

Aspects of Learning Performance as a Cross-Functional Team in a Kaizen-Led Working Environment

By

Ravee Phoewhawm, PhD
Department of Innovative Business Management
International College, Chiang Mai Rajabhat University
202 Changpuak Road, Amphur Muang
Chiang Mai, Thailand, 50300
Tel +66 53 885980, Fax +66 53 885983
E-mail: rtc999@yahoo.com

Abstract

Kaizen events take flight when there is a dedicated cross-functional team that is focused on ways to improve a targeted work area, with specific goals, in an accelerated timeframe. This study provides an outline for management in developing the factors that will enable a cross-functional team to establish a learning performance in the midst of a kaizen event. A case study was conducted on a company that has already incorporated the kaizen concept and then a theoretical analysis was done to provide the factors that support the learning performance as a cross-functional team. The study asserts that learning as a cross-functional team in a kaizen-led working environment can only be performed effectively when there is a proper circulation that calls for action, team members being able to enact their supporting role, and the structure fashioning a working system that enables the team to achieve its assignment. A proper framework is also essential.

Keywords: Change, Continuous Improvement, Cross-Functional Team, Kaizen, Learning.

1. Introduction

In a Kaizen led working environment, management needs to obtain a collective approach on finding and searching for better methods in sustaining continuous improvement which can only take its course if the appointed system within the organization provides the supporting foundation to do so. On the practical side of management, the conditions that allow this unique operational philosophy to exist are depended upon the positive morale, satisfaction, and collaborative behavior of the participating individuals (Glover et al., 2013) who are committed to this working style, as well as for management to constantly orchestrate around the dynamics in the workplace to produce results that are high in gratitude and compensates for the workers' tiring efforts (Magnier-Watanabe, 2011). Therefore, management needs to understand that kaizen events take flight when there is a dedicated cross-functional team that is focused on ways to improve a targeted work area, with specific goals, in an accelerated timeframe (Farris et al.,

2008). Because for management, such a team is asked to make sure that they are gathering real data, fact, or information so that there is a strong level of assurance to decide for the next action plan that brings about greater gain without disrupting other operational processes that depend on the resources to complete the assignments (Saleeshya, Raghuram, and Vamsi, 2012).

Kaizen is an approach for business excellence thus requiring workers' to apply their skills, knowledge, and abilities as a unit to improve and support the working standards and operation for the organization to maintain sustainability (Macpherson et. al., 2015). In order for kaizen to be truly implemented it requires the cooperation and collaboration of all sectors involved to be aligned with the principle and beliefs for aiming maximum efficiency, the practice is an ongoing process that should never be taken granted (Smith et. al., 2009). The true advantage of kaizen is bestowed in its precepts on designing the ways for participants to make the critical feedback as a collective group from the data and information that have been gathered in the working process so that the next step of action can be decided upon by top management with confidence (Smith, Nachtmann and Pohl, 2010). There must be a reliance on people to work as a team and promote learning with each other as kaizen involves an intricate complex web of variables that can provide valuable information for making progress and knowing which critical points can be solved or examined for further understanding (Haun, Mothersell and Motwani, 2015). The mission of the team in carrying out the kaizen activities can only go so far as the level of commitment that is being poured into from the powers and authority of the management structure within the organization, it would be a waste of time and energy if management has an unsteady commitment in promoting kaizen (Liu et. al., 2015).

This work attempts to provide management a demonstration on the factors that can create the working conditions for a cross-functional team to learn as a cohesive entity. To illustrate this idea the author emphasizes on the structure that establishes the movement, outline, and moral support for permitting the team to not only perform as a cross-functional unit but as individual participants who want to explore, raise questions, conduct examination out of curiosity, and seek for changes to help others learn. In the business of finding continuous improvement, management needs to maintain a system that does not rely on investments, but on the improvement of the processes and the employees' performance (Titu, Oprean, and Grucel, 2010) so that the decisions and actions fortify the intentions, whereas kaizen is the influential working culture. In addition, the policies and procedures set forth should not be constituted as

the consequences for workers who do not conform but to be encouraged to increment their knowledge and abilities in being opportunistic, creative, and innovative in the methods of workplace development (Oki, 2012). The approach in learning as a cross-functional team in a kaizen event is dependent on each member being accountable for promoting self-discipline, managing time, skill development, taking part in participation and involvement, displaying morale, and providing communication so that there is no disruption when the focus is on finding an ideal solution (Strategic Direction, 2004). The aim of this study is to provide an outline for developing the factors that will enable a cross-functional team to establish a learning performance in the midst of a kaizen event. Such a concept could bring a better understanding for team managers/leaders or human resource management to design and coordinate the workplace for individuals to collectively operate in a cross-functional disciplinary manner. In addition, it can also provide an in-depth perspective for arranging the conditions for team learning to be in a better position to enhance continuous improvement.

The idea of this work is to illustrate the aspects that support the learning performance for a cross-functional team in a kaizen-led working environment. The study contributes in developing a practical framework that can be applied for team managers or human resource management to configure and organize a design that would strengthen the working philosophy of continuous improvement. The paper attempts to achieve this aim by first providing a case study of a company that has already incorporated the kaizen concept and then offering a theoretical analysis for the factors that support the learning performance as a cross-functional team. Upon delivering the ideal frame the following research questions have been raised for analysis:

- 1. How should the aspects support a learning environment in the workplace for a cross-functional team?*
- 2. How does a cross-functional team perform in learning during the kaizen activities?*
- 3. Why should the structural role of the organization support the learning performance of a cross-functional team?*

2. Literature Review

A cross-functional team is usually established from the decision of top management. In this form of group work approach, individual members are asked to combine their expertise, knowledge, and insight as one entity to identify the challenges confronting the working operation of the organization so that an action can be implemented to assure that the goal and objectives

can be attained. The practical idea of having a cross-functional team is to have the integrated talents of team members come up with some form of creativity or innovation for developing new products, improving the working system of the organization, maintaining or staying ahead of the market competition, and assisting others to learn and understand the greater details for enhancing operational performance so that the organization is able to thrive towards the future (Bunduchi, 2009). In a cross-functional manner, the team members are given a chance to showcase their unique abilities from their respective discipline and are asked to make a professional contribution to explore and recommend for the best way in problem solving or offering solutions that can foster an effective teamwork philosophy in the workplace (Lovelace et al., 2001). Organizations that incorporate kaizen activities most often have a cross-functional team that is designed and utilized as a concept for getting employees involved, making incremental improvement, and promoting organizational culture change in driving and sustaining performance improvement (Van Aken Grado, et. al., 2010).

