

**ERNANIA ROCHA FORTES**

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**HIGHER EDUCATION ADMINISTRATION**

**MANAGEMENT OF COSTS IN A HIGHER EDUCATION  
INSTITUTION**

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**Abstract-** The purpose of this study is to describe the perception of the leaders of Mindelo Private University (Pseudonym) located in Cape Verde about the institution's cost management. Specifically, it is intended to define and describe the cost centers that are relevant to cost management analysis in university institutions: teaching costs, research and extension costs, administration costs and maintenance costs. It is also intended to characterize cost-generating activities for each cost center. The participants of this research were four leaders who have experience in the management of the university, and thus, can contribute with relevant information on the cost management of this university. Having in mind the aim of this study, this research focused on qualitative data collection through the use of documentary research and interviews. After analyzing and discussing the obtained data, the results allowed concluding that it is necessary to know the costs of a University Institution in order to be able to define the pricing strategy of the monthly fees charged. Correct cost management is essential. It is also concluded that an incorrect cost management means higher monthly payments, which makes the “product” education less competitive in the market.

## CHAPTER I – INTRODUCTION

At a time when higher education institutions around the world face declining numbers of students and provide funding, it becomes imperative for those involved in the student recruitment process to understand the factors used by students in the search process (Briggs; Wilson, 2007).

To have knowledge of costs in University Institutions in Cape Verde is essential to eliminate waste of resources. From this situation, it can be said that cost management is, therefore, the main instrument for the correct use of resources. Cost management

means systematic monitoring of the amount of resources applied in each area and their verification of effective use.

The costs in higher education institutions can be grouped into four major areas: tuition costs, research and extension costs, administrative costs, and maintenance costs. Therefore, my research project has as its aim to describe the perception of the leaders of Mindelo Private University (Pseudonym) about the institution's cost management. Specifically, it is intended to define and describe the cost centers that are relevant to cost management analysis in university institutions: teaching costs, research and extension costs, administration costs and maintenance costs. It is also intended to characterize cost-generating activities for each cost center. It is hoped to offer a contribution to the analysis of cost management in University Institutions, based on the information collected in the case studied.

## CHAPTER II –LITERATURE REVIEW

### Literature Review

#### Costs of Teaching

According to Bowen (1980), the cost of the students results from three social decisions: the total expenditure on higher education, the number of service units available and the level of quality.

In this way, Morgan (2003) points out that the measurement of the cost per student is not so simple, mainly due to three factors: the cost of using of the buildings, equipment and land. According to the author, it is not clear whether financial aid to students is a cost or deduction of revenue. The difficulty of cost allocation and the existence of joint

costs in educational institutions are also pointed out as factors that hinder the correct measurement of the cost of the student.

According to Amaral (2002), the cost that most appears in the discussions about student costs in Brazil is the “cost of the student”. This methodology divides the total volume of resources applied in the institution by the total number of students. According to the author, federal higher education institutions have expenditures that are not directly directed to teaching, research and extension. However, in many cases these values are incorporated at the time of the calculation. Thus, when incorporated generate the “student cost”.

Human capital, or a more skilled labor force, is one of the main determinants of the economic growth and productivity. However, the recent trends in the cost of education in Australia can cause a lower growth and productivity. For example, during the period from 1982 to 2003, the inflation rose by an average of 4.4 percent per year, while the cost of education in general grew by an average of 7.8 percent. This made education a relatively expensive item among Australian families (Valadkhani; Worthington; Layton, 2005).

### **Cost of Research and Extension**

According to Schwartzman (1996), the university is an organization of multiple objectives, and to know the cost per student of these institutions it is necessary to divide the costs of the university by allocating them in their true purposes: teaching (it would be necessary to separate the first degree, the second degree, of the higher and postgraduate courses), research and extension. In this way it becomes possible to make plausible comparisons between universities. Still according to the author, the need for

teachers to be available to universities for research and extension increases the cost per student. According to the author, it is not all the sectors of the university that are able or capable of developing research of relevance and quality. Thus, the university ends up spending a good part of its revenue on research that does not bring benefit and that entail the increase of the cost per student.

Soares and Cericato (2005) argue that there are several methodologies for calculating the cost per student and it is not possible to identify a correct one. For this reason, it is difficult to compare of cost per student among higher education institutions, except when it is known that all values analyzed come from the same methodology. When comparing the cost per student between countries, the situation is complex as well. This is because there are variables such as university entrance policies, personnel, the laws of the country, among others that directly interfere with the cost and student relationship.

According to Garcia (2006), the margin of the courses or contribution margin of the courses is a value that expresses how much of the revenue is left after the payment of the direct expenses of the courses (for example, teachers, teaching material, laboratories, etc.). The calculation of the margin must be done course by course and should be analyzed in absolute and relative values.

