

Integration of Lean Method in English Language Teaching and Learning: A New Perspective

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Abstract— Lean is regarded as a logical method to exploiting value by reducing waste, and by flowing the creation or service at the pull of the student request. These key concepts of “value,” “flow,” and “pull,” align with the final lean goal: “perfection,” or a nonstop determined for development in the presentation of the organization. Through applying a lean methodology to the teaching processes, additionally the teachers can eliminate reasons that do not add value and are thus wasteful, and they can focus their efforts on the advancement of teaching and learning. By applying the lean principles and methods industrialized in the industry, teachers can improve the content, education, organization, and valuation methods engaged in their accounting courses to help and confirm that students achieve the knowledge and skills that will make them most necessary to students. Lean can be taught throughout several methods and tools, such as readings and class discussion, game- and simulation-based methods, and the open forum method. The readings and discussion technique present students with the chance, and even the responsibility, to express their Point of view on certain subjects, needing the students to think censoriously on the topic and use logic to assess others' situations through open and active contribution. When applying lean production to learning, we should first identify the process and then maintain focus on what adds value (i.e., student improvements), empower students to do CI (continuous improvement), eliminate what does not add value through Kaizen (brainstorm alternatives and identify a hypothesis to test), conduct PDCA (develop an experimental plan, carry out the plan or do it and then check for results and adjust accordingly), and make a team work to support and share with each other. To apply lean thinking and to create a lean culture classroom, the classroom should first be organized; thereafter, visual sheets should be managed, pre-planning must be done, takt-time should be established, and work should be standardized by creating syllabi and schedules and associated materials. Other classroom tools must be available as well, such as Pareto charts, root cause, and weekly quality assessments. To fulfill this objective, a research question has been approved as a data collection instrument in this descriptive study, a 35 item questionnaire was administered to English preparatory school student and an interview was conducted with twelve students.

In addition, the descriptive statistics indicated that the male learners employed language learning strategies more frequently (average=3.3) than the female learners (average=3.2) It can be determined that male learners use lean learning methods more than female student do. The value of (F) is 2.479, which reflects the dependency to be at significant levels (>0.01 at the level of 1%). Rendering to this model, duration of taking English (b = 1.534, p = .116 p > .01) is statistically not significant predictor of learning lean method. Value of T which is (27.87 > .01) and the

Value of P (.000) reveals the descriptive factor of gender effect on learning lean method as statistically significant. Besides, all the values in the regression model come out to support the view that gender is effective in the use of learning the lean method.

Index Terms— Lean, English Language Teaching, Lean Strategies, Lean Methods, Academic Achievement.

I. INTRODUCTION

The main purpose of the study is to describe the lean technique and to discover the extent to which it can be integrated into English language teaching and learning processes or not and regarding its effects. However, English language teaching has been introduced to a new strategy which may help students as well as foreign language learner to learn language faster. That strategy and concept is called lean production.

The idea of *lean* is most commonly related with the Japanese industry, mainly with the Toyota Production System (TPS). Lean creation was created in 1950 by a young engineer named Eigi from the Toyoda family; he created the perception after his first visit to the Ford factory (Monden, 1983; Ohon, 1988; Shingo, 1988). It converted a powerful tool because of the shortage of resources and concentrated local competition in the Japanese automobile market Lean is based on Ford's mass production system that belongs to the United States with some improvements and lies in the improvement of the theory and data-driven analysis in the systematic method. Henry Ford started one of most substantial revolutions that has ever occurred in the industry, and his efforts are known as the Mass Production System, which was developed in 1908. Henry Ford authorized people to improve the processes they performed.

Above the next two decades, however, lean manufacturing became progressively widespread between Western companies and has been applied not just by different manufacturing establishments but, in some suitcases, by their service complements as well. Lean has now been applied through a wide series of industrial settings and "has moved away from a merely 'shop floor-focus' on waste and cost reduction to an approach that contingently sought to enhance value (or perceived value) to customers by adding product or service features and/or removing wasteful activities" (Hines et al., 2004: 995). Lean supplies the most value from the student's perception while overwhelming the least resources. The stable development of Toyota, from its start as a small company to becoming one of the world's largest automakers, has concentrated on how its success was attained. The enthusiasts of lean claim that lean manufacturing has significantly developed invention proficiency. Toyota distinguishes the effects and applies the collective intellect of