2.1 Factors for Team Learning in a Continuous Improvement Working Environment

If an organization has set a commitment for continuously finding ways to improve the standard way of operation in the workplace (Topuz and Arazan, 2013), and being focused on eliminating problems and seeking for the best solution possible (Folinas and Ngosa, 2013) then management has to set the criteria for the teams to perform with the ability of being engaged on how to divide the processes and analyzing them which can give them a greater chance to focus on developing quality and cutting down on complexity, redundancy, and non-value added steps (Gil-Marques, and Moreno-Luzon, 2013). In a kaizen led working environment learning is stimulated in the working process for the purpose of letting the staff to constantly make an examination and propose some important questions to set the aims of the mission (Emiliani, 2005). Teams that are given an appropriate access for gathering information for conducting an analysis will be in a better position to confirm as a group on an appropriate study design and obtain the proper tools for making the right assessment (Al-Tahat and Eteir, 2010). With the aim of making continuous improvement as part of the working culture, there has to be a system that emphasizes on encouraging individuals from a cross-level discipline to have a gung ho spirit that emphatically embraces a kaizen event when asked upon to participate. Top management and particularly human resource management need to find a continuous improvement concept of

their own to configure the factors that lead to the anticipation of individual workers take part in a collective effort to support kaizen activities (Marksberry et al., 2010).

2.2 Learning Performance for a Cross-Functional Team in Kaizen Activities

A learning performance can be sustained as long as the organization structure makes it a priority to do away with the policies and procedures that do nothing more than create frustration for team members in making an effort to carry out their duties. A holistic approach within the organization can break away from the negative working personalities of silos, self-interest, and being power-crazed while devoting more of the positive energy in changing and improving the working process and systems, as well as seeing how customer values can be added to expand the practical procedures (Suárez-Barraza and Ramis-Pujol, 2010). In reality, not every decision and action made is going to simply reach the targeted objectives with ease, nevertheless the deed taken should be in the direction to reinforce a positive learning environment for team members to reflect, relearn, seek for other methods through dialogues with fellow peers, and to experiment with some new tactic for organizing kaizen activities (Doolen et al., 2008). The balance between having enough time to learn and delivering the results on time will often be viewed as quite challenging for kaizen activities. The study done by Shang and Pheng (2013) asserts that a tight timeframe compromises the control in accurate practice of kaizen as workers take drastic measures to deliberately shorten the schedule while being deviant from seeking for improvement. The authors indicate that time has to work its way around the team's capacity and capability so that the team members can set the condition for their fellow colleagues to follow and learn on the drive towards quality; the behavior and mindset becomes the critical point for reinforcing the morale for utilizing kaizen even in the midst of some struggle being encountered. Farris (et al., 2008) believes that certain boundary conditions (e.g., cost, etc.) should be arranged and then giving the team a high degree of autonomy in deciding what solutions to implement, as long as those boundary conditions are met. This idea is for the purpose of being prevented from being hindered in taking the necessary actions to complete a task and not having to become overly stressful with the amount of available resources to be used for problem solving.

2.3 Structural Role Supporting Teams to Learn

Learning, like work itself, can only be produced if everyone within the organization is buying into their role and carrying out their tasks to ensure that the kaizen activities are making it possible for supporting the system in the workplace, identifying for better methods to reduce

hazards in their working procedure, giving a chance for others to make a discovery on their own and share it with others, as well as equipping the team to be able to cross-function in a new challenging situation (Lareau, 2003). One of the organizational structural role is on continuously looking for new ways to have their employees accept the working culture and style of wanting to work in a cross-functional setting while at the same time harping on the best practices that can enable the team to acquire the ideal learning techniques for taking a collective initiative in continuous improvement (Glover et al., 2011). The other role is on accentuating the benefits and fruitful results that empowers the workers' belief that such a system accommodates the group effort and acceptable for team members to go through some testing and experimenting with the ideas to be assure of their discernment without being heavily pressured to produce the results or being criticized for failing to deliver the outcome on time (Sandoval-Arzaga & Sua´rez-Barraza, 2010). While the kaizen concept has good intentions management has to be aware that not everything is perfect and that the feedback provided from participating team members can point out for ways to make progression. If the desire for the cross-functional team to learn is identified as the morale then the structural foundation that is in currently in place have to facilitate the working conditions for individuals to be given the time and space to obtain a keen sense and insight to strengthen their team's performance toward achieving the aims and objectives (Khan, 2011).