### **Administrative Cost**

Both the administrative and maintenance costs are considered indirect costs because they are not part of the *core business* of a university. For Garcia (2006), the fixed costs hinder the financial efficiency of higher education institutions. This is

because there is a tendency for these costs to increase and, to avoid financial losses, many institutions cut costs in the academic part, which is not ideal, because it is not advisable to cut costs in the end activity, but in the middle activity.

For Minogue (2003), the proportion of students, teachers and administrative staff should be managed. This is because, in order to increase the financial efficiency of the university institution, it is advisable not to have too many administrative staff. Thus, according to the author, the more students enrolled, the more teachers and administrative staff are hired. A smaller number of enrollments lead to a reduction of staff. Thus, the university institution can guarantee a good remuneration to the administrative staff, avoiding the loss of qualified personnel and damages in the quality of the offered services.

Administrative spending on higher education in the United States is believed to be growing very rapidly, especially in relation to the expenditure that is directly related to education, and that this so-called “administrative swell” is a major factor in increasing the cost of higher education (Hendrick, Wassell Jr, Henson, 2009).

According to Garcia (2006), what prevents the reduction of the administrative expenses, in many institutions, is the separation of the same with the academic area. In some cases, the administrative area ends up gaining its own strength, sometimes even greater than the academic area, which is the core business. This is a serious strategic mistake, however, unfortunately very common. The main consequence of this is that the academic teams are unable to establish models of gradual pedagogical projects and easy operational automation via systems, which would undoubtedly greatly reduce the administrative costs.



## **Maintenance Cost**

According to Perez Jr., Oliveira and Costa (2001), the maintenance costs can be classified as auxiliary, since they exist basically to provide services to other departments.

Nogueira (2001) emphasizes the great difference in the expenses of maintenance of buildings that only contemplate classrooms and those that maintain laboratories of teaching and research. The maintenance costs (only water, electricity, telephone and gas) of a building with only classrooms are, on average, five times smaller than a building with laboratories used for teaching and research. This difference can be attributed to the greater consumption of resources in the use of laboratory equipment.

For Garcia (2006) the fixed costs are the great villain of the financial efficiency of the institutions. There is always a great tendency for these costs to increase and, to rectify, many institutions end up choosing to cut in the academic part, which can be a serious mistake, after all, one should not cut into the end-activity, the focus of the economy must be on the middle-activity. The big challenge for getting fixed costs lies in the deep design of agile and automated processes.

## **CHAPTER III- METHODOLOGIES**

Based on the specific objectives of this study, the following research questions were formulated: How are the cost centers of Mindelo Private University (Pseudonym) characterized: Teaching cost; Cost of research and extension; Administrative costs; and Maintenance cost?; What are the relevant aspects of the respective components (cost-



generating activities) of each cost center and how can they interfere with cost management?

### **Sample population**

Mindelo Private University (Pseudonym) was intentionally chosen and analyzed in relation to the cost management, given the perception of its leaders. The target audience of this research was leaders who have experience in the management of the university, and thus, can contribute with relevant information on the cost management of this university. Regardless, four Mindelo's Private University (Pseudonym) leaders were interviewed.

### **Plan for data analysis**

Having in mind the aim of this study, this research focused on qualitative data collection. With the aim to obtain the information necessary to answer the research questions it was chosen two data collection instrument as a way to avoid doubts arising during the data collection phase and to ensure the clarity of the data: Documentary research and interviews. Two key informants were interviewed. The interviews based on the script had an average duration of thirty-five minutes. The interviews when they were not recorded they had their most important parts annotated by the researcher. The primary data were treated with the content analysis technique with regard to open questions, and descriptive statistical analysis was also used for "closed" questions.

### **Categories of Analysis of the Cost Management in University Institutions**

The analysis of cost management in University Institutions in this study was categorized into four areas, related to their respective cost centers. Thus, the categories

of analysis in this research are: cost of teaching; cost of research and extension; administrative costs; and cost of maintenance. Each category consists of its components, that is, its activities that generate costs, according to their occurrence. The table below presents the categories of analysis of this research and its respective components.

<b>Teaching Cost</b>	<b>Cost of research and extension</b>	<b>Administrative cost</b>	<b>Maintenance cost</b>
Teachers' Salary	Salary of the professionals involved	Rectory	Equipment maintenance
Equipment and materials used in the classroom	Material for carrying out the activities	Coordination of the units	Library maintenance
Scholarships	Research and extension grants	Coordination of the courses	Maintenance of laboratories
		Student Support Sector	Expenses like water, electricity, telephone.

