Lean Management Systems in Knowledge Institutions: A Case of ZCAS University

Serah Beza Mbewe
Assistant Dean Open,
Distance and eLearning, ZCAS University

ABSTRACT
The modern institutions are operating in a dynamic and very competitive environment. Therefore, they are challenged to make continual improvements in the way they operate as they provide quality service to their customers (Cole & Kelly, 2015). The solution to this is the application of the lean management system which have been successfully in the service industry in the bid to maintain a competitive advantage (Dunlevy, 2012). This paper explores the concepts of the lean approach, as applied to a knowledge institution, ZCAS University, being a higher educational institution, in its delivery of its academic programmes on the three modes of study, namely Fulltime, Part-time and Open, Distance and eLearning (ODeL). It will further explore tacit and explicit knowledge, the lean principles of conflict resolution, communication, structures, problem solving skills and the leadership engagement needed for the implementation of a lean management system in relation to the requirements of an educational institution while closely monitoring and maintaining the quality of delivery.

Keyword: Lean Management, Knowledge Institutions, Higher Educational Institutions, Quality of delivery, academic programmes, Semester

INTRODUCTION TO LEAN MANAGEMENT SYSTEM

The lean management system, originally synonymous with the automotive industry, is a systematic approach to continually improving the organisation by making small but incremental changes while differentiating between "value" and "waste" to improve efficiency and quality in the institution's processes (Rouse, 2013). Core to this continued improvement is having ways to audit how well the processes in the organisation are currently running and trying to figure out what other improvements can be made (Ford & Murli, 2016). In order to implement and sustain the lead management system in an institution, the institution will need to adhere to six (6) generally agreed principles are outlined below;

- Aligning the goals to implementing the lean management system with the strategic goals of the institution (Sullivan, 2013)
- Defining the standard of work both for managers and all the other staff of the institution (Ford & Murli, 2016)
- Adhering the standards of work and having way to ensure that every employee does so (Sullivan, 2013)
- Disseminating consistent information to everyone in the organisation so that everyone stays focused on the message (Sullivan, 2013)
- Getting everyone on board by using visual aids that will help everyone easily access and understand the information (Sullivan, 2013)
- Coaching managers and employees to efficiently and correctly use the lean tools at all levels of the institution (Sullivan, 2013) (Ford & Murli, 2016)

This approach has been successful in manufacturing industries, like in the Toyota Production systems (Staats & Upton, 2011). High educational institutions have attempted to apply these principles which has resulted in mixture of success and some problems that have ignited the debate over the sustainability of the approach as the High educational institutions increase their portfolio programmes (Thirkell & Ashman, 2014).

Some knowledge institutions, such as a case of ZCAS University which offers Accounting, Finance, Business and Information Communication Technology (ICT) programmes in Zambia, have applied these principles in order to maximise the use of limited resources. In an effort to reduce cost, the institution has implemented the lead management approached on the Academic Studies faculty as the number of programmes and students grow while maintaining a lean structure to handle the growth.

ZCAS UNIVERSITY

The introduction of new academic programmes has introduced a sharp increase on the number of courses that run every semester at ZCAS University. The main challenge has been to provide the promised quality of learning to the student while maintaining a lean number of lecturing staff, hence minimising lecturer related cost for the institution (Thirkell & Ashman, 2014). Therefore, the hiring of lecturers in ZCAS University is strictly based on the lack of expertise in a particular area of study. ZCAS University applies the lead approach in the ZCAS University in two (2) main way; the semester courses and common courses on different programmes help provide solutions to both economic and organisational structure pressures (Thirkell & Ashman, 2014).

Semester Courses

Not all courses on every programme run every semester at ZCAS University. The courses are separated into First Semester Courses and Second Semester Courses. Therefore, only First Semester Courses run in the First Semester (January to June), and only Semester Courses run in the Second Semester (July to December). This reduces the number of courses that each lecturer takes and mixing all the students taking that course from different cohorts into one class. This in turn also helps not to overload the lecturers with lecturing periods, allowing the same lecturers to handle the student on different modes of study (Fulltime, Part-Time and ODeL) to take the same course and allows for the maintenance of few lecturers.

Common Courses

ZCAS University being a business college offers programmes that offer solution in the business world, therefore, there are some common courses that are found on most of the programmes. This allows ZCAS University to combine students from different programmes taking the same course in one class. Therefore, this helps to maximise resources and reduce the cost of having different lecturers. The main challenge here is to ensure that each of the common courses answer to the particular need on that programme and that it runs in the same semester on all the programmes.

TACIT VERSUS EXPLICIT KNOWLEDGE

Explicit knowledge is coded or written down knowledge that is scientifically researched or through literature while tacit knowledge is know-how that is generally acquired through previous experience or professional expertise (Kothari, et al., 2012). In order for an institution to maintain the standard of work in the institution, there is need to outline the standard practice for that tasks that are performed in the workplace which allows for checking the output for a task against the set standards. The main challenge is coding or outlining every task or procedure that is undertaken in the institution and in addition, documenting the tacit

knowledge the is worked out in an employee's head, that emerges in the day to day activities in the workplace (Staats & Upton, 2011).