3. Research Methodology

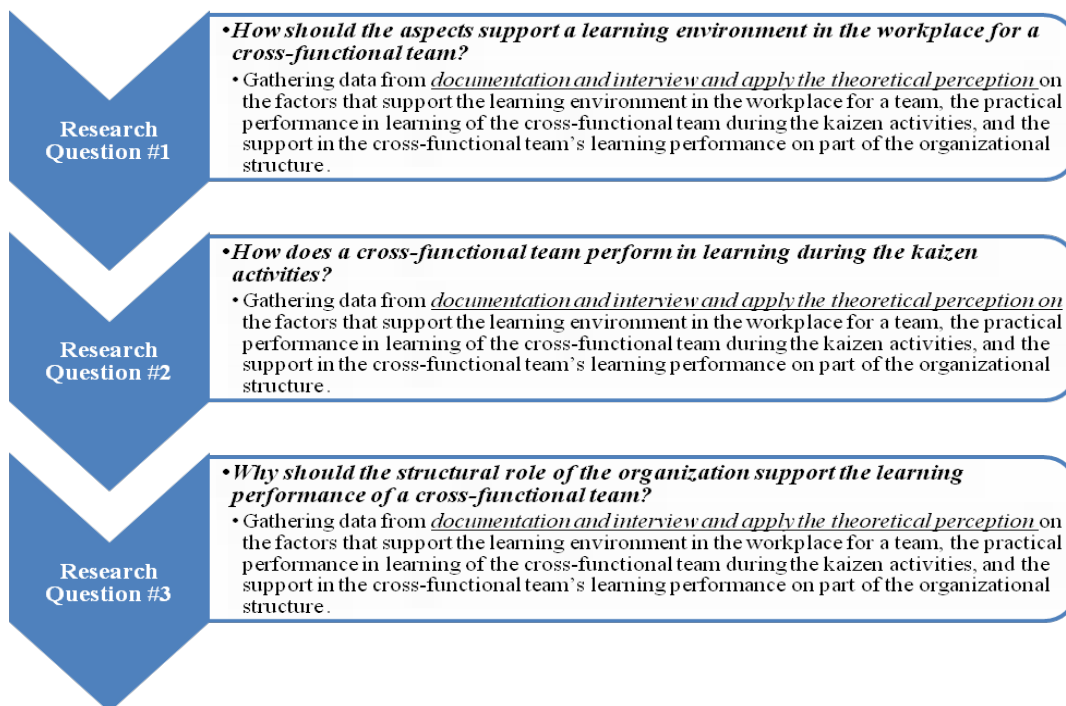
3.1 A Case Study on a Cross-Functional Team Learning During the Kaizen Events

This case study was carried at a company, which shall go by the name of President's Food, which has been undergoing a long period of kaizen activities in its workplace. The author of the study was introduced to a cross-functional team by the quality assurance manager which had been established to procure the company's philosophy and mission of maintaining operational efficiency and quality assurance. The quality assurance manager stated that "*the cross-functional team was composed by top management at the President Food Company to be the eyes, ear, and brain-trust to gather the intelligence back to them in finding better ways for continuous improvement in reducing the cost of production, decreasing the amount of materials being used, increasing the rate of production, improving safety at work, saving energy, limiting the procedures for work performance, and improving quality*". Furthermore, it was understood

that “*due to the numerous kaizen activities that had been taken on a monthly basis the work focused on case matters dealing with the reducing the production cost*”: the study chose five of these kaizen events to be examined through its documentation file with an interview of the key team members and management that procured the operation.

The methodology of the research oversaw two methods for gathering data for analysis: documentation and interview. 190 documented kaizen events were reviewed for the study. Out of this number, 49 cases which focused on the ways for improving workplace safety were chosen for thorough assessment. The process of documentation and interviewing were implemented with a theoretical perception on the factors that support the learning environment in the workplace for a team, the practical performance in learning of the cross-functional team during the kaizen activities, and the support in the cross-functional team’s learning performance on part of the organizational structure. Following the guidance of Yin’s approach for collecting case study evidence (Yin, 2009) whereas the documents had to be confirmed and enhanced from other sources, the quality officer was inquired about the recorded events and the action taken: it was revealed that certain meetings were held to discuss about workplace safety and the documents served as a reference point. It was learned that these documents served as part of the foundation for the Kaizen model which had been implemented from Japanese companies that were successful in running their operation in an efficient manner. The workplace safety documents were highly celebrated in President’s Food annual review board when they reach a target number that indicates no accidents on the job. With regards to Yin’s approach to an interview he recommends the process to be done in-depth by asking about the facts of the matter along with their viewpoints on the events. The in-depth interview was conducted with individuals involved in the cross-functional team (management, production supervisor, quality officer, safety officer, and operators) that took part in the kaizen activities. In terms of characteristics, management had a high expectation for getting things done, the production supervisor took a more efficient approach on things due to schedule, the quality officer provided the proper means of communication with others involved to meet the standards, the safety officer coordinated with all the staff around him to ensure that safety was being met, and the operators gave the necessary feedback through the line of operation. With referral to the document, each of the team members were asked by the researcher on the supporting aspects for a learning environment for a team, the learning performance as a cross-functional team during the kaizen activities, and the need for

organization support in the team’s learning performance. As the author of the study was given a site tour for each area of the members’ workplace station the explanation provided details with regards to the protocols, procedures, and the practical concepts that were highly required to be adhered to; therefore, the perception was that a system was already in place and the cross-functional team members were given the assurance that the positive results for enabling workplace safety would occur as long as everyone is committed on a continuous basis. Although there was an attempt to answer the research questions the replies mainly consisted of what task and duties that each team member had to know what to do, so that when the events are documented there is more accurate information being presented for the quality assurance manager to take proper action and be allocated with the proper resources to obtain the results. Below is a conceptual framework directed towards summarizing the findings based on the three research questions raised in this study:



4. Analytical Results

Data was collected from the Yin’s tactical approach for documentation and interviewing. The information obtained from these two methods was triangulated to produce the facts for an analysis based on the three research questions. In the form of a qualitative analysis, the case study provided an explanation building of the events that have occurred based on the facts that

had been procured. The three research questions have been transformed into statements which offer a clarification of the study.