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these precursors to its small manufacturing action. It then improves and enlarges its process upgrading through waste elimination concentration to include the innovativeness wide procedures (Ziskovsky, 2007). Lean is likewise seen just like an arrangement of instruments or methods that take into account the diminishment of waste. There are five principles to manage the execution of lean procedures. In addition, lean comprises of 25 tools: 5S "diminish sat around idly and movement at the smaller scale level", automaton (enables mechanized hardware to work without human mediation or checking); cell fabricating (rearranges the work process and focuses on a solitary item or limited family; enhances quality, stock, and numerous different parameters), ceaseless stream (arranges generation by guaranteeing synchronized, persistent stream all through the esteem stream), constant change (to regulate the act of making numerous little upgrades each day and enhance general productivity, for example, with accruing funds); Design for Six Sigma (DFSS) (to guarantee that an item's outline is anything but difficult to make without deformities and addresses client issues.), disposal of waste (enhance proficiency and viability.), centered manufacturing plants (adjust handle abilities with promoting methodology and think mastery); in-station quality control (keeps surrenders from going to downstream procedures and guarantees prompt input for amendment of value issues); jidoka (averts issues on one station of a generation line from building stock and furthermore makes criticalness to discover perpetual arrangements); Six Sigma (enhances quality, operational execution, practices, and frameworks.), Kaizen Blitz (enhances confined creation regions rapidly and significantly beats inactivity basic to numerous associations); Kanban plan generation and limit work-in-process while empowering change in numerous territories. lean bookkeeping intends to appropriately represent lean exercises and bolster the lean activity; lean office is mean to convey lean standards to exercises regularly done in an office situation; lean providers for the most part push changes upstream in the inventory network; fabricating methodology is to guarantee a match, or harmoniousness, between the organization's business sectors and generation framework ability; blended model creation is a steadies the request on creation forms upstream from a last sequential construction system; one-piece stream intends to decreases stock interior to a work cell and powers enhancements and work adjust; purpose-of-utilization stockpiling is to diminishes material development; prepare mapping is to envision and comprehend the succession and nature of occasions in a procedure at the large scale and smaller scale levels; creation leveling is steadies request fluctuation on procedures; Pull and synchronous planning intends to nearly connect and synchronize forms and avert surges of WIP stock or potentially deficiencies; brisk and simple Kaizen work is to formalize, spread, and keep up nonstop change exercises; and setup lessening intends to limit setup time and cost, consequently liberating limit and empowering the creation of little lots.

Lean incorporates *Kaizen* (Japanese for "change" or "change", the English interpretation is "nonstop change", or "constant improvement."), a format where representatives at all levels of a firm cooperate proactively to meet general, incremental improvements to the assembling procedure. It might be said, it joins the aggregate gifts inside an

organization to make an intense motor for development—it is part activity plan and part rationality. Kaizen is a day by day activity whose aims go past change. It is likewise a procedure that, when done accurately, adapts the work environment, kills diligent work (both mental and physical), and shows individuals how to do fast tests utilizing the logical technique and how to figure out how to see and take out waste in business forms. As an activity arrange, Kaizen is about sorting out occasions concentrated on enhancing particular zones inside the organization. These occasions include groups of workers at all levels, with a particularly solid accentuation on including plant floor representatives. As a reasoning, Kaizen is about building a culture where all workers are effectively occupied with recommending and actualizing changes to the organization. In genuinely lean organizations, it turns into a characteristic mindset for both administrators and plant floor representatives.

Lean additionally incorporates Poka-Yoke which refers to mistake sealing (or blunder proofing or trick-proofing). These are inventive gadgets that make it almost inconceivable for an administrator to make an errors. (Liker, 2004). Poka-yoke have five ways of problem-proofing that was created by Shigeo Shingo from Toyota Motors as an apparatus to ensure Zero Defects. The procedure of Zero Defects (ZD) is alternatively called "problem sealing" or "safeguard." By assuming control dreary undertakings or activities that rely on upon carefulness or memory, poka-yoke can free from laborers' chance and their psyches to seek after more esteem included exercises. For instance, they didn't have a Poka-Yoke to check if the cotter stick was set up, they had a light blind over the plate of cotter pins. On the event that the light blind was not broken by the administrator coming to through it to get a cotter stick, the moving mechanical production system would stop, and andon light would go ahead, and a caution would sound. Lean production has five principle and seven wastes, and with the help of these tools wastes can be reduced and eliminated. Lean production means creating more value for customers with fewer resources, which means exploiting customers' values while reducing waste. Lean is comprised of qualified people who continuously search for the simplest and smoothest process in order to fully meet customers' needs. To be "lean" is to receive a philosophical technique that is constant in its push to make an incentive for the client through the disposal and anticipation of waste, for example, overabundance stock, unnecessary movement, and other time-and asset expending exercises. Basically, lean intends to make an esteem stream that is included just the procedures that include saw client esteem; everything else is pointless and ought to be dismissed. As more esteem is made with less assets, lean operations can progressively concentrate on permitting client request to force items and administrations through generation and the store network. Be that as it may, unless dependability and ideal stream exist, the lean esteem stream can't take care of the demand that is pulled through the framework without utilizing an extensive cradle stock (Glovia International, Inc., 2008).