In the case of ZCAS University, there are rules that are laid out for the student's progression from on semester to the other or the criteria that is used to grant a student exemptions based on a previous acquired qualification which can be classified as explicit knowledge (Sanchez). But there are other complications that arise if the student does not follow the normal progression due to having to repeat certain courses. These issues are dealt with on a case by case basis. The challenge that ZCAS University is faced with is documenting the decisions that are taken on case by case so that the next time a similar case arises, the decision made on such a case is consistently applied (Staats & Upton, 2011).

It is however worth noting that not every case that arises can be coded, but instead, it is vital to continue monitoring those cases that are considered to be tacit, following the trends of how often such occur. If it occurs very often and has a great impact on the progression of a number of students, then it is worth having that particular case documented and coded as explicit knowledge (Enakrire & Uloma, 2012). For example, at ZCAS University, a first year course, Principles of Marketing and Academic Writing, are common courses on all the Accounting, Finance and Business programmes and most of the students usually do not get exempted from the two courses. To allow those who exempted from all first and second year courses to proceed to the third year with any low level course, Principles of Marketing and Academic Writing run every semester.

There are those cases that do not occur frequently. These are the cases that will remain classified as tacit and will only be dealt with when they occur (Jasimuddin, Klein, & Connell, 2005). At ZCAS University, there are special cases that affect specific student. Such cases are referred to the Board of Examiners (BoE) for consideration and specific decisions are made by the BoE that are specific to each case based on the circumstance surrounding the case under consideration. For example, some course that run in a specific semester might be allowed to run because there are too many students that cannot proceed to the next level if they do not repeat the particular course in question.

Furthermore, the final year courses cannot conform to the alignment, where by the second semester courses only rum in the second semester. This is because the student join and some students join the institution with some exceptions that are specific based on their previous qualification every semester. Therefore, the lean approach is only applicable to mainly the first, second and third years.

THE LEAN APPROACH IN THE ZCAS UNIVERSITY ENVIRONMENT

The implementation of a lean approach to the management of the courses at ZCAS University are centred on maximising the use of the limited resources (lecturers) but at the same time provided quality education that will make ZCAS University the centre of choice in the South African region (Çaliṣkan & Mulgeci, 2012). The bid to reducing cost but still maintaining quality in the social environment required reviewing the relationships between the lean management concepts and the activities that are encountered daily in the workplace which are conflict resolution, communication, structures, problem-solving and leadership engagement.

Conflict Resolution

Conflict exists in every workplace as employees work in teams which most employees dislike and would rather not confront it because it is not pleasant and steers up emotions. Therefore,

it is important for the institution to have specific strategies in place to resolve conflicts when they arise (DiTullio, 2014).

In the implementation of a lean management system, most institutions focus on tools and processes that help apply to reduction of waste neglecting the behaviour of the employees that are an integral part of the system and the source of conflicts. The institution will require transforming the way of thinking and the processes that are proposed into actual behaviour (Timlick, 2016). This can be achieved by ensuring that the system is governed by facts and not emotions that are as a result of relying more on tacit knowledge other than explicit knowledge. Therefore, the importance of continually transforming tacit knowledge into explicit knowledge becomes ever more important to avoid conflicts into the future (Staats & Upton, 2011).

At ZCAS University, conflict related to special cases pertaining to specific students are set aside and presented in the BoE for deliberation. Once the BoE has applied a decision, this is documented and applied to other similar cases that might arise as the decision at this point is no longer tacit but explicit.

Communication
A successful lean management system requires continually making changes as the institution pursues the continued improvement. This requires that the systems have an effective communication system. If the communication is not effective, there will be resistance to change and cause confusion as well as frustration among the employees (Gîfu & Teodorescu, 2014).

To achieve effective communication, the institution will require to apply two main strategies;
- The first one is defining who should communicate, how often and what method of communication should be used (Staats & Upton, 2011). For example, at ZCAS University, once a decision has been reach by the BoE and is documented, the Head of Programmes (HoP) who is a member of the BoE, will need to call for a departmental meeting at which this decision will be explained to the faculty members so that they know how to handle a similar case when it occurs.
- Creating a shared understanding that will ensure that what is being communicated has the same meaning to everyone (Staats & Upton, 2011). As the HoP communicates the documented decision to the faculty members, he/she will need to provide a background to the case that lead to that decision and include the process that was considered in the adoption of the decision. He/she will need to get any comments from the faculty members on the documented decision. At the end of the discussion, the member would have bought into the decision and should be able to communicate it confidently to the students if such a case occurred.

To consolidate all the need developments affecting all the programmes at ZCAS University, there is a faculty meeting that is chaired by the Executive Director at the beginning of each semester. It is in this meeting that main goals for maintaining the lean management system are emphasised and the needed additions to refining the system are shared to everyone for that continued improvement of the system (Gîfu & Teodorescu, 2014).

Structures
The traditional organisational structures are used to create functional departments, supervisors and human resources in alignment with the functions, relationships, responsibilities, authorities and communications that are needed to help employee to focus on their jobs and achieve the overall objectives and goals of the organisation (Cole & Kelly, 2015).