4.1 Supporting Aspects for a Team Learning Environment in the Workplace

Before an actual kaizen event can take place a suggestion form has to be filled out in order to understand the nature of the situation and the approach for obtaining the satisfying results. An interview with management states the rationale that “*there has to be a working concept placed in hand so that the frame of mind sees and execute as one, otherwise people may drift off and do other activities that are not relevant to the objective*”. The personnel in charge of his/her area is asked to complete the suggestion form by stating the initiative, indicating the type of improvement task, filling out the details about the current situation/problem with information and image, as well as providing an ideal application to develop the issue, letting the committees know the extent of assistance, resources and financial support to proceed with the operation, and offering the expected benefits that would be gained from doing this event. Below is a sample of a kaizen suggestion form (which had been translated into English from the original document that is in the appendix section) from an organization that was chosen for research:

KAIZAN SUGGESTION FORM	
Proclaimer: 1..... Code #..... 2..... Code #..... Division:	No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Floor Year Month Level Proclamation date:/...../.....
Stating issue:	
Area for Improvement <input type="checkbox"/> Reduce production cost <input type="checkbox"/> Reduce material cost <input type="checkbox"/> Increase productivity <input type="checkbox"/> Safety improvement <input type="checkbox"/> Saving energy <input type="checkbox"/> Reduce workload <input type="checkbox"/> Quality improvement <input type="checkbox"/> Other issue	
<u>Problem identified/Current situation</u> (Draw out the picture, diagram or provide an explanation)	<u>Suggestion/Providing solution</u> (Draw out the picture, diagram or provide an explanation)
<input type="checkbox"/> Required procedures in assistance from other departmental units <input type="checkbox"/> Materials in use/Current resources/Improvement process does not require the use of a budget <input type="checkbox"/> Improvement process requires the use of budget for _____ _____	

Timeline process _____ week, starting from _____ to _____.
Expected results to be gained from the procurement _____ _____
Committee's consideration Viewpoint of Department Head _____ _____ Signature _____ Position _____ Date _____ _____ <input type="checkbox"/> Accept the operation <input type="checkbox"/> Reject, due to _____
Signature _____ Registered Applicant _____ Date _____ _____

Fig.1 Kaizen Suggestion Form

Figure 1 demonstrates that, in a continuous improvement working environment, when there is a specific kaizen initiative placed on proper form and circulated for action then the members that are requested to participate should firmly align their skills and abilities to accomplish the overall purpose. Information within the suggestion form provides an outline of the idea, rationale, concept, requirements for operation, and the expected gain from this completing the initiative. The characteristics of the kaizen suggestion form feature begins with the person filling out the form by filling out his/her name and job status, the “stating issue” box that serves as the main topic to be considered for operation, an “area for improvement” slot that identifies the aim to be focused upon, a channel that allows workers to draw out the problem at hand and how it should be solved as an idea, this is followed by the technical assistances to support the event with a timeline process and the “expected results to be gained” section that raises the mindfulness of the team for meeting the expectation. The form seeks the approval from the committee in order for the event to take its course. The kaizen suggestion form provides the direction for members of a cross-functional team to be grounded on the facts of what they are trying to accomplish as the channels of ‘problem identified/current situation’, ‘suggestion/providing solution’, selection from ‘required procedures, materials in use, and improvement process’, ‘timeline process’, and ‘expected results to be gained’ form a configuration to let the team be fully aware of their roles and responsibilities to make sure that

objectives are highly attainable. While at the same, the form also serves as a testament on the reality of making a tremendous effort for improving quality. Such a form provides a sense for individual staff members to foster a collaborative mindset as they become fully aware that changes are not just only need to be made but to be fully embraced as the working culture that is striving towards producing with quality and standards (Smadi, 2009). An interview with the quality officer and safety revealed that *“there is a need for team members to understand the situation at hand and gain a sense of appreciation of promoting the kaizen events because the changes taken place also create a positive working atmosphere”*. Such an optimistic activity invites a stronger discipline among fellow working colleagues to see beyond their working routines and become more open to alternatives that can make them highly cooperative and coordinated as they complete their tasks and assignments in a constructive manner (Yokozawa and Steenhuis, 2013). The real outcome that was produced from the suggestion form can be viewed by the cross-functional team not only based on the intended results but also as a workshop for studying their methodology applied and to gain the mastery of obtaining effective results, as well as discovering better ways for sustaining the learning performance as a team (Schindler and Eppler, 2003).

4.2 *Cross-Functional Team’s Learning Performance in Kaizen Activities*

With a diverse range of skills, expertise and competence being processed into the event members of this specific team formation are asked to buy into their role. Just like a professional sports team, such as basketball, ice hockey, or North American football, some individuals have to realize that they cannot always be the leading star athlete or assume a specific role where the highlight of the event is going to shine on them. In this case, the important thing is to provide assistance and support so that working operation fulfills the intended outcome. While corroboration is deemed as imperative for performing and learning as a cross-functional unit participants have to set aside charged emotions that find the faults and mistakes of others, and highlight the positive points for further communication and feedback instead (Titu, Oprean and Grecu, 2010). Upon interview with the team there were some errors mentioned with regards to the day to day operation. Members proclaimed that *“although everyone has good intentions to complete their assignments and are making tremendous effort to obtain results the team felt that it was necessary to see how the context of safety can be improved upon rather than getting caught up in a conundrum of why couldn’t they just do it like this or like that”*. It was also