Lean is a program of hierarchical change that enable every single specialist in an educational system (from understudy through director) to build her/his own execution and occupation fulfillment through process change. Lean connect with everybody in a streamlining his or her work forms by

distinguishing and taking out the progression inside each procedure that are inefficient, pointless or don't contribute the incentive to work. By fusing an esteem including approach framework wide, schools can be more proficient in their operation and more powerful at convey their administrations, advance the learning execution of all understudies, and make a culture of accomplishment and fulfillment for all (Ziskovisky, 2011.).

Lean is as yet a moderately new way to deal with Higher Education change. Just amid the last 5-8 years colleges and schools started to explore different avenues regarding Lean standards. The mind greater part of cases canvassed in writing are from the US where most HEIs dependably worked in a focused market condition, and this manner are more open to private segmentation of the management rehearsal (Owlia & Aspinwall 1997). The majority of it falls under the class of dark writing, e.g. a few online papers with rather episodic confirmation (Moore et al. n.d.; Alp n.d.; Kuslern.d., see also Jin & Kachroo 2010). In these records, which don't meet scholarly models of experimental research, the creators commend the accomplishment of their Lean ventures, however, stay extremely dubious on the connected Lean approach and the quantitative results. A couple of insightful articles on the theme remain hypothetical (Dahlgard & Østergaard 2000) or put each sort of change action in HE under the Lean heading (Comm & Mathaisel 2005, 2005) – again a case of ex-post legitimization. Over lean thinking programs, many universities have qualified complete method developments and cost decreases. Lean's roots are from industry, not academia, but lean organization can be successfully applied to HE organizations. The influence of lean in HE has been premeditated and established to be potentially useful. Reports examining lean in higher education have showed that lean principles are being successfully applied. The lean methodology has become more common in higher education organizations to reduce waste, streamline processes, and re-engage a workforce drained from the effects of the 2008 financial crisis (Balzer, 2010; Finn & Geraci, 2012; Radnor & Bucci, 2011). Universities and colleges are looking for better effectiveness in their academic programs and facility delivery areas and are making decisions to prioritize key areas (Dickson, 2011). Universities and colleges operate in a climate of uncertainty and face an increased scope of the mission, unstable enrollments, costs that are outpacing inflation, and diminished government support (Association of Universities and Colleges in Canada, 2012). Further, Houston (2008) posited that higher education has moved from a model focused on accountability to one focused on improvement, and lean methodology is increasingly seen as a central strategy for improvement.

Lean Teaching is a commonsense guide for school and college educators who are occupied with ending up plainly better instructors. Lean is about learning regard for individuals because, without engagement, there is no learning and ceaseless change that essentially includes learning, nor are there movements in feeling that empower us to see things unexpectedly. A composed domain encourages youngsters to be more autonomous and enables educators to invest more energy in their understudies as opposed to investing time seeking to discover what is required. Most new businesses

fizzle since they squander excessively time and cash constructing the wrong item before acknowledging past the point of no return what the correct item ought to have been. Accordingly, instructors ought to acquaint understudies with the possibility of the lean startup—an approach that has demonstrated effectiveness for some youthful cutting edge organizations (Eisenmann, 2011).

Lean is a theory of persistently rearranging forms and wiping out waste. Its uses are straightforward, and it offers straightforward devices that can be connected in any authoritative setting. Drawing on the inventive considering workers, an association can apply lean standards without immense capital uses. Associations applying lean standards experience huge outcomes, for example, increments in profitability diminish in deformities, decreases in stock, and enhanced time conveyances and money streams (Tatikonda, 2007).

Instructing confounded ideas, for example, lean reasoning to understudies or representatives who have never had any contact with it might be a very difficult undertaking. The test, when showing understudies, is to make a setting with the goal that they can envision and comprehend why lean rationality is imperative and how it can function. The test is to make an involvement with the majority of the significant specialized and also social ideas, for example, pull generation, process duration, work-in-advance, adjusting, cooperation, and correspondence (Dukovska-Popovska, 2014).

