



## HIGHER EDUCATION QUALITY MANAGEMENT: EVIDENCE FROM ADRAR UNIVERSITY



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### ABSTRACT

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The quality of education seems to be one the biggest challenges that face the educational institutions, in particular the University ones. This issue prompted many of them to adopt total quality management concepts in order to raise the level of teaching and learning and a focus on the quality of its output efficiency. Therefore, this study aims to examine the reality of the comprehensive quality management at the University of Adrar. The opinions of professors and students of Adrar University had been analyzed, and in light of that study, we conclude that there is no comprehensive quality at the level of this university.

#### JEL Classification:

A22, A23, C88, I23, I26.

**Contribution/ Originality:** The study sheds light on the reality of Total Quality Management in higher education institutions by taking the University of Adrar as an example. It is by this sense, one of the few studies that tackled the issue at an Algerian higher education institution. Therefore, it enriches the existed literature in this domain especially in Algeria on one hand, and paves the way for further investigations on the other.

### 1. INTRODUCTION

The non-profit units' sector gets a great importance in economic activity in any country relative to the size of any investments that are allocated to this sector and the size of the services it offers (Carven *et al.*, 1983; Christian, 2013). The Education sector is considered as the most important one as it brings the desired development, and the strategic balance, which provides the community with all its human skills capable to assume the development responsibility in the various fields of life. In addition to this, the university contributes in sharing knowledge, and preparing specialists in various business sectors (Jane, 1978; George, 1995; Maureen, 2004; Kent *et al.*, 2005; Joy, 2009; Jesse and Trey, 2014).

Considerably, the educational development process gets attention in most countries and the application development of the of total quality standards becomes a feature of the current era. This issue led thinkers to consider it by the quality era as one of the basic pillars of the successful management model that appeared to keep

pace with the international and domestic changes (Walter, 1974; Richard and Michael, 1975; Teresa *et al.*, 2012). After the consolidation of the economics of education idea and considering it as an investment rather than consumption, educational institutions become under great pressure to use quality as a criterion for educational product and by this sense, the quality becomes a symbol and a requirement in order to achieve improvement in the educational process in various components. In this context, the research tries to examine the reality of the Total Quality Management at the University of Adrar. To meet the challenge, we resort to a questionnaire in an attempt to get the necessary information that can identify the level and the application of TQM at the University of Adrar.

## 2. ABOUT ADRAR UNIVERSITY

Adrar University witnessed a remarkable development since its inception at all levels. We try through this section to identify the origins and the most important developments ever known at this education organization.

The first nucleus of higher education in the state of Adrar had been established by Decree No. 118-86 in 06/05/1986 modified and complemented by Decree No. 175-86, in 08/05/1986, and included the establishment of National Higher Conservatory of the law. This latter had been developed to the University of Adrar under Decree No. 01 -269 in 09.18.2001 amended by an Executive Decree No. 04-259 dated 08/29/2004 which considers it as an administrative public institution enjoying legal status and financial independence.

Adrar University provides pedagogical and scientific curriculums in several fields in an attempt to boost the scientific research and the economic development. In addition to this, the university has seen a considerable development in 2012/2013 which moved from three colleges to five under the Executive Decree No. 12-302 dated in 04/08/2012. These colleges include 16 sections and each one was established under the decisions No. 800-801-802-803-804 respectively. This leap is consolidated by the opening of new disciplines and degrees like Master and Doctorate levels. The Faculties of Adrar University are: Faculty of Humanities and Social Sciences and Islamic Studies, Faculty of Literature and Languages, Faculty of Science and Technology, Faculty of Law and Political Science, Faculty of Economics and Management.

## 3. SOME PEDAGOGICAL INDICATORS DURING 2012-2015

In this section, we present some indicators that are useful in giving a clear picture of the institution of Adrar University.