learned that due to the nature of task interdependencies that are heavily dependent on a strong collaboration for learning performance *the team is always thinking and asking about how things can be done better or a lot smarter in mitigating the chances of accidents from occurring*. But in order for them to be accountable and mindful they had to brand the process that makes their team members and for other workers who are not directly involved to feel that it's safe and sound for expressing one's point of view. From this information, when team members are given space to discuss about moderate approaches toward gaining a better understanding, effective working procedures, and being able to make suggestions for examining and verifying the results then it creates a positive aura for the learning performance to take place in the workplace (Harteis, Bauer and Gruber, 2008). The learning performance occurs in a team when the team becomes a part of motivational factors that enable workers to observe the surrounding circumstances as it unfolds and to make some analysis that supports the mission objectives of the organization; thus helping the team to obtain greater detail of the situation and to implement the decisive actions that are more confident to take (Greene, 2012). With the issue of safety in the workplace as one of the top priority in a kaizen led working environment a cross-functional team truly learns more on this matter when individuals are able to see the unseen, hear what has been unheard, and at least feel the issue that has often been difficult to touch upon (Jackson, 2014). Having the behaviors to keep on learning is also depended on others to be honest and straightforward with the issue while making sure no one has intimated to voice their opinions or self-censoring their thoughts due to fear of repercussions of not displaying loyalty (Andersen.sdu.dk).

4.3 Structural Role of Organization in Supporting Cross-Functional Team's Learning Performance

While the structure within the organization exemplifies the rules and guidelines it has to ensure that it is fostering a working climate and environment that encourages the team to learn, relearn, and at times unlearn some of the standard that is in the operational framework. Based on the interview, *"the team needs the organization as a whole to support the intended outcome by being able to adapt and go with the changes that are based on the results reported in from doing the kaizen activities, thus allowing them to try other methods that can prove better in the long run"*. Although the kaizen process takes time to produce real time outcomes for further decision making the *team wants the board of directors to provide some valuable inputs to enable*

the work to not only operate on a smooth basis but it doesn't put the pressure on other workers to participate in producing some results. Focusing on the issue of safety is quite dynamic for a cross-functional team as individual members have to maneuver around the psychological aspects to alleviate the feeling of being exposed to risks and countermeasures (Schneier, 2008) in addition to the system brandishing the sensation of protection, certainty, and survival for workers to be assured of doing maximum production without any unwanted revelations along the course (Bar-Tal and Jacobson, 1998). It was also learned from the interview that *"the team had to assume the role as a booster club to sustain the morale in submitting the kaizen suggestions on a monthly basis despite being aware that workers also understood that not all suggestions have been given priority"*. Although the team acts as the voice to cheer on for encouraging kaizen activities the organization serves as the heart that embraces the events by expressing appreciation on the effort and discipline to all staff members at seminars and banquets. Just how a crop is dependent on the soil's richness, water's purity, climate's support, and sun's timing for a healthy growth the learning performance of a cross-functional team can only go so far with the strength in structure's assistance and guidance. Therefore, the policies and rules should be integrated to enable the team's learning performance to flourish by configuring on ways to make the working operation conducive for being able to ask, experiment, and reflect with a sense of trust that there will be no ad hoc decision making that could derail the mission (Chatterjee, 2012). To see how much actual progress the team has accomplished in the learning performance on safety the authorities in the power structure need to have a feedback session that keeps them abreast on the day-to-day affairs. With the force in their hand to make things happen, the top directors can give the impression of security by developing the communication channels for team members to maintain contact with the relevant staff workers to acquire critical information and act as a barrier that prevents disruption or disturbance to the team's endeavor towards reaching the aims and objectives (Hendrickson, 2012). While in the midst of assisting the team in its learning performance the top directors learn in action the best practice for conditioning and coordinating the working system for a cross-functional team to excel (Pentland, 2012).

5. Discussion & Conclusion

Learning as a cross-functional team in a kaizen-led working environment can only be performed effectively when there is a proper circulation that calls for action, team members being able to enact their supporting role, and the structure fashioning a working system that enables the team to achieve its assignment. The latter is about demonstrating accountability to a commitment towards continuous improvement so that the whole organization embraces the working culture (Aoki, 2008) while the two previous issues sets the direction for what needs to happen and the requirements to make it happen as well as arranging for future appointments to function as a cross-functional team for taking on challenging assignments and gaining a sense of appreciation on doing them (Suárez-Barraza and Lingham, 2008). Management has to consider the factors for promoting a proper working environment for team members to learn in a cross-functional manner by setting up policies and procedures that reveal themselves as part of the kaizen foundation. There should be a platform for team members, which represents a method for continuous improvement, to discuss about the events that are actually going on and then to offer some adjustments to ensure the process is aimed towards the intended outcome. Cross-functioning as a team on the basis of continuous improvement should be open and adapted to new ideas from fellow colleagues who are coming from a disciplinary background so that there's no shortsightedness for being innovative or creative. The learning performance of a cross-functional team can never be 100% perfect but the strive for perfection must be a collective effort to overcome any setbacks when the plan to obtain workplace safety falls apart. Team members should be allowed to ask questions and examine the process to ensure that the concept is updated and that the practical procedures for supporting kaizen are aiming towards the objectives and goal. Bringing together the skills, expertise, abilities, and talents of staff to form a cross-functional unit is a challenge from the start due to the dynamics involved. However, whatever may occur unexpectedly or become unwanted obstacles along the journey to continuous improvement the team needs to be given the psychological security to fulfill its objectives: a constructive framework to address the managerial reluctances to kaizen implementations, and offering more flexibility to both management and kaizen facilitation in planning and execution for the purpose of maintaining progress (Culcuoglu and Wang, 2012). Therefore, the structure of the organization has to guarantee that the ideas that they want from upholding kaizen is acknowledged to be a tool that provides the appropriate time, resources, and

energy for members of the cross-functional team to attain the mission objectives. The organizational structure should provide the wisdom and logic on certain task and actions will be called for changes while others to meet the challenge for sticking with the course until the aims are achieved.