#### CHAPTER IV – DATA ANALYSIS

It was sought to classify and describe the information obtained, dividing it into five blocks. They focus on the results of the research related to the different cost centers, that is, the categories of analysis of the research: Teaching Cost; Cost of Research and Extension; Administrative costs; Maintenance costs. The costs of the institution related to graduation and post-graduation were considered as teaching costs; while the research and extension costs refer to research and extension activities. Administrative costs are those that focus on the activities related to the operational operation of the institution and the cost of maintenance are those basic expenses such as rent, energy, water and others of this nature.

## Cost Management

The description of the results in this section focuses on the general aspects of cost management at Mindelo Private University (Pseudonym). We tried to identify the functioning of cost management, as well as, to describe the perception of the leaders interviewed on the subject. In this sense, the research revealed that, for the leaders of the institution, the cost theme is highly relevant, that is, the totality of the respondents stated that the functioning of the institution depends to a great extent on a correct cost management. According to several testimonies, “if the institution spends more than planned in the budget planning, it will possibly have serious administrative and financial immediate losses and organizational in the medium and long term.”

The view of the interviewees on the issue of the cost control is also unanimous, since all of them perceive control as a decentralized activity. It was found that at the Mindelo Private University (Pseudonym), there is a sector of controllership, which actually corresponds to an accounting department in the institution. The Controllership is the body responsible for the cost control. Regarding the purposes of using the information generated on the cost of Mindelo Private University (Pseudonym), all respondents, directly or indirectly, stated that decision making is the main purpose of cost management. In addition, for some of the respondents, the cost management also has the purpose of generating positive cash flow that is obtaining revenues higher than expenses and, thus, guaranteeing a better margin of contribution.

Regarding the use of the information generated by the cost management, it was verified that the opinions are divided. For 50% of the respondents the information generated by the cost management is used satisfactorily and appropriately to the situation of the

Mindelo Private University (Pseudonym). For the other half of the respondents, this information could be used in a different way, that is, they should be used to guarantee the survival of the institution, mainly to guide the search for positive cash flow or, moreover, they should be used in a more intensive and effective way in several dimensions of the Institution's decision-making process, which would lead to a greater commitment to issues related to the institution's costs.

As a summary of the interviewees' perceptions about the cost management problem at the University of Cape Verde, it can be said that most of them were worried about the issue. Thus, the research shows that, in the view of the leaders of the Mindelo Private University (Pseudonym), the relevance of the cost management is a common denominator and it should be a matter of concern and interest in institutionalizing it effectively. In reality, it can be verified that, the cost management is no longer just an accounting activity and it assumes a strategic function for the survival of the institution.

### **Cost of Teaching**

According to the opinion of the interviewees, “these activities (teaching) are the reason for being of the institution”. The cost of teaching is of fundamental importance to the institution. This is because the amounts from the tuition are used to cover teaching costs. Thus, the research and extension projects have different sources of funding. Therefore, if the calculation per student is not satisfactory, the university can end up having losses with the course in question, which would make it impossible to open new classes.

As for the value of student credit, its formula can be defined as follows: the Mindelo Private University (Pseudonym) calculates the cost per student for each course

individually. From the financial needs presented in the curricular projects, the cost of credit for each course is calculated. Based on this amount the monthly payments have their price set.

The research sought to know the opinion of the leaders interviewed about various measures and determinations in use in the institution. For example, when asked what are the best ways to reduce the cost per student (credit value), the respondents pointed to three different actions. The most cited suggestion, recommended optimizing the resources and inputs used, so as to “spend less to perform the same tasks”. The second most cited suggestion recommended reviewing some administrative practices in general, that is, making management more efficient, with lower costs and elimination of waste. The third recommendation indicated the need for class agglutination, that is, the common subjects between several courses could be taught together.

It is observed coherence between the perceptions of the leaders of the University of Cape Verde and the bibliography, regarding the problematic of the costs of teaching. The perception of the leaders on the problematic and the relevance of the cost management for the Mindelo Private University (Pseudonym) is therefore an unequivocal factor of institutional concern with its development.

### **Cost with Research and Extension**

The main activities that generate costs in research and extension are those that directly affect the activities of research laboratories. Direct costs are therefore the following factors or cost-generating activities: Salary of the teacher/researcher; physical structure and equipment; payment to scholarship holders; laboratory equipment.

According to the interviewees, the factor salary of the teacher is the one that focuses more on the composition of the costs with research and extension.

It should be clarified that the costs of research and extension are not fully covered by the amount collected with the tuition fees charged to the students, as opposed to the costs of teaching, the research and extension have other sources of financing. It should also be noted that if a project is associated with a particular course, the costs of the project may be part of the costs of teaching and this may lead to deduction of revenue. In this way, the costs incurred with research and extensions have other sources of funding.

