Kaizen implementation program is not satisfactory. Similarly, different challenges emanated from the implementation of the Kaizen program, such as lack of knowledge about the Kaizen concept by managers and employees, negative perception towards the implementation of kaizen implementation, lack of material resources and the like. Abera (2015) tried to summarize various empirical and theoretical literature to examine Kaizen implementation in Ethiopia. From the literature summary, he concluded that even though there are many kinds of literature available on kaizen philosophy in many countries, an empirical study done on the implementation of Kaizen in Ethiopia is very scarce. Finally, he suggests that in Ethiopia, more study will be required on issues related to Kaizen.

Hagos (2016) examine factors and challenges affecting the implementation of kaizen tools in selected garment factories of Ethiopia. His study pointed out that continuous improvement tools and principles are not implemented and practiced as well. The study further identified the three critical factors that affect continuous improvement in the factory: top management commitment, employee motivation, and participation in Kaizen implementation. Lingappan (2016) undertakes a case study on Kaizen Performance in an Engineering Industry in India. His study proves that the company can survive with lower manufacturing costs and higher quality with the Kaizen and other techniques. Another study done on Kaizen issues is a study undertaken by Mekonnen (2017). Her study assesses kaizen implementation practices and challenges in Tikur Abbay Shoe share Company in Addis Ababa, Ethiopia. Her finding shows that the company focused only on 5 s' implementation of Kaizen, and other elements of Kaizen implementation tools were not in practice.

From the reviews of some empirical studies, it can be realized that many studies have been undertaken on Kaizen issues. However, still now much is not known about Kaizen. Particularly, in an emerging economy like Ethiopia, the concept of Kaizen is at its infant. Hence, details are unknown about kaizen implementation, dissemination, and potential challenges in small and medium manufacturing firms. Moreover, Kaizen is a key for economic transformation through productivity improvement better emphasizes has to be given. Therefore, this study tried to examine kaizen implementation and its challenges in small and medium manufacturing firms of Woliso town by considering all the above states of affairs.

METHODS

The type of research employed in this study was descriptive research adopting a quantitative research approach. For this study, a sample of 55 small and medium manufacturing firms of Woliso town was used. The study employed primary data,

which were gathered through questionnaires designed as closed and open-ended. The data obtained from primary sources were processed by using SPSS version 22. Moreover, to visualize the collected data and analyze processes, frequency tables, bar graphs, and piecharts were used.

RESULTS AND DISCUSSIONS

Characteristics of respondents

Men owned the majority of the small and medium manufacturing firms of the study areas. As shown in Figure 1, 94% of respondents were male, while about 6% were female.

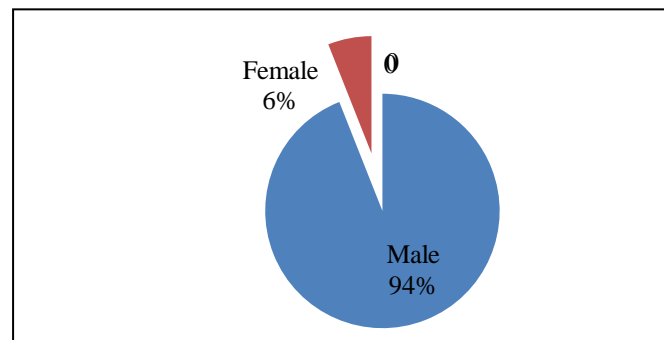


Figure 1. Gender structure

More than half of the small and medium manufacturing firms took the year of services between 10-15 years. Figure 2 shows that 53% and 31% of the respondents have 10 to 15 service years and above 15 years of service, respectively. About 10% of the respondents have 5 to 10 years, and finally, only 6% responded they have below 5 years of service. This finding indicates that the owners' were relatively experienced businesses persons to adopt and implement different improvement strategies such as Kaizen.