In conclusion, this work conducted a practical study on the idea of learning as a cross-functional team in a workplace environment that is kaizen driven. The chosen site, known as President's Food, for conducting the research work was due to the company's large amount of ongoing activities related to continuous improvement for its standard of working operation. This company not only had the idea, but also the structural format and the personnel staff to procure the events on a monthly basis. What's intriguing is that it is a Far Eastern concept for raising the standards incorporated by a Thai operated company where the working culture emphasize on working at a moderate place and handling tasks at a less hectic pace. By raising the questions on the aspects that support the learning environment, how such a team performs in learning, and the structural role's support for the team's learning performance the analysis gained was quite satisfactory. The limitation for carrying out the study was the time and space to actually obtain real data being produced for in-depth examination. Perhaps another approach, such as storytelling from the team or a timeline on one of the kaizen event, for doing the research would provide some better insights in the future.

REFERENCES

- Al-Tahat, M. and Eteir, M. (2010) "Investigation of the Potential of Implementing Kaizen Principles in Jordanian Companies", *International Journal of Product Development*, Vol. 10, No.1/2/3, pp. 87 - 100
- Andersen.sdu.dk, accessed on 3/Feb/2016: http://www.andersen.sdu.dk/vaerk/hersholt/TheEmperorsNewClothes_e.html
- Aoki, K. (2008) "Transferring Japanese Kaizen Activities to Overseas Plants in China", *International Journal of Operations & Production Management*, Vol. 28, No. 6, pp. 518-539, © Emerald Group Publishing Limited, 0144-3577, DOI 10.1108/01443570810875340
- Bar-Tal, D. and Jacobson, D. (1998) "A Psychological Perspective on Security". *Applied Psychology: An International Review*, 1998, Vol.47, No.1, pp.59-71.

- Bunduchi, R. (2009) “Implementing Best Practices to Support Creativity in NPD Cross-functional Teams”, *International Journal of Innovation Management*, Vol. 13 No. 4, pp. 537-54.
- Chatterjee, D. (2012) ‘Innovativeness: A Team Knowledge and Communication Perspective’, *Int. J. of Innovation and Learning*, 2012 Vol.12, No.3, pp.229 – 246.
- Culcuoglu, M.U. and Wang, S. (2012), “A New Approach to Kaizen Events in Healthcare Delivery Systems: Kaizen Sessions”, *Proceedings of the 2012 Industrial and Systems Engineering Research Conference*, Institute of Industrial Engineers-Publisher, pp. 1-9
- Dickson, E., Singh, S., Cheung, D., Wyatt, C. and Nugent, A. (2009) “Application of Lean Manufacturing Techniques in the Emergency Department”, *The Journal of Emergency Medicine*, Vol. 37, No. 2, pp. 177–182,
- Doolen, T.L, Van Aken, E.M, Farris, J.A., Worley, J. and Huwe, J. (2008) “Kaizen Events and Organizational Performance: A Field Study”, *International Journal of Productivity and Performance Management*, Vol. 57 No. 8, 2008 pp. 637-658, © Emerald Group Publishing Limited 1741-0401, DOI10.1108/17410400810916062
- Emiliani, M.L. (2005) “Using Kaizen to Improve Graduate Business School Degree Programs”, *Quality Assurance in Education*, Vol. 13, No. 1, pp. 37-52, © Emerald Group Publishing Limited, 0968-4883, DOI 10.1108/09684880510578641
- Farris, J.A., Van Aken, E.M., Doolen, T.L. and Worley, J. (2008) “Learning from Less Successful Kaizen Events: A Case Study”, *Engineering Management Journal*, Vol. 20, No. 3, pp. 10-20.
- Folinas, D. and Ngosa, J. (2013) “Doing More with Less: A Pharmaceutical Supplier Case”, *International Journal of Productivity and Quality Management*, Vol. 11, No. 4, pp. 412 - 433
- Gil-Marques, M. and Moreno-Luzon, M. (2013) “Driving Human resources Towards Quality and Innovation in a Highly Competitive Environment”, *International Journal of Manpower*, Vol. 34, No. 8, pp. 839-860, © Emerald Group Publishing Limited, 0143-7720, DOI 10.1108/IJM-07-2013-0183
- Glover, W.J., Liu, W., Farris, J. and Van Aken, E. (2013) “Characteristics of Established Kaizen Event Programs: An Empirical Study”, *International Journal of Operations & Production Management*, Vol. 33, No. 9, pp. 1166-1201, © Emerald Group Publishing Limited, 0144-3577, DOI 10.1108/IJOPM-03-2011-0119
- Glover, W.J., Farris, J., Van Aken, E.M. and Doolen, T.L. (2011) “Critical Success Factors for the Sustainability of Kaizen Event Human Resource Outcomes: An Empirical Study”, *International Journal of Production Economics*, Vol. 132, pp. 197–213, Elsevier B.V. All rights reserved.