While lean process change is a new idea for the training business overall, some ground breaking teachers have connected this effective approach particularly to find approaches to enhance understudy learning. The consequences of these spearheading endeavors to recognize and kill squander in the educating and learning procedures are predictable with the outcomes experienced by other lean associations—enhanced execution with cost funds (Zikovisky, 2007). Lean can be instructed all through a few strategies and apparatuses, for example, readings and class discourse, amusement and recreation based techniques, and the open discussion strategy. The readings and discourse technique presents understudies with the open door, and even the commitment, to express their Point of view on specific issues, requiring the understudies to think basically regarding the matter and utilize rationale to assess others' positions through open and dynamic cooperation. A portion of the advantages of utilizing readings and talk as a learning strategy, are that it encourages understudies to investigate and break down an assortment of points of view, it builds their scholarly snappiness and cooperation propensities; it builds up understudies' blend and joining aptitudes, and it prompts change (Bonwell and Eison, 1991).

The open classroom gathering is a dynamic showing technique in which understudies intelligently share considerations and gain from class discourses about contextual analyses and required readings. The reason for an open classroom gathering is to set up another instructional method for showing lean (Hamzeh, 2013). This strategy is connected to the Construction Management Department of Colorado State University, and the speakers are relied upon to encourage the comprehension of lean standards while "get ready understudies to enter the workforce with a strong hypothetical comprehension of lean and its transferability to

the development working stage" (Hamzeh, 2013). As an advancement of the open classroom gathering technique, the online discourses discussions strategy seems to be the most favored by understudies. Tsao et al. present inquiries on an exchange that mesh a few strands of discussion into a synopsis that may incite individuals to seek after the theme further or even look for help when essential Lean usage on schools has two fundamental point: first Increase the learning yield for the students which Provide understudies with more opportunity for learning, educators with more opportunity for instructing, and increment the nature of educating, Second Improve the workplace for the instructors to Create a more alluring workplace at the school and evacuate "time hoodlums" in organization of classes (T. Netland, 2005). Schools use lean practice to determine improvement starting from the essential technology delivery. According to (Keyte&Locher, 2004), value stream mapping is a material used to petition the views of the primary stakeholders who are teachers, students, policymakers, parents administrators and boards concerning that which is of value in the educational delivery process. A student's day at school can be described using time allocation and resources for different activities. Depending on the stake holder's opinions, decision-making is according to what is worth and what is not during that educational day. Whatever is of value is reserved and that which isn't is upgraded or rather eradicated (Flumerfelt, S., & Green, G., 2013).

Methods

Participant.

There were (622) participants from total (622) in the study from all levels in the (Sabis International School) in the academic year of 2016-2017. The sampling is the whole research population, totally 282 feminine and 340 masculine learners joined to the study and the age of student were between (5-15) years old and their background of English language were concerted among three groups (0-5, 5-10, 10-15) years of learning English .

Measures

To investigate the correlation between lean learning strategies and the duration of taking English course, and regression examination of the relationship between a gender and the use of lean learning strategies, quantitative descriptive research analysis was applied.

After setting study subject, the study design is defined and a test study is applied, so that the reliability of the tools can be attested

A 35-item questionnaire about lean production has been conducted to 622 participant out of 622 at Sabis International

School in Duhok city. A 5 choice Likert type of questionnaire was established in order to measure the subject stages of agreement or disagreement in a measureable manner, ranging from "never" to "always was used in the questionnaire. Mark five was denoted to "always" while four marks was labeled as "usually". Three marks was defined as "sometimes" and two marks as "rarely". Lastly, one mark was fit as "never". To investigate the relationship, correlation study design by Pearson-Correlation method was applied.