Thus, based on the analysis of the interviews and other information obtained in this research, it is possible to deduce that the stage of research development at the Mindelo Private University (Pseudonym) still does not present distortions, because the research practices are still modest, in the sense of entailing investments that could compromise the functioning of the institution. Even so, it seems that the issues related to the costs of research and extension are relevant and worth highlighting.

### **Administrative Cost**

According to the interviewees, the administrative expenses pointed to several actions and activities that generate costs. The most cited, expressed by all respondents, refers to the salary of the technical-administrative staff of the Mindelo Private University (Pseudonym). The next, pointed out by half of the respondents refers to the physical structure, materials and equipment necessary for the accomplishment and operation of administrative activities, from physical space, equipment and computers, among others. In addition to these, four items appear as the third response, that is,



incidence of activities generating administrative costs. These are: electricity, security, cleanliness and taxes. Finally, the last response refers to the institution's expenses with financial expenses, mainly in relation to interest paid on loans acquired in the financial system.

However, it should first be noted that the administrative costs are paid as expenses from the student tuition. It should be emphasized that each course must, at the discretion of the university, present a certain amount of contribution margin and this value is defined by the institution, as it helps to pay administrative expenses.

Thus, the research shows that, in the view of the leaders of the Mindelo Private University (Pseudonym), the relevance of the administrative costs is a common denominator in the organizational culture, since there is a need to control them.

### **Maintenance Cost**

The Maintenance costs and their factors of analysis have significant value in the institution's cost management; this is because it is an expense that is not directly related to the institution's end-activity. The main activities that generate maintenance costs are those that directly affect the activities of replacement of materials: laboratory consumables; replacement of consumables in classrooms; cleaning materials; and construction material.

Thus, based on the analysis of the interviews and other information obtained in this research, it is possible to deduce that the maintenance cost is implicit in the other categories of analysis (teaching costs, research and extension, and administrative). Even so, it seems that the issues related to maintenance costs are relevant and deserve to be



highlighted, as well as, a deeper analysis that can support the establishment of cost management policies for this category. The research shows that a more appropriate control of maintenance costs is relevant in order to control such expenses that are not included in the institution's core business.

### **Conclusion**

In this paper, in particular, it was sought to investigate the cost management of the Mindelo Private University (Pseudonym) from the perspective of the leaders. The conclusions presented here represent the perceptions of effective employees who understand and experience the institution's cost management and, therefore, could contribute information to the development of this work.

The results of this research allowed concluding that it is necessary to know the costs of a University Institution in order to be able to define the pricing strategy of the monthly fees charged. Correct cost management is essential. Considerations on the costs of Cape Verdean higher education should lead to an immediate search for a more efficient management and institutional arrangements in the offer of the disciplines, allowing at the same time, expansion of the service to the population and excellence of the education offered, with the rational equation of the costs, currently practiced. It is also concluded that an incorrect cost management means higher monthly payments, which makes the “product” education less competitive in the market.

It should be remembered that the main objective of this research is to identify the perception of the leaders of Mindelo Private University (Pseudonym) regarding the cost management of the institution. The analysis of the data revealed significant aspects of

the cost management problem in the university. Thus, it is possible to establish the following conclusive aspects.

<b>Teaching Cost</b>	<b>Cost of research and extension</b>	<b>Administrative cost</b>
Teachers' Salary	Salary of the professionals involved	Rectory
Equipment and materials used in the classroom	Material for carrying out the activities (equipment, record material)	Coordination of the units
Scholarships	Research and extension grants	Coordination of the courses
Library maintenance	Maintenance of laboratories	Student Support Sector
		Advertising and financial expenses

The costs incurred with research and extensions have other sources of funding other than tuition. However, if a research project is associated with a course, the costs of this project may be part of course costs. Thus, it is deducted from the monthly income.

The administrative costs in Mindelo Private University (Pseudonym) are covered by the monthly fees charged. Each course must have a contribution margin defined by the institution in order to pay the administrative expenses. This contribution margin is the revenue generated by the course, discounting the amounts spent on it. The defined percentage of contribution margin varies from course to course and from unit to unit. The new courses/units do not yet have to present contribution margin results in the oldest and most structured course/unit indices. This contribution margin is used to pay for administrative expenses and future investments programmed by the university. The maintenance costs are deducted directly from course revenue, research group, or management. In this way, maintenance costs such as electricity, water and sewage, postal services, telephone and internet are prorated and allocated as teaching, research,

extension or administrative costs. In fact, at Mindelo Private University (Pseudonym) this classification of maintenance cost does not happen, it is embedded in the other classified categories.

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