PERSPECTIVES ON IMPLEMENTING KAIZEN METHOD FOR THE IMPROVEMENT OF ACADEMIC ONLINE TEACHING

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Abstract: The teaching activity in universities required adaptation in the current context when the physical presence of students was interrupted in an unexpected moment and way. The strategies of the universities required major reconfigurations regarding the way of transmitting the information to ensure the continuity and preservation of the quality of the didactic act. At the individual or micro-group level, university teachers tried to identify new ways and methods adapted to the pandemic context, a situation in which many of the principles of physical teaching were automatically identified as ineffective. Based on the direct survey method, observation and analysis of university teachers, this article presents in stages how higher education can be streamlined in terms of activities with students, using the Kaizen Method and its principles as a support tool. Although this method has been used overwhelmingly by the private sector, it is helpful to highlight the benefits of its adoption in terms of online teaching activities to maintain the quality of services provided to students.

Keywords: *management, Kaizen, online teaching, quality*

JEL Classification: L15, M10, M12, M53

Introduction

The challenges brought by online education worldwide have imposed the need to quickly readjust the management of organisations in each field of activity and at each level. We cannot identify a sector of activity that has been undisturbed by the pandemic crisis that the world is still going through. We are in the situation where organisations are still rethinking their managerial strategies, recalculating all types of investment or development plans and trying not to be affected by this health crisis by optimising processes of any kind that the academic sector involves.

One of the areas most immediately and severely affected since the onset of the COVID 19 Pandemic was education. Higher education, on which the authors have focused their attention in this article, has undergone significant, rapid changes, adapted to the context, based on centralised and autonomous decisions at the same time, under the needs of the moment. The proposed method for analysis from the point of view of the possibility of efficient implementation in the de facto situation present for maintaining, respectively increasing the quality of university educational services is the Kaizen Method.

Considered the key to Japanese performance, this method improves quality in organisations through constant and continuous change, using small steps that bring long-term efficiency. (Kouadria, Araba, 2021)

Review of the specialised literature

Currently known as an effective management method, the beginnings of the use of this method were recorded in Japan after the Second World War. Specifically, this concept was created by Masaki Imai to increase the performance of organisations in the '80s (Suárez-Barraza et al., 2011). Subsequently, Japanese and then, inspired by their success, American companies adapted the Kaizen principles in management activity, and the beneficial results began to appear.

Etymologically, we identify the substrates and the concept's meaning in the two words that compose it: *kai*, which means in Japanese *change* and *zen*, which represents *good (better)*, which is equivalent to the present concept of continuous quality improvement. Although it was planned as a support tool for industry, today it confirms Kaizen's hypothesis of being an excellent support tool in any type of activity, including online higher education (Sapungan, Cuarteros, 2018), if properly adapted, by precise application of its principles.

It is important to note that the investments or costs of implementing this system are sometimes non-existent or minimal. However, some researchers (Jayantha, 2021) believe that the Kaizen method has not yet been enhanced to its fullest extent because its creation and application was created for the Japanese socio-economic system, which is very different from other states.

Online education, supposedly a rethinking of teachers' teaching and relationship strategies with students, has brought new opportunities and new challenges. In this context, we can say that the Kaizen Method had and currently has a favourable period, being considered by more and more universities concerned with increasing the quality of teaching as a possible way to continue activities in conditions of efficiency at least good or even better. Moreover, as an argument, more and more scientific research has been published recently, highlighting the opportunities and benefits of applying Kaizen principles in online higher education (Hashim, Fuzi, 2021; Attar, 2021).

Although research conducted until the last decade has not deepened the importance of Kaizen applied explicitly to higher education, practice shows that the system has been used in the past in competition between higher education institutions (Balzer, 2010). The essence of Kaizen application was the following types of actions: identification of essential processes/activities, efficient development of activities, abandonment of the types of processes (waste) that do not lead to performance or value, a continuation of activities in more efficient conditions, continuous improvement of activities.

A very current and documented study (Gómez-Molina, Moyano-Fuentes, 2021) indicates that the implementation of Lean management in universities brings them multiple advantages, the existing literature in this field until mid-2020, counting 68 specialised articles, published on Web of Science and Scopus platforms, the first article in this field is published in 2003. This highlights the fact that although Asian culture has almost four decades since adopting quality management tools, including the Kaizen Method, the concerns of other parts of the world they were activated two decades later, being explicable in this context the advance registered in specific fields by the "veteran" practitioners of Lean Management, implicitly Kaizen.