Findings

Applied questionnaires were collected. Wholly data analyses were achieved using the Statistical Package for Social Sciences (SPSS). The Split-half method was used to size the reliability of the questionnaire. The Split-half reliability coefficient was calculated to be 0,80 which were definite to be reliable for Likert-type approach. The data was analyzed by using frequencies, percentages, mean, correlation, linear regression, and ANOVA. The frequency and the percentage of the male participant in the data is (340), (54.7) while the frequency and the percentage of female participant is (282), (45.3). Besides, the frequency and percentage of the participant who take (1-5) years is (182), (29.2), (5-10) years is (219), (35.2), (10-15) years is (221), (35.5). The data showed that the student of Sabis International School in Duhok city can use lean learning strategies, in sum the results indicated that the use of the strategies by overall students stays within the scope of high frequency (3.5-5.0) and moderate use (2.5-3.4). So, according to the results, there was not low frequent use of any of the strategies (1.0-2.4). In addition, the general average stated frequency of strategy use was 3.2. Moreover, the descriptive statistics indicated that the male learners employed language learning strategies more frequently (average=3.3) than the female learners (average=3.2). One can conclude that male students use lean learning strategies more than female student do. As the additional step, the correlation among lean learning strategies and the duration of taking English course was put out. As an answer to each research question the Pearson product-moment correlation co-efficient, ANOVA and linear regression was computed between the variables was studied. The value of (F) is 2.479, which reflects the dependency to be at significant levels (>0.01 at the level of 1%). Rendering to this model, duration of taking English (b = 1.534, p= .116 p > .01) is statistically not significant predictor of learning lean method. Value of T which is (27.87 > .01) and the Value of P (.000) reveals the descriptive factor of gender effect on learning lean method as statistically significant.

Table 1: Correlations between lean learning strategies and the duration of taking English course.

		Correlations	
		Gender	Duration of taking English
Gender	Pearson correlation	1	-.063-
	Sig. (2-tailed)		.116
	N	622	622
Duration of Taking English	Pearson correlation	-.063-	1
	Sig. (2-tailed)	.116	
	N	622	622

The results, indicated that there was a significant negative correlation between reported frequency of lean learning strategy use and gender, duration of taking English ($r = -.063, p = .116, p > 0.01, n = 622$) which is good. This means that There is a negative correlation between duration of taking English course and lean learning strategies because sig.

(2-tailed) = 0.116 which is greater than 0.01, which mean that there isa negative relationship between gender and the duration of taking English course. Thus, there is not sufficient evidence to state that this correlation exists in the population.

Table 2: the regression analysis of the relationship between a gender and the use of lean learning strategies

Linear regression				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.063 ^a	.004	.002	.498

a. Predictors: (Constant), learning_English_language

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.614	1	.614	2.479	.116 ^b
	Residual	153.534	620	.248		
	Total	154.148	621			

a. Dependent Variable: gender
b. Predictors: (Constant), learning_English_language

In order to observe if the regression model is meaningful or not, ANOVA was conducted. According to ANOVA, duration of taking English ($r = -.063, p = .116, p > .01$), the value of (F) = 2.479, is statistically not significant predictor of learning lean method. While, the Value of T which is (27.87.01) and the value of p is (.000) reveals the descriptive factor of gender effect on learning lean method as statistically significant. In addition, all the values in the regression model come out to support the view that gender is effective in the use of learning the lean method. Among other factors, such as gender, age, duration of taking English course also explains the difference at adopting learning lean method. It means that the gender effect on choosing learning lean methods and then applying it in language learning while the duration of taking English course does not effect on lean learning strategy.

Conclusion

Lean management is new for education but it is an old concept. There are glaring differences between the products from the education service and those from a manufacturing assembly line. That said there are still some massive similarities in both delivery systems of the education service and the manufacturing assembly lines. This is due to the many complicated processes that both delivery systems are composed of. As such, many aspects of Toyota’s process

improvement methodologies and other Lean tools can and do apply to improving the processes of delivering education. (Ziskovsky, 2007)

In addition, lean is a new technique of manufacture and a new way to establish the whole innovativeness, counting the improvement of new products. A lean organization permits learners to generate products not only quicker and inexpensive, but improved because they offer more significance to students. Lean innovation allow students to create instructions for learning, the objectives are stated clearly to students so they know what to expect, the whole course is planned out before, so there is a standard in each course, students study at their own pace, the information is available online and easy to access, students have better understanding with unit-perfection requirement for advance. The core principle of lean is that every process should add value, as value is defined by the student. Every step that does not add value, known in Lean as discarded, should be reduced to the extent possible.

In sum, innovation is a method in which thoughts are decoded into new products and procedures to generate, develop, or expand business prospects, on the other hands when we look at the foundations of Lean we will see that lean provide students some significantvisions, for example, what can learners learn from doing kaizen successfully that can help them to improve new products, procedures and progress

existing ones. Lean is one of the most imperative organizational innovations of the current organization history and an important energy to motivate the innovation process within existing establishments as well as startups. Lean requirements, basic assumptions, practices, and tools have the possible to convert an establishment into an organism of knowledge, philosophies, and innovations generation. Lean has always been more than just a development method.

