Abstract

The problem tree method is specific to the management field and can be used efficiently in any organization. Due to the high degree of detailing the main and secondary causes and effects of a problem, this method can help experts to discover many pertinent solutions to that problem. Based on the theoretical study and case studies, the paper aims to highlight the big potential of this method for educational management in schools and universities.

Firstly, based on a literature review, we have highlighted the advantages and opportunities of using this method in the educational environment. Secondly, we have presented two case studies in which the use of problem tree method could be beneficial.

The first case study is based on a common problem in Romanian gymnasium schools: the fluctuation of teachers. This phenomenon, which has grown in recent years, especially in rural areas, causes the parents’ unhappy reliance on the educational system. In the long run, lowering confidence in certain schools affected by staff fluctuations leads to other phenomena that negatively influence the educational process, such as: moving children from one school to another, even in different zones, the unjustified increase in the rating of some schools in cities, and the frequent change of the field of subjects taught by a teacher. So, using the problem tree method, we have highlighted the most important of the causes and effects of teacher fluctuations. Even these causes have their roots in the educational system or in the school management we have proposed a series of solutions to reduce teacher fluctuations or to reduce the impact of this fluctuation in the community.

In the second case study, we have analyzed the low use of educational platforms in Romanian academic environment. Applying the problem tree method, we have found some interesting explanations to causes like the reluctance of some academics to share their teaching materials with more people, the lack of interest of Romanian students in accessing certain online platforms, the low investment in online platform development etc.

Keywords: problem, method, school, causes, effects.

1 INTRODUCTION

Problem and Situational Analysis can be a central tool in the design and management of any activity or intervention [1].

The problem tree method is specific to the management field and can be used efficiently in any organization, especially for planning and implementing projects [2, 3]. Specially literature mentions six stages of elaborating a strategy with this method: formulating all problems, selecting one focal problem, developing the problem tree, discovering and analyzing alternatives, and selecting the strategy between these alternatives [1]. We mention that our paper refers to the first three stages above mentioned focusing on the third one: the problem tree analysis. The elaboration of school objectives, the alternatives analysis and finalizing the school strategy are stages that must be developed by the management of each school, depending on the specific situation in the institution.

Specialists agree that the problem tree method follows a procedure in other six steps [4]: identify existing problems, define the core problem, formulate the causes, formulate the effects, draw a diagram, and verify the logic of diagram (making adjustments, if necessary). The method aims at identifying real bottlenecks, which stakeholders give priority to and seek to remove them [5].

2 FIRST CASE STUDY

The first case study brings in foreground a common problem in Romanian gymnasium schools: fluctuation of teachers. This phenomenon, which has grown in recent years, especially in rural areas,
causes the parents' unhappy reliance on the educational system. In the long run, lowering confidence in certain schools affected by staff fluctuations leads to other phenomena that negatively influence the educational process, such as: moving children from one school to another, even in different zones, the unjustified increase in the rating of some schools in cities, and the frequent change of the field of subjects taught by a teacher. Using the problem tree method and taking into account the opinions of interviewed stakeholders, we have determined the main causes and effects of the fluctuation of teachers (Fig. 1).

![Problem tree analysis](image)

**Figure 1. The problem tree method applied to the fluctuation of teacher.**

Problem tree analysis is undertaken in a workshop setting, where a variety of stakeholders are brought together to analyze the existing situation [1]. Therefore, in our case studies we have collected opinions from various stakeholders. This first case study was started with interviews with teachers from gymnasium schools and pupils’ parents. Several recommendations of these stakeholders were:
• Creating convenient offers for parents and pupils that take into account the optimal number of pupils to carry out their activities and their preferred timetable;
• Attractive salaries and adequate bonuses for teachers;
• Appropriate settlement of transport costs;
• Engaging in management positions people with skills and leadership traits;
• Mobilizing school management to attract funds from sponsorships and projects.

Among the objectives of the school that will be facilitated by solving the problem are: getting adequate funding, continuous development of the institution, good school results and a favorable image of the school in the community.

3 SECOND CASE STUDY

Another problem to which Romanian education system has to face on is the low use of educational platforms. Even in the academic environment, there is a limited use of them.

Figure 2. The low use of educational platforms – a problem for Romanian academic world.
The problem analyzed in the second case study was firstly defined as acute on November 28, 2017, on a workshop session organized for the national re-accreditation of specialization Economic Engineering in Mechanical Field – Distance Learning, at “Lucian Blaga” University of Sibiu, Romania. The following year (2018), we interviewed several academics in this university about the low use of educational platforms in the Romanian academic world.

Applying the problem tree method (Fig. 2), we can conclude that in a world governed by online activities, online classes have a great chance at engaging and inspiring students to participate and truly acquire useful information for their future. Therefore, it is necessary to change the mentality of teachers to prefer classical teaching, but also how the leadership of universities collaborates with IT partners. We believe that this collaboration must follow three major directions:

- Training academics to use online platforms;
- Implementing computer tools to ease teachers’ work and reduce their online time;
- Finding ways for stimulate the group creativity among students and teachers, and, of course, for stimulate their common research activities.

4 CONCLUSIONS

We have firstly highlighted in this paper the advantages of using the problem tree method in the educational environment. Secondly, we have exemplified with two case studies, one from gymnasium schools, and other from academic environment.

Unfortunately, the Romanian education system has many flaws. The lack of openness toward new education techniques is the biggest one. Teachers are used to thinking a certain way and have strong convictions regarding the way they were themselves taught. But systems change and we can recall an expression that would make our point of view very clear: "old school". It is a way of letting someone know that they are doing things the old fashioned way, taking the sure and tested path. And being old school has its own advantages.

But nothing ever improved or progressed by doing the same things over and over again. In order for something to change, the way of doing it needs to change. And changing the education system is not a modern trend, it is a necessity. We don’t need to change the education system because it would look better or more interesting, we need to change it because the entire world is changing and if this education system remains the same there is a risk that it would crumble on itself. The “new school” and applying new teaching methods is an absolute requirement for this already changing world and extremely fast changing youth. If it doesn’t, we risk not a having an education system to begin with.

REFERENCES