- Greene, R. (2012) *Mastery*, Viking, Penguin Group, New York, NY, USA, ISBN: 978-0-670-02496-4
- Harteis, C., Bauer, J. and Gruber, H. (2008) “The Culture of Learning from Mistakes: How Employees Handle Mistakes in Everyday Work”, *International Journal of Educational Research* Vol. 47, No. 4, pp. 223–231
- Hendrickson, J. (2012) “The Capable Utility Company: Redefining Performance for the New Business Environment”, Booz & Company, (accessed 9 Sept 2012) http://www.booz.com/global/home/what_we_think/reports_and_white_papers/ic-display/50722303
- Haun, J., Mothersell, W. M., & Motwani, J. (2015) “Implementing Kaizen in the Workplace: A Case Study”, *International Journal of Management & Behavioural Sciences*, Vol. 6, pp 321-325
- Jackson, P. (2014) *Eleven Rings: The Soul of Success*, Penguin Books, New York, NY, USA, ISBN: 978-0-14-312534-1
- Kaizen at Nippon: Behind the Theory, *Strategic Direction*, Volume 20, Number 5, 2004 , pp. 23-25, © Emerald Group Publishing Limited, 0258-0543, DOI 10.1108/02580540410532704
- Khan, I.A. (2011) “KAIZEN : The Japanese Strategy for Continuous Improvement”, *VSRD-International Journal of Business & Management Research*, Vol. 1 (3), pp.177-184, ISSN-2231-248x
- Lareau, W. (2003) “Office Kaizen: Transforming Office Operations into a Strategic Competitive Advantage”, Quality Press, July, Milwaukee, WI.
- Liu, W. H., Asio, S., Cross, J., Glover, W. J., & Van Aken, E. (2015) “Understanding Team Mental Models Affecting Kaizen Event Success”, *Team Performance Management*, Vol. 21, No. 7/8, pp.361-385.
- Lovelace, K., Shapiro, D.L. and Weingart, L.R. (2001), “Maximizing Cross-functional New Product Teams’ Innovativeness and Constraint Adherence: A Conflict Communications Perspective”, *Academy of Management*, Vol. 44 No. 4, pp. 779-93.
- Macpherson, W.G., Lockhart, J.C., Kavan, H. and Iaquinto, A.L. (2015), "Kaizen: a Japanese Philosophy and System for Business Excellence", *Journal of Business Strategy*, Vol. 36, Iss. 5 pp. 3 – 9
- Magnier-Watanabe, R. (2011) “Getting Ready for Kaizen: Organizational and Knowledge Management Enablers, *VINE: The Journal of Information and*

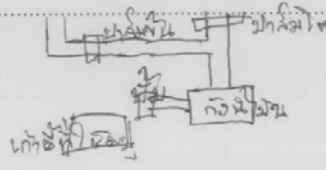
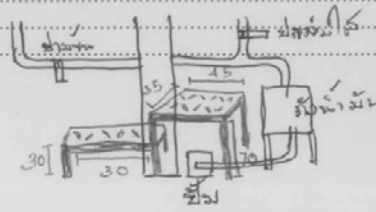
Knowledge Management Systems, Vol. 41 No. 4, pp. 428-448, © Emerald Group Publishing Limited, 0305-5728, DOI 10.1108/03055721111188520

- Marin-Garcia, J., Garcia-Sabater, J. and Bonavia, T. (2009) “The Impact of Kaizen Events on Improving the performance of Automotive Components' First-tier Suppliers”, *International Journal of Automotive Technology and Management*, Vol. 9, No.4, pp. 362 - 376
- Marksberry, P., Badurdeen, F., Gregory, B. and Kreaflle, K. (2010) “Management Directed Kaizen: Toyota’s Jishuken Process for Management Development”, *Journal of Manufacturing Technology Management*, Vol. 21, No. 6, pp. 670-686, © Emerald Group Publishing Limited, 1741-038X, DOI 10.1108/17410381011063987
- May, M. (2006) “The Elegant Solution: Toyota’s Formula for Mastering Innovation”, Free Press, New York, NY, USA, ISBN-13-978-1-4165-3814-1
- Miller, G., Pawloski, J. and Standridge, C. (2010) “A Case Study of Lean, Sustainable Manufacturing”, *Journal of Industrial Engineering & Management*, Vol. 3, No. 1, pp. 11-32
- Modarress, B., Ansari, A. and Lockwood, D.L. (2005) “Kaizen Costing for Lean Manufacturing: A Case Study”, *International Journal of Production Research*, Vol. 43, No. 9, May, pp. 1751–1760
- Oki, K. (2012) “A Japanese Factory in Thailand: Seeking Acceptance of Kaizen Activities”, *Annals of Business Administrative Science*, Vol. 11, pp. 55–63.
- Pentland, A. (2012) “The New Science of Building Great Teams”, *Harvard Business Review*, Vol. 90, Issue 4, April, pp. 62-70.
- Saleeshya, P.G., Raghuram, P. and Vamsi, N. (2012) “Lean Manufacturing Practices in Textile Industries – A Case Study”, *International Journal Collaborative Enterprise*, Vol. 3, No. 1, pp.18–37.
- Sandoval-Arzaga, F. and Sua´rez-Barraza, M. (2010) “Experts Within Kaizen Teams: How to Get the Most from their Knowledge”, *Development & Learning in Organizations*, Vol. 24, No. 4, pp. 10-13, © Emerald Group Publishing Limited, ISSN 1477-7282, DOI 10.1108/14777281011056703
- Schindler, M. and Eppler, M.J. (2003) “Harvesting Project Knowledge: A Review of Project Learning Methods and Success Factors”, *International Journal of Project Management*, Vol. 21, No. 3, pp. 219-228
- Schneier, B. (2008) “The Psychology of Security” (accessed 22 Sept 2012) <http://www.schneier.com/essay-155.html>