The adoption of Kaizen by any organisation supports the efficiency of time management, the efficient use of human, material, financial and informational resources, the increase of quality in all activities, implicitly of employee satisfaction (Finn, Geraci, 2012).

Research methodology

The present study was limited for objective reasons derived from the current pandemic context to the conceptualisation stage, with particular perspectives of deepening the research in the applicative sphere. The research methods were the observation method and the direct survey method with subjects belonging to a homogeneous panel of university teachers involved in the online teaching process due to the pandemic crisis, not voluntarily, voluntarily.

The collection of information was complex, made difficult on the one hand by the novelty of online education related to the position of teacher in a new perspective, hypostasis. However, on the other hand, the novelty of the way of communicating with students, the unpredictability, the uncertainty, the desire not to decrease the quality of information transmitted by identifying the most appropriate methods give rise to fear, blockages, different emotions of teachers today and all these features have been carefully observed and analysed by to the authors, in the presentation of the possibility of application.

Using Kaizen principles to improve online teaching in universities

In the activity of continuous improvement of the quality of online activity in the university environment, the central role is played by teachers, internal formal leaders, informal internal leaders and beneficiaries (students) as well as all categories of representatives from the practical environment employers, institutions, organisations, NGOs, etc.

We will insist on presenting how to adapt the Kaizen principles in the online teaching activity on the recommendations and practical possibilities of implementation, for reasons of efficiency and usefulness of this article wishing to complete the basis of practical studies in the direct implementation of existing Kaizen principles (Rees, Protheroe, 2009; Rodríguez-González, 2015; Kregel, 2019; Suárez-Barraza, Chitkara, 2021; Kregel, Coners, 2021), published so far.

The Kaizen principles are based on and identified in the literature with the 5S Method, which sums up a number of five sets of actions (with the following names in Japanese: *Seiri, Seiton, Seiso, Seiketsu, Shitsuke*), essential to respect, in order to expect the results of Kaizen adoption either professionally or personally. Each of the 5 actions has its own rules, straightforward, as follows (Kaizen Institute Romania, Official webpage, 2021):

- o *5S Seiri*; Sort, Classify, Eliminate;
- o *5S Seiton*; Systematise, Simplify;
- o *5S Seiso*; Shine, Clean and check, Repair;
- o *5S Seiketsu*; Standardise, Stabilise;
- o *5S Shitsuke*; Support, Self-discipline, Maintain Standards.

The first stage, **Seiri,** refers to the organisation of the environment and the workspace by giving up what is unnecessary.

The second stage, **Seiton,** refers to the ordering and reduction of working time in an attempt to identify the equipment;

The third stage, **Seiso,** marks the cleaning process of the equipment for easier access to use;

The fourth stage, **Seiketsu**, is the concept of standardisation, easy to implement by developing procedural documents to reduce errors and repetitions or duplication of activities, tasks, or tasks.

The fifth stage, **Shitsuke**, is an element of preservation, supporting the elements implemented by this method.

Carried out chronologically and successively, the previous stages produce the Kaizen effect, a method that is part of the group of quality improvement methods through Lean Management and which, although initially designed for another sector, successfully proves its effectiveness in the area of online university education, in this period full of challenges that the university environment and not only, did not face.

The focus will be more and more on the needs of students, even more than before the online transfer of classes, as the lack of socialising with colleagues can make young people accumulate certain emotional deficiencies. Equally, universities will be concerned with the socio-emotional aspect of online classroom learning through their Career Counseling Centers (Butnaru et a., 2021).

The 5s with the practical modalities of implementation and the directions of action proposed by the authors for the teachers to adapt the Kaizen principles to the online didactic academic activity are presented in tabular form below.

Table no. 1

5S Stages	Practical ways of implementation in academic online teaching activity/directions of action
5S Seiri *~Organisation~*	• the existence of a workspace and the necessary logistics for teachers for conducting online courses; • academic facilitating of using a unitary educational platform, for all students, in order to streamline communication with students; • the existence of an optimal connection to the Internet; • making updates for the device used in online teaching, with enough time before starting the courses; • ensuring the functionality of the sound and the webcam; • previous verification of the correct composition of the study groups by comparing the tables/lists with the students. • adding to the online course group the missing persons and deleting from the list the persons who do not have the course/activity in their curriculum; • archiving the online activities carried out by the professor in the previous semester / academic year in order to facilitate the browsing of the materials from the platform and their easy identification; • uploading the materials related to each online course on the