The organisational structure of a lean management system is focused on achieving the organisation's objectives and goals with the minimum set of resources and enabling the system to improve continually and becoming more efficient (McLaughlin, 2017). The structural changes will require to be in line with the changes that are essential to the reduction of costs and improvement of the performance of the institution, eliminating any waste in the system (Kettunen, 2015).

As ZCAS University grows, its main challenge is to ensure the growth of its structure is strictly guided by the introduced activities only and not just adding new employees to its system without considering the level of activity that is required (StateUniversity.com, 2017). The increase in the number of students and the strategic decision to promote ELearning as a strategic area of focus for the institution to gain a competitive edge necessitated the employment of a fulltime ELearning Coordinator for the institution.

On the other hand, ZCAS University is not expected to employee more lecturers just because new programmes have been introduced. Due to the synergies that are on the programmes that are running, the students on the new programmes can simply join the classes that are already running. The rest of the courses are then filled with Part-time lecturers until the area of study matures enough, and that is when a fulltime lecturer can be employed. The emphasis here is keeping the costs low even as new programmes are introduced and leading to an increase in the number of students (McLaughlin, 2017).

Problem Solving
Problem solving is a skilfully crafted process of using activities that are directed purposely at dealing with deviations from the set standards in the systems while focusing on achieving the intended goal (Til, Tracey, Sengupta, & Fliedner, 2009). The individuals in the work place, regardless of their position should be equipped with the skill to identify the root cause of the problem, review the alternative solutions that are available, select and implement the best alternative solution for the current problem (Flinchbaugh & Center, 2016). To achieve this, the employees will require to be skilled and cultured to quickly identify deviations when they occur and be able to solve some problems at their level and only escalate those problems that are beyond their capabilities, which is one of the alternative solutions that is available to them (Simons, 2015).

In case of ZCAS University, it is not all deviations from the laid out standards that wait until the BoE meeting, which occurs at the end of every semester. There are problems that can be handled outside that BoE meeting that are only reported on during the BoE meeting. An example is the interruption of studies by students during the semester. This can occur and approved by the HoPs and a list of those that have interrupted their studies can be reported to the BoE to ensure that they are excluded from the programmes because they did not sit for the exams for that semester. This helps ensure that the problem is solved as soon as it emerges and only documented for the committee that authorises it to ensure that there is adherence to the lean approach (Staats & Upton, 2011).

Some of the problems, especially academic problems that concern a specific set of students and in a more specialised area, the HoP cannot make a decision as an individual. A committee will need to table the problem to provide a solution that is well vetted, removing individual biases and providing some confidence that the resulting solution would be as accurate as possible. In addition, this promotes team work in other areas of the institution (Simons, 2015). This also supports the lean approach problem solving principle that suggests that a problem should be solved where it occurs (Staats & Upton, 2011).

Leadership Engagement

According to Peter Drucker who is said to be the father of modern management, "management is doing things right while leadership is doing the right things" (Cole & Kelly, 2015). He set the acceptable benchmark of what was expected from a good leader and emphasized that a leader's main role was to enhance one's understanding that there is need for continuous development and enhancement. In addition to focusing on personal development, asking for help or support is not a sign of weakness but a part of that needed continued development (Dunlevy, 2012).

In a lean management system, a leader is required to extend the spirit of continuous personal development to engaging the employees who are part of the team to focus on high levels of continuous improvement and development (LeanKit, 2017). The team should be driven to be more efficient, flexible, focused on reducing waste and have great problem solving skills that is fostered by constructive communication between the team members (Dunlevy, 2012).

To help foster the lean approach to managing academic programmes at ZCAS University, the institution has introduced the "ZCAS WAY", a philosophy that will help outline what is expected from every member of staff to contribute to the maintaining of an efficient system and continued removal of waste in the system. The aim of the "ZCAS WAY" is to influence and change the mind-set of the employees to start thinking lean (Picchi, 2016).

The "ZCAS WAY" committee member is also responsible for the transformation of tacit knowledge into explicit knowledge and continually educating and persuading the ZCAS University community (through training workshops and consultative meetings) on the changes so that the institution adapts and operated according to the latest information (Staats & Upton, 2011). The committee will continually mentor the system encouraging it to frontline staff to generate and implement new ideas to which managers play a supporting role, focused on the path of being a lean system (Staats & Upton, 2011).

CONCLUSION

The implementation of the lean management system requires transformation of not only the processes but all aspects of the institution. The institution needs to continuously improve and develop with a focus on eliminating waste while delivering client value (LeanKit, 2017). To effectively coordinate the activities through the lean management system, the institution will require a strong leadership framework that will foster a change of mind-set and behaviour of all the employees. The leadership framework will also continually gather information that will help the system to continually improve on its efficiency, education, persuasion and mentoring of the system of the lean principles that will reduce on waste and help focus on client value (Dunlevy, 2012). The coordination will only be achieved by a clear and well-structured communication strategy and will ensure that all ranks in the institution are well equipped with the latest information to the smooth running and maintenance of the lean management system (Enakrire & Uloma, 2012).

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