- Shang, G. and Pheng, L. (2013) “Understanding the Application of Kaizen Methods in Construction Firms in China”, *Journal of Technology Management in China*, Vol. 8, No. 1, pp. 18-33, © Emerald Group Publishing Limited, 1746-8779, DOI 10.1108/JTMC-03-2013-0018
- Smith, B.K., Nachtmann, H., & Pohl, E.A. (2010) “Kaizen Event Effectiveness via Healthcare Logistics Data Standardization”, In A. Johnson & J. Miller (Eds.), *IIE Annual Conference, Proceedings*, Cancun, MX: Institute of Industrial Engineers, pp. 1-6
- Smith, G., Poteat-Godwin, A., Harrison, L.M. and Randolph, G.D. (2012) “Applying Lean Principles and Kaizen Rapid Improvement Events in Public Health Practice”, *Journal of Public Health Management Practice*, Vol. 18, Issue 1, pp. 52–54
- Sua´rez-Barraza, M. and Ramis-Pujol, J. (2010) “Implementation of Lean-Kaizen in the Human Resource Service Process: A Case Study in a Mexican Public Service Organization”, *Journal of Manufacturing Technology Management*, Vol. 21 No. 3, pp. 388-410, © Emerald Group Publishing Limited, 1741-038X, DOI 10.1108/17410381011024359
- Suárez-Barraza, M.F. and Lingham, T. (2008), “Kaizen within Kaizen Teams: Continuous and Process Improvements in a Spanish Municipality”, *The Asian Journal on Quality*, Vol. 9, Issue1, pp. 1-21.
- Titu, M.A., Oprean, C. and Grecu, D. (2010) “Applying the Kaizen Method and the 5S Technique in the Activity of Post-Sale Services in the Knowledge-Based Organization”, *Proceedings of International Multi-Conference of Engineers and Computer Scientists*, Vol. III, IMECS2010, March 17-19, Hong Kong
- Topuz, C. and Arasan, Z. (2013) “Kaizen-educational: An Awareness-raising and Motivational- enhancement Group Counseling Model”, *Procedia - Social and Behavioral Sciences*, Vol. 84, No. 9 July, pp. 1356-1360
- Van Aken Grado, E.M., Farris, J.A., Glover, W. and Letens, G. (2010) “A Framework for Designing, Managing, and Improving Kaizen Event Programs”, *International Journal of Productivity and Performance Management*, Vol. 59, No. 7, pp. 641- 667, © Emerald Group Publishing Limited, 1741-0401, DOI 10.1108/17410401011075648
- Weber, D.O. (2006) “Totyota-Style Management Drives Virginia Mason”, *The Physician Executive*, January – February, pp. 12-17
- Yin, R.K. (2009) *Case Study Research: Design and Method*, 4th Edition, Applied Social Research Methods Series Vol. 5, Sage Publications, Inc., London, U.K.
- Yokozawa, K. and Steenhuis, H. (2013), “The Influence of National Level Factors on International Kaizen Transfer: An Exploratory Study in the Netherlands”, *Journal of*

APPENDIX


แบบฟอร์มไคเซ็น (KAIZEN SUGGESTION)
หน้าที่ 1

ผู้นำเสนอ : 1. ศุภวิชญ์ ถานะจิตร รหัส 01-084840 เลขที่ 9N 05 04 019 2. รหัส ฝ่ายที่ พ.ศ. เดือน สัปดาห์	
หน่วยงาน : สำนักงานปลัดกระทรวง วันที่นำเสนอ 4 / 7 / 55	
ข้อเสนอแนะเรื่อง : <u>น้ำเปิด-ปิดน้ำในชักโครก ฝาถังน้ำ-ชักโครก</u>	
ประเภทการปรับปรุง <input type="checkbox"/> ลดต้นทุนผลิต <input type="checkbox"/> ลดค่าใช้จ่ายวัสดุอุปกรณ์ <input type="checkbox"/> เพิ่มผลผลิต <input checked="" type="checkbox"/> ปรับปรุงความปลอดภัย <input type="checkbox"/> ประหยัดพลังงาน <input type="checkbox"/> ลดขั้นตอนการทำงาน <input type="checkbox"/> ปรับปรุงคุณภาพ <input type="checkbox"/> อื่นๆ	
ปัญหา / สภาพปัจจุบัน (รูปวาด รูปภาพประกอบ หรือ คำอธิบาย)	ข้อเสนอแนะ / แนวทางการปรับปรุงแก้ไข (รูปวาด รูปภาพประกอบ หรือ คำอธิบาย)
เวลาเปิด-ปิดน้ำในชักโครก ฝาถังน้ำ-ชักโครก ทำให้เสียงดังเวลา เพราะสวิตช์มีเสียงดังไปสวิตช์เปิด-ปิดน้ำในชักโครก 	จะนำเสียงเสนอแนะไปแก้ไขโดยการแก้ไขแบบอื่น สวิตช์เปิดน้ำในชักโครกตัวเดิม เพื่อป้องกันความปลอดภัยของพนักงานที่ปฏิบัติงาน และสามารถเพิ่มขั้นตอนการทำงาน 
<input checked="" type="checkbox"/> ในการดำเนินการต้องการความช่วยเหลือจากหน่วยงาน <u>ซ่อมบำรุง</u> <input checked="" type="checkbox"/> วัสดุ / อุปกรณ์ที่มีอยู่ / ไม่เพียงพอประมาณในการปรับปรุง <input checked="" type="checkbox"/> ใช้งบประมาณในการปรับปรุง ได้แก่ <u>สวิตช์เปิด</u>	
ระยะเวลาในการดำเนินการ 1-2 อาทิตย์ ตั้งแต่ ถึง	
ผลที่คาดว่าจะได้รับ <u>ทำให้เสียงดังออกมามากขึ้น ไม่เป็นอันตรายต่อพนักงานที่เปิด-ปิดน้ำในชักโครก</u>	
ส่วนของคุณคณะกรรมการไคเซ็นพื้นที่ ความคิดเห็นของหัวหน้างาน	
ลงชื่อ ตำแหน่ง วันที่ <input checked="" type="checkbox"/> รับลงทะเบียน <input type="checkbox"/> ไม่รับลงทะเบียน เหตุผล	
ลงชื่อ ผู้รับลงทะเบียน วันที่	

แก้ไขครั้งที่ (จัดทำครั้งแรก) เริ่มใช้ วันที่ 22 กรกฎาคม 2553

Original Kaizen Suggestion Form