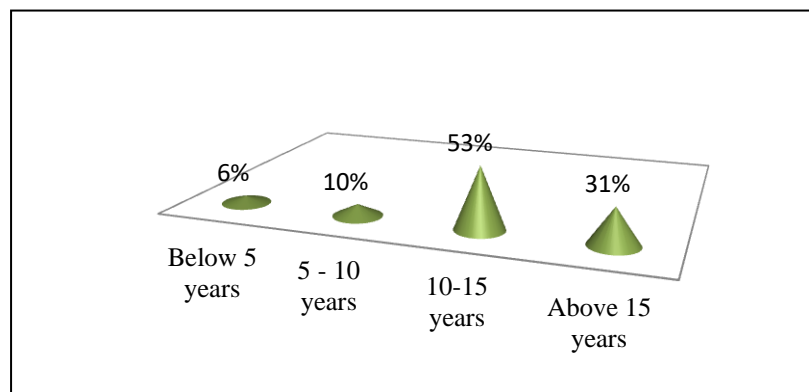


Figure 2. Year of establishment

. Regarding the respondents' educational background, the result shows that 48% and 32% of the respondents held secondary school certificates and college diplomas, respectively. Similarly, the survey shows about 9% of the respondents attain primary school, whereas about 11% held a degree and above (Figure 3). Hence, this result implies that the majority of small and medium manufacturing firms in the study areas have secondary school certificates to understand specific issues related to Kaizen.

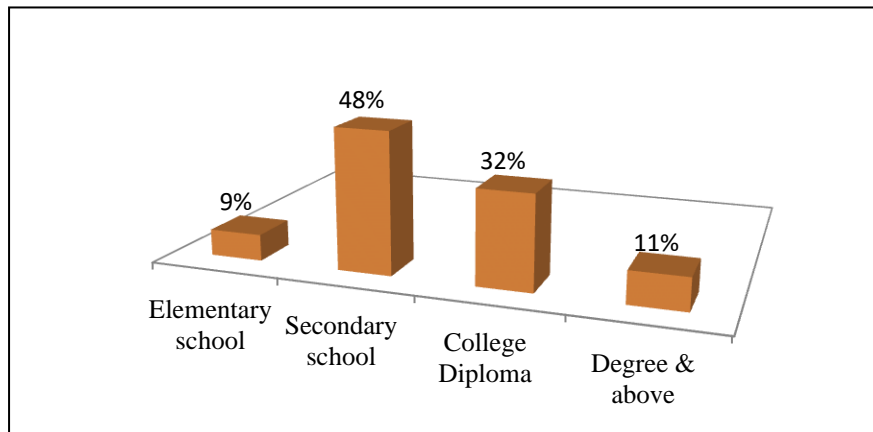


Figure 3. Education background

Kaizen concept: perception, implementation, benefits and key challenges

The training opportunities provided to employees of the organization are shown in Table 2. Based on this, it can be seen that 93% of the respondents replied that there was no access to training regarding Kaizen issues. On the other hand, roughly 7% of the respondents react that some sort of training relates to Kaizen. It implies that the majority of the workers have no training opportunity to be aware more about Kaizen concepts. According to the respondent feedback, the main reason for not getting training opportunities is that Kaizen is not yet well-known with all employees of the organization. Similarly, most management and the owners’ of the organization were not very much failed with the concept of Kaizen

Table 1. Is your organization provided employee training on Kaizen implementation?

Response	Frequency	Percentage (%)
Yes	4	7.27
No	51	92.73
Total	55	100.00

Figure 4. presents the worker's engagement in the Kaizen implementation program. As a result, 64% and 21% of the respondents replied that Kaizen's implementation is poor and very poor, respectively. On the other hand, about 10% and 5% of the respondents were answered that their engagement in Kaizen implementation was fair and good, respectively. Finally, none of the respondents were replied that their engagement in Kaizen implementation was very good. This result shows that the engagement of workers in the Kaizen implementation program is poor in most cases.

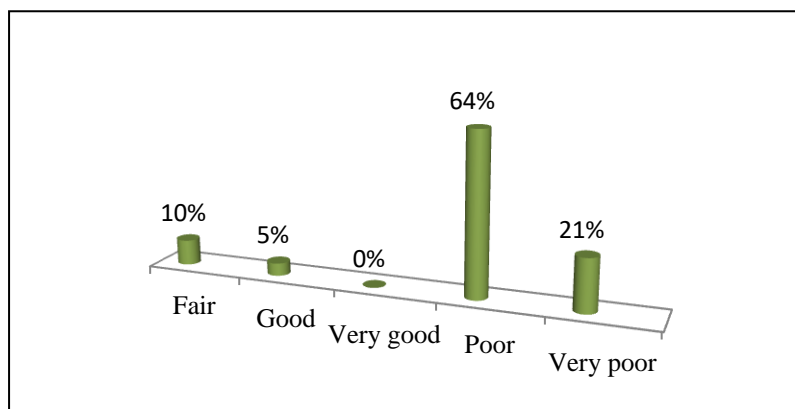


Figure 4. The extent of workers' participation in Kaizen implementation.

