

MANAGEMENT - THE CHALLENGE FACED BY THE MAINTENANCE SERVICE IN SCHOOL BUILDINGS

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Abstract

Modern management – inevitably enters into the function of maintenance within construction buildings. This paper discusses the basic characteristics, principles, and ideas of traditional and modern management. Since maintenance is a very important activity in school buildings, then the function is quite complex and comprehensive, because they aim at maintenance management primarily corrective and preventive, and not only as well as safety at work and environmental protection. Management in maintenance is practically introduced by working on: Setting goals, leading people, Motivating employees, Teamwork, etc. While contemporary maintenance conditions require new managerial approaches and concepts and seek to move beyond traditional methods and techniques of management and leadership, and move towards change and innovation management, in learning and knowledge management then the necessary role of leaders and teamwork but also in the maintenance function.

Keywords: Maintenance management, maintenance function, employee motivation, teamwork.

1 Introduction

Contemporary development trends manifested in globalization and the galloping development of techniques and technology offer unprecedented opportunities for the development of humanity, but because resources are limited and especially taking into account the organization of time, any goal-oriented activity must be managed. Therefore, modern management implies a high degree of productivity, balancing between focus and flexibility, that is, openness to new perspectives, as well as seeking opportunities in diversity and continuous learning.

Maintenance represents the individual approach of the facilities to the challenges of its management, and as such should reflect its specifics. Therefore, the need for services related to the time of organizing the learning process and accordingly to the creation of public spaces of school facilities is always growing. In this case, it is normally accepted that the condition of school facilities, especially in the last two decades in Kosovo, is not at the required level. There is no single maintenance plan that will be successful for school facilities that are different and located in different locations. Along with this, the need to improve these services and make them more effective is increasing more than ever before. This is why facility managers must have visionary skills when it comes to anticipating the needs of potential users of these school facilities. In designing and implementing an appropriate maintenance approach, we must first of all consider the particularities in which schools operate, then their organization, position, and culture. Maintenance includes the most common forms such as: corrective maintenance, which is performed after the occurrence of failure, damage, loss, etc., preventive maintenance, which is performed at predetermined intervals to prevent failures from occurring, and modification of procedures that are performed to improve their functionality and availability. This also raises the issue of the level of maintenance to create optimal working and hygienic conditions to avoid possible defects in these facilities. It is often thought that a large number of specialists in the maintenance sector, can be well-structured, highly disciplined, and technically ready for the process, but if there is no good management, then it is just a group that lacks flexibility, initiative, and the spirit of cooperation. It turns out that maintenance is primarily a problem of organizing the sensitive part of the service activity, which can be called the problem of maintenance management in school facilities.

2 Methodology

The objectives of the research in the paper refer to the validation of results, research, data collection, and data analysis as well as the expansion of existing knowledge, to improve the practice of maintenance of school facilities. Therefore, the aim is to find sustainable, interesting, practical solutions and to raise the awareness of the user and maintenance personnel about the importance of contemporary global experiences in the practice of maintaining school facilities. They can be realized according to guidelines that enable a more positive understanding and all kinds of resources (human, material, financial, informational, and infrastructural). In this way, it is much easier to work on preventing damages and other impacts that would create conditions for school facilities to become generators of positive trends and changes in society in general. Initially, the audit of the existing condition was done, considering that each building must meet the safety conditions in terms of construction since the construction of school buildings was designed and executed at different times and the eventual interventions in the re-destination of the spaces of school buildings in many schools it is quite evident.

3 Assessment of maintenance services in school facilities

If there is a certain market price for all products and services, we must take this into account when it comes to maintenance, either when it is organized as an internal service in school facilities, or as an external contractor that provides its services for it. In both cases, value must be determined and the value of maintenance services means that it has its components, which are quality, time factor and cost. The key elements analyzed in almost all school facilities are:

- Roof
- External and internal walls
- Windows
- Heating system
- Electrical installations
- Sanitary nodes and the sanitary hot water system
- Spaces outside the facility

During the audit of the existing condition, considering that each school building must meet the safety conditions in terms of construction since their constructions were designed and executed at different times, it is true that the maintenance process has not been developed at the required level in most of these school facilities. Therefore, the interventions in the construction according to the requirements for the re-destination of the spaces are very evident and the maintenance process should also be carried out according to the existing requirements of the buildings.