	platform;
	• removal of obsolete documents from the materials folder;
	• keeping the supporting materials handy to provide additional details, depending on the context;
	• placing the support objects at hand to be used in optimal time;
	• facilitating by the university the participation of teachers in training courses in order to carry out online activities;
	• request for feedback/recommendations from students regarding the way of conducting online courses;
	• transmitting to the students the essential information, especially to the students who request specific explanations; also appealing to individual study activity, through the transmission of weekly study topics;
	• establishing a program of regular consultations for students for discussions that do not belong to the topic (e.g. other information specific to counselling or tutoring activities);
	• compliance with the announced calendar of discipline (course/seminar/laboratory topics);
	• providing the necessary examples for each online lesson, for the most correct and efficient assimilation of the subject;
	• active involvement of students in online activities;
	• establishing the rules for conducting the course by consulting students;
5S Seiton *~Systematisation, Work time~*	• setting a calendar of online courses and starting and ending them at times set in the schedule;
	• initiation of the online meeting by the teacher;
	• scheduling an alarm to mark the break (online) of students;
	• granting a break, to avoid the agglomeration of information and the weight of their mental or applied processing;
	• regular submission of assignments to be prepared with a set deadline, which students should not exceed;
	• the consistent distribution of the time available between the activity of transmitting information online and the interaction with students;
	• early connection of the equipment used in the teaching process, in order to remedy any non-conformities;
	• rescheduling of online courses whose conduct could not be carried out for objective reasons;
	• timely announcement to students of course schedule changes and communication of ways to recover these hours;
	• allowing the students to participate in online courses (and) with other series in order to streamline their program;
5S Seiso	• •orderly maintenance of the workspace;

~Cleaning the equipment~	- cleaning the work area/table; - ventilating the space dedicated to online courses; - sorting documents into folders and grouping those on the desktop; - stopping other types of devices than the one used in the teaching activity at least 5 minutes before; - placing a container of water at hand; - paying attention to the work climate established between teacher and students; - maintaining a healthy and productive online work environment; - control and cleaning of work equipment; - separating and removing objects or items that are of no use at all or for that time online;
5S Seiketsu ~ Process standardisation~	- standardisation of the rules for conducting online courses; - compliance with time and content planning of courses; - assignment of tasks/person (e.g., the student responsible for transmitting information related to absenteeism to the teacher); - identification of mechanisms for detecting the active presence (e.g., requesting attendance by activating the functions offered by the platform used for online classes: a raised virtual hand); - maintaining a constantly personalised scenario, depending on the preferences of teachers and students, of online classes: you can opt for the pattern: teaching, exemplification, debate, discussions, control questions, quizzes, etc .; - stimulating the activation of students' video visibility, during online classes, for interaction as close as possible to the real one: - applying the rules of the online class for both students and teachers, without deviations;
5S Shitsuke ~Support, maintenance~	- involving all students together with the teacher in the elaboration and observance of the group rules in the development of online courses; - permanent request (every hour online) for active involvement in the online class and feedback; - creating a routine in conducting online activities that provide safety to students; - highlighting and making students aware of the individual and group responsibility they have for conducting online classes in good conditions and achieving efficiency through the Kaizen method;

- encouraging and perpetuating good habits, practices and methods in online classes;
- using an exchange of experience and benchmarking between teachers who teach classes online;
- militating for obtaining a discipline in the process of participation in online courses and assimilation of knowledge for further examinations;
- maintaining the positive elements implemented during the online courses;
- continuous identification of opportunities to improve online activities by appealing to students' creativity, needs and feedback obtained from them.

Source: Author's proposals and contribution

At first contact with these rules adapted to the specifics of online education, the Kaizen method and implicitly its principles may seem challenging to implement, difficult, unattractive and with uncertain results. However, this is not the case at all, as the practice has shown that implementing these principles is done in small steps, not rigorous and drastic, by improving practices and standards, without consistent capital investment, in full accordance with quality control (Prošić, 2011).

In 2019, university teachers and students alike were put in new positions in this period marked by the current medical crisis worldwide. Therefore, it was necessary to get acquainted quickly with the online teaching environment, educational platforms, online testing and examination. Quality in education means, along with the courses taught, how this knowledge is transmitted, the teachers' concern for the well-being of students, the enthusiasm with which they teach online subjects, their motivation and dedication. In the situation where the bureaucracy still exists at a very high level, all the previously mentioned desideratum seem challenging to achieve, but nothing seems impossible to achieve through the teacher's vocation.