Hence, the findings of this study are consistent with a study by Desta et al. (2014), which found the employees didn't have the full aptitude to recognize the kaizen management system.

94% of the respondents have no sufficient understanding of Kaizen as a device of productivity improvement. In comparison, very few (6%) of the respondents understand Kaizen for improved productivity (Table 2). It implies that most small and medium business owners engaged in manufacturing firms have no adequate understanding of Kaizen. As further information obtained from the respondents indicates, owners have not understood mainly because Kaizen as continuous improvement emerged most recently. Most importantly, as per the respondents' suggestion, despite Kaizen's benefit for improving productivity, little attention has been given.

A study done by Murata supports the findings of this study, Murata & Katayama (2009), which revealed Kaizen is seen as a short-term plan rather than solving organizations' problems in a wide range. The emphasis here is on long-term improvement. Although the concept of Kaizen is quite simple to understand, it is 'importance of support cannot be over-emphasized.

Table 2. Do you have a sufficient understanding of Kaizen as a tool of productivity improvement?

Response	Frequency	Percentage (%)
Yes	3	5.45
No	52	94.55
Total	55	100.00

Consequently, about 89% of the respondents did not implement the 5 s' basic Kaizen practices; whereas, about 11% of the respondents were involved in these practices. This finding indicated that the 5 s' basic Kaizen implementations such as; sorting, set in order, shine, standardization, and sustain were insignificant (Table 3). Moreover, the findings further indicate that the core reason not to implement these 5 s' Kaizen activities is the lack of knowledge and experience related to Kaizen philosophy. Again, the survey result also shows that, from the respondent involved in implementing the 5 s' of Kaizen, most of them engaged in shinning the workplace of the firms.

However, the findings of this study are different from Keijiro (2018), which suggested the 5s is a popular and easy method for the initial stage of Kaizen Introduction, which is also very effective, particularly for developing economies.

Table 3. Do you implement the 5 s' basic kaizen practices?

Response	Frequency	Percentage (%)
Yes	6	10.91
No	49	89.09
Total	55	100.00

Figure 5. illustrates the core problem attributed to Kaizen implementation. As a result, 51% of the respondents react that Kaizen is a tiresome activity. Similarly, about 35% of the respondents replied that there is no personal benefit attached to Kaizen's success in engaging in Kaizen activities. On the other hand, 11% of the respondents forwarded that, use of Kaizen is unessential. Lastly, nearly 3% of the respondents react that Kaizen has a limited effect on productivity improvement. This finding implies that the core problem attached to Kaizen implementation is that it is a monotonous activity.

The findings of this study are quite similar to the study results of Mekonnen. (2017), which pointed out that Kaizen implementation and reporting results were complex. There were conceptual misunderstandings between managers and workers, policymakers, and other stakeholders.

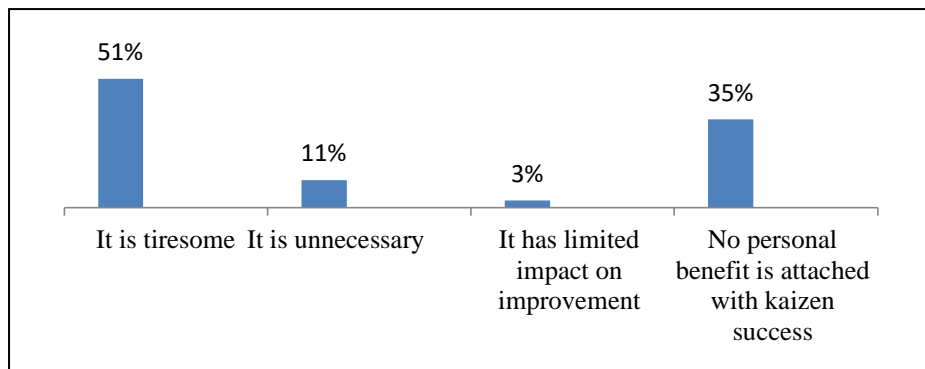


Figure 5. Problem attached to Kaizen implementation

Concerning employees' eagerness to accept Kaizen, 77% of the respondents replied that employees have no interest in accepting Kaizen philosophy. In contrast, about 23% of the respondents forwarded that employees were interested in accepting the Kaizen concept (Table 4). It indicates that the significant majority of employees of small and medium manufacturing firms in the study areas did not show interest in Kaizen. The study further indicates that employees display low interest in Kaizen because Kaizen practices are assumed to be exhaustive and routine activities. Similarly, the Kaizen approach is still at its infant stage that requires special strategies to make employees fail with Kaizen.