The main finding of this article is that there is not a high statistical significant difference between the duration of taking English course and using lean learning strategies. Additionally, there is a high statistical significant relationship between gender and using lean learning strategies.

This research demonstrates that there is a negative correlation of the data which mean that there is no significant different between the duration of taking English courses that the learners has possessed, in using the overall usage of lean strategies by (mean: 9.84). As it has been mentioned the main aim of the study is to reveal to what extent does lean can be integrated into English language teaching in addition to examine its effects and according to the result of the data lean can be integrated into English learning process 50% which indicated positive outcomes and there is a chance that lean can be a good process for education system in the future.

Although this study was conducted in one region, the results should be take a broad view to other areas. The findings suggest that this approach would also be beneficial in other sectors.

Generally there is a misperception that lean practices can be effectively applied only in the manufacturing area. But this research reveals that that lean practices can be positively employed in education area also leading to proven beneficial financial results and excellent students satisfactions. Lean is not only restricted to the tools but also it embraces the involvement of an active students. Through distinct approaches, many proposals have been made to improve the workflow through the application of lean methodologies to remove the non-value added activities. Lean practice needs a reengineering heart and motivation on the part of organization to use lean to its full potential to obtain good returns economically as well as satisfactorily.

Lean method is a promising approach to improve productivity in the road creation sector. Lean principles have been positively implemented to optimize the processes in companies and projects. Training is a relevant part of sustainably implementing lean method. Simulation games are very suitable to impart lean principles and prove to be an important supplemental tool for teaching. Successful second language students are conscious of the strategies they practice and why they use them. They are skilled of using these methods for the given tasks and for their own needs as student, while learning a second language. The contribution of this study to language teachers or researchers can be the

finding related with the students preference about learning English language. In addition, we got to conclude that the student who suffer at the hands of the shortcoming of our current educational system, lean could be extremely helpful, which mean that Lean method is appropriate for school but it has to be understood as a system and implemented with clarity. Lean help academicians in improved sympathetic student's needs, choosing and establishing course subjects and activities, changing teaching instruction, making faithful calculations of student learning. In a situation of growing education system, submission of lean principles decreases wastes and adds more value without demanding enormous effort. Illustration on the intellect of persons, Lean submissions show highly significant results in production, cost, and school.

Recommendation

Who becomes successful in their second language are careful on the strategy they use. They have the ability to use these strategy for a specified assignment and their requests as learners while learning the second language. Since the result of this study is satisfied with quite good number of participants, it recommended that this research should be conducted in a larger scale with different universities in various cities or distinct groups of participants since what is required is to be able to make more significant generalizations and beneficial confirmations on the results. Besides, since learning lean strategies are directly connected with English achievement, some courses aiming to make students acquire better learning strategies could be prepared with the target of improving language learning skills. It is important for the students and teachers to have knowledge about the learning styles and learning lean strategies in the language learning process. For instance, it would be effective to include required or influential learning lean strategies while teaching subjects or principles in each discipline. It would certainly make contributions on the students' academic success. And, also the instructors of these strategies are to be educated in teaching and assessing issues. Actually, at the very beginning, while setting a goal students are to determine strategical approaches, adapt them and arrange new strategies. Throughout the process, views of the learners and teachers have to be gotten as to assess the suitability of the strategies.

The research that is produced by different universities and colleges are unique since the capacity of production varies. It is therefore preferable for the universities and the colleges to practice the lean methodology to discover its maximum benefits. The advantages of introducing lean production in higher education will help in strengthening the businesses as well as opening good relation with other international institution. Furthermore, a loan program will help he continuity of the businesses within the sectors of higher education (David E.2014).

The administration of a firm or a business organization should decide on employing the lead paragraph in their production. They are therefore required to provide learning for their employees for them to know the use of the lean tools and the techniques that are involved. By the management, a cooperate model is required so that the workers of the firm will work together with the management staff for a quality product to be produced. This will help create a good environment for the management. For the employees of the organization to operate well, the management should give them a motivational gift that will encourage them to work harder. The management also has a role in keeping the records of the employees to let them go on with the same spirit of work (Lean Vet. 2017).

The impact that wills outcomes after the lean program is introduced in the higher education will be an improvement of sharing the important ideas with different students. The development of the student after the lean methodology will be a combination of the opinions contributed by many students. Through this the information of the etudes from both the student and the teachers will be obtained, the teacher can be evaluated using this information. In this case, the unnecessary use of some document can be easily eliminated and this case the quality and his performance of the student will be improved.

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