Fig.1 The state of the roof of the



Fig.2 The state of the roof of the Ernest Koliqi school, Ferizaj
Esat Mekuli school, Podujevë



Fig. 3 External walls



Fig.4 Windows

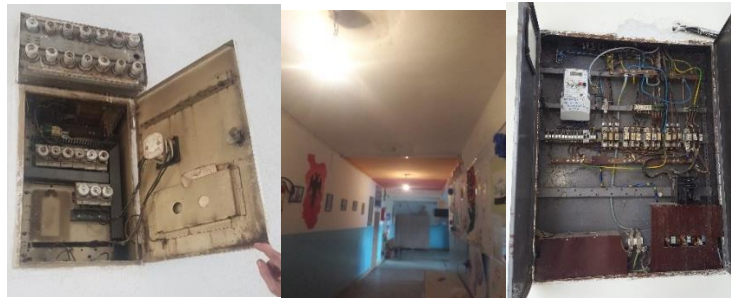


Fig.5 Electrical installations



Fig. 6 Sanitary nodes

4 Results

Analysis of the situation

The complete renovation of the building was done according to the standards, for example, all the windows were adjusted according to the standards, and the roofs and all other elements that were assessed by the audit as necessary to be renovated.



Fig.7 Window arrangement



Fig.8 Facade and roof adjustment

The maintenance management process where, according to research for our region for school facilities which are public facilities, there are several management models where they are:

- Creation of a municipal enterprise that deals with the management and maintenance of the city's schools or incorporation into an existing municipal enterprise,
- Engagement of private maintenance companies that will manage the school facilities
- Management of facilities directly by the owner, in this case the Municipality, appointing the management staff within the culture directorate.

It is of particular importance which maintenance model will be applied and which budgeting will be carried out during maintenance management. Based on practices, I propose that the model of maintenance of school facilities would be to recruit only a narrow staff for specific jobs who should be permanent in the schools or even a staff sold with a contract on the job. The permanent staff must be informed of all the preventive measures and must be ready to fulfill the requests to the investor for subcontracting of various parts for maintenance according to the need, or even to engage the workers of public Municipal companies. The maintenance processes must be carried out based on the scheduled deadlines, where before the beginning of each academic year for the object, all the needs of the object are conducted.

TABLE 4. FACILITY MAINTENANCE CYCLE

Activity	Designation	The control cycle
Painting of exterior walls	Decorative	4-5 years
External perimeter walls	Regular inspections	years
	Inspection and checking of details	5-6 years
Partition walls	Painting	3 years
	Structural adjustments	As needed
Clean water supply	Quality control and valves	monthly
	Cleaning of water tanks and valves	3 monthly
Hot water supply	Checking boilers	monthly
	Control of water heating boilers	6 monthly
Exterior windows, fences and metalwork	Condition check and repair	years
	Painting (steel and iron)	2-3 years
Roof and gutters	Control and cleaning of vertical and horizontal gutters	Before and after periods of rain and snow
Channels for surface water drainage (atmospheric)	Checking and cleaning for bugs and vegetation	years
Underground water drainage channels	Control and cleaning of wells	2 month
	Checking and cleaning pipes	2 years
Fire services	Control and adjustment by management staff	javor
	Repair and reporting to the fire department	years
	Fire resistant doors	monthly
Heating, cooling and air cleaning in the facility	Checking air filters, recuperates, cellars, heating pipes, collectors and boilers	3 month - 1 years
The others	Checking alarm systems, sound systems, cameras, lighting and TV monitors	6 month - 1 years

Management and maintenance are vital to ensure the proper functioning and longevity of facilities, as well as the well-being of those who use them. The main objective is to ensure that the building is safe and fit for purpose. Management and maintenance are key issues not only since the school is a functional facility, but must also be considered during the design and construction phases.



Fig.9 The object of the "Rilindja" primary and secondary school in the village Dritan, K. Drenas.

Conclusions

Based on what was said above, we come to the following conclusions: The pressure for more maintenance and rehabilitation of existing buildings is growing in our country as a debt to be paid for the development needs for more efficient and sustainable construction. Building rehabilitation and maintenance is an important component of any sustainable development strategy. Both together are essential to ensure the long-term well-being of the building stock.

- Maintenance and rehabilitation of school facilities enables users to extend the life of existing buildings with moderate resources compared to replacement costs. Moreover, maintenance and rehabilitation constitute less energy and waste than new construction and can provide social good by preserving already familiar landmarks by giving them a new lease of life.
- Rapid economic, demographic, and technological changes in our country are raising the risk of obsolescence of many school facilities, supporting their rehabilitation. Aging is more difficult to control than damage, even though rehabilitation.
- The decision to rehabilitate or rebuild (if demolish and build) a school facility should be determined primarily by the economic viability of these two options. The potential value of the adapted building should also factor into the suitability of any proposed rehabilitation scheme. Other influences such as legal restrictions may also be at play, but first, perhaps, the financial assessment will be more important.
- In case the life of the school facilities is not extended for more than 20 years and the value of the rehabilitation cost exceeds 75% of the value of new construction, the rehabilitation is not feasible and it is advisable to switch to new construction.

This is except cases when the object for its architectural and historical values is on the list of cultural monuments.

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