Applying the **5S** and obtaining positive results, reflected in ensuring and maintaining the quality of organisations, including universities, is a fact confirmed by specialised studies that illustrate current realities (Jaca et al., 2014; Hu, Xu, 2011; Ebuetse, 2018; Barnes et al., 2017). The practical teaching activity is equal to seeing learning and its needs through the student's eyes (Ramsden, 1998). In a plastic expression, the Kaizen method defines as *waste*, the elements that do not bring added value and, on the contrary, are time and energy-consuming, are considered disruptive elements, which must be abandoned, according to some researchers (Dahlgaard et al. 2011; Lareau, 2003).

From the direct analysis carried out on the present activity through observation, exchange of good practices and experience between teachers, the following categories of elements have now been noted to which it is necessary to pay attention by teachers, as they represent leading elements. poor student results:

- ✓ relatively low employment/insertion rate on the labour market caused by the non-deepening of the practical side of the theoretically learned materials;

✓ non-adaptation of educational programs to the needs of the labour market and following the abilities and skills of students regarding the knowledge necessary to pass the exams;

✓ transmitted knowledge that does not add value to the general culture in the studied field;

✓ information transmitted in duplicate, across several disciplines;

✓ non-adaptation of the curriculum to the present reality, by providing outdated information, impossible to apply in the subsequent professional activity;

✓ not efficiently using teaching time;

✓ inadequate class planning, with the allocation of time for non-specific activities to the detriment of student interaction and information transmission;

✓ errors in the teaching process that lead to a waste of time resources; insufficient materials and support facilities for students; transmission of tasks indefinitely in time that does not form the suitable student conduct for the future status of an employee; no request for group or individual feedback after each subject taught; lack of consultation of employers on the knowledge to be passed on to students for each area.

The advantages of implementing Kaizen principles in online education are materialised by: reducing costs, obtaining more efficient processes in terms of procedure and time, increasing the quality of online educational services, motivating all those involved in the implementation and direct beneficiaries (students) or indirect (employers). These advantages bring a new culture to the student's educational process regarding its quality and size. Successful university management involves the application of both classic and innovative methods, techniques and tools, together with appropriate benchmarking and participatory management policies, in the context of practising and promoting natural performance management (Turner, 2005; Agasisti, Bonomi, 2014; Dragolea, Cotîrlea, 2009).

The main barrier to implementing Kaizen in online education may be the resistance to change of at least one of the parties involved. However, without understanding the importance, the value brought by this change, efficiency, the significant role of each party involved, Kaizen cannot demonstrate its applicability and efficiency. Therefore the guiding role in Kaizen's philosophy and concept of organisation management is essential.

Conclusions

As mentioned by Masaaki Imai, the founder of Kaizen, Kaizen means the improvement of the work environment and the continuous improvement of personal, social, and professional life. In the professional sphere, Kaizen application means the involvement of everyone: managers and subordinates alike (Kaizen Institute, Official site).

Regardless of the organisation's size or the object of activity, it is suitable for implementing Kaizen following the principles, without exception (Gapp et al., 2008).

The implementation of Kaizen in universities within the online teaching activity must represent a continuous improvement of the online educational processes, achieved

through innovative educational tools adapted to the present time. The Kaizen goal in universities requires alignment with the organisation's overall strategy, respectively, with the strategic and operational plans (Wiid, 2019).

In addition to individual and group efforts, tenderers and beneficiaries must have knowledge, skills, leadership, creativity and permanent adaptability; teachers to adapt or even change the way they teach, from transmitters of knowledge teachers will become facilitators.

Currently, when teaching and research standards put increasing pressure on both teaching and non-teaching staff in universities, when the pandemic crisis supplements the fears and uncertainties of both teachers and students, implementing a new system in the organisation can shape a policy of resistance to change on their part. The current advantage is that the pioneers of implementing Kaizen in higher education emerged decades ago, and an objective benchmarking activity can help organisations aspiring to implement to understand better the help that the five previously detailed principles can bring.

The practical research of the possibilities of implementing the Kaizen principles in the online didactic activity was gradually illustrated in the present material, depending on the realities of the online course class, based on the experiences related by the professors from the academic environment. Nevertheless, there are essential start-up steps that can improve the way online classes are conducted in universities. Furthermore, having the advantage that the authors are also university teachers, the experiences are understood in their actual dimension, and the proposed measures can formulate a clear idea to other teachers about what Kaizen means.

The specialised literature presents the implementation modalities in many fields, but the authors identified a gap in Kaizen's explanation, respectively, the possibilities of adapting the 5S to online university education. We intended our approach to be valuable, continued, multiplied, and a field of interest for other researchers.

The research direction opened by the authors through this article will be continued through research initiatives and initiatives for applying Kaizen principles and the efficiency of online teaching in universities through the development of scientific materials to provide helpful support for the community of researchers and beneficiaries of this field.

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