The results of this study are similar to the findings of Tanner & Roncarti (1994), Rink (2005), and Jaca et al. (2010) that concluded the implementation of Kaizen is an exhaustive task because it requires system development, strong support from senior management, resources such as time, money and spaces among others.

Table 4. Do your employees eager to accept Kaizen?

Response	Frequency	Percentage (%)
Yes	13	23.64
No	42	76.36
Total	55	100.00

Referring to the most pressing problems prevailing the implementation of Kaizen, 51% of the respondents replied that Kaizen's biggest bottleneck is that all the concerned bodies pay little attention to Kaizen. Likewise, 29% and 16% of the respondent forwarded that lack of skill and initiation, respectively. Finally, about 4% of the respondent react that lack of enough resources and technology was another core problem of Kaizen implementation (Figure 6). It indicates that the most challenging problem prohibiting the implementation of Kaizen in the study areas is an inability to give more attention to Kaizen.

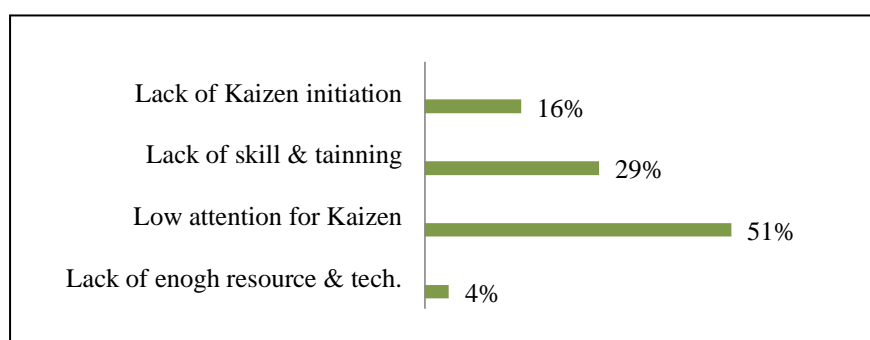


Figure 6. The most pressing problem hindering the implementations of Kaizen.

These results support the study done by Michalska & Szewieczek (2007), Kelly (2000), which found, lack of commitment, a lack of preparation of a professional team, and unclearly defined roles of the participants and kaizen consultants are some of the problems that hinder Kaizen implementation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study investigated Kaizen implementation and its challenges in small and medium manufacturing firms of Woliso town. The study found that a significant majority of the workers have no awareness about Kaizen because of a lack of training opportunities. In addition, the study revealed that most small and medium manufacturing firms in the study areas have no sufficient understanding of Kaizen because Kaizen philosophy is a newly emerging concept of productivity improvement. The study identified that the 5 s of Kaizen practices were insignificant due to lack of knowledge and experience. Similarly, Kaizen philosophy is considered exhaustive, and routine employees' attitude in Kaizen implementation is very weak. Moreover, the study sought out that the Kaizen concept is a new approach; it requires the best strategies to make Kaizen familiar with all common businesses. Finally, the study investigated the main pressing problems that hinder Kaizen's implementation in the study areas: the inability to give more attention to Kaizen by all stakeholders of the need.

Recommendations

Basically, Kaizen is a new concept; as a result, most common people, employees, and managers have a misconception of Kaizen. However, the contribution of Kaizen for continuous improvement is significant. As a result, it is important to provide continuous training programs for employees and managers of small and medium manufacturing firms. The concept of Kaizen is not only limited to organization alone. However, Kaizen is everyday life that all human beings have at home, at the office, school, etc. Hence, all responsibility bodies such as government, organization management, leaders, even households need to sustain Kaizen. Finally, to extend Kaizen's philosophy as a key for gradual improvement, it is also very important to incorporate in the school curriculum.

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