- The Evolution of Students' Number: Adrar University experienced a significant increase in the number of students, as shown by the following table:

**Table-1. Evolution of Students' Number**

| Academic Year | The number of students at the faculty of Economics | Number of students post- graduation | The total number of students |
|---------------|--|-------------------------------------|------------------------------|
| 2012-2013     | 1003   | 209                                 | 8316                         |
| 2013-2014     | 1762   | 203                                 | 9002                         |
| 2014-2015     | 1703   | 255                                 | 9232                         |

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Through the table, it is noticeable that the number of post-graduate students increased to 255 students from 2012-2013 to 2015. This increase is due to the desire of the students to continue their education and achieve higher scientific achievement.

**Table-2. Number of Pedagogical Seats offered**

| Academic year | Pedagogical structures |
|---------------|------------------------|
| 2012-2013     | 9162 Pedagogical seat  |
| 2013-2014     | 9164 Pedagogical seat  |
| 2014-2015     | 9450 Pedagogical seat  |

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- The evolution of the number of graduate students: The table shows the number of graduate students per period:

**Table-3. Evolution of the Number of Graduate Students during 2012-2015**

| Academic year | Number of Graduate Students |
|---------------|-----------------------------|
| 2012-2013     | 1864                        |
| 2013-2014     | 2258                        |
| 2014-2015     | 2145                        |

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Through the table above we notice that the number of students who graduate at the university level experienced a growing from 1864 graduated students in 2013 to 2145 graduated students during the academic year 2013-2015.

- The evolution of permanent professors' number: we have observed a significant development in the census of permanent professors, which significantly contribute in the improvement of cost-effectiveness of university education. The following table illustrates this:

**Table-4. Evolution of the Permanent Professors during the Period 2012-2015**

| Academic year | Number of permanent teachers |
|---------------|------------------------------|
| 2012-2013     | 240                          |
| 2013-2014     | 303                          |
| 2014-2015     | 330                          |

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This increase in the number of professors was due to the large and growing number of registered students at the university as well the new disciplines that been opened, the issue that implies the need for more teachers.

#### 4. EMPIRICAL STUDY

We collect the necessary information by adopting a questionnaire. One of the main difficulties of the research is the lack of information, that is the reason why the survey questionnaire that has been designed to collect information in line with the objectives of the research. The study population is composed of professors and students at Adrar University. The questionnaire is distributed to 100 professors and 350 students. Data are treated and analyzed by using the statistical program SPSS.

Relying on the Likert Scale to measure the answers degree of the respondents to the questionnaire phrases, this scale is one of the most common standards, asking the respondent to determine the degree of approval or disapproval on the specific options and this measure is often five graded as it is illustrated by the following table:

**Table-5. Likert Scale**

| The response | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------------|----------------|-------|---------|----------|-------------------|
| Class        | 1              | 2     | 3       | 4        | 5                 |

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- Robustness of the questionnaire:

The questionnaire is intended to examine the ability to measure the quality in the point of view of teachers and Students, through the calculation of the correlation coefficient between the constituent phrases questionnaire and by using SPSS program as it is illustrated in the following tables:

Table-6. Internal Consistency of the Teachers' Questionnaire

| Number | Phrases   | Correlation Coefficient |
|--------|---|-------------------------|
| 1      | University contains atmosphere for professors to Educate  | 0.429                   |
| 2      | Library contains appropriate scientific material that meets the needs of Professor  | 0.345                   |
| 3      | Concepts of quality in higher education are evident to professors with the progress in the teaching process   | 0.412                   |
| 4      | The curriculum develop the scientific and practical students' ability   | 0.316                   |
| 5      | University contains modern methods to facilitate the teaching process   | 0.363                   |
| 6      | University keeps pace with the modern advanced technologies that help in the development of performance to improve the quality of educational services  | 0.481                   |
| 7      | University meets the needs of faculty members and check their ambitions   | 0.352                   |
| 8      | University gives priority to the scientific research  | 0.522                   |
| 9      | University contains appropriate infrastructure necessary for the process of education in terms of workshops and laboratories to ensure the effectiveness of the practical side in the educational process | 0.386                   |
| 10     | University provides the necessary studies to support the financial resources and research   | 0.498                   |
| 11     | University uses its activities in scientific research in the Research bother community service  | 0.534                   |
| 12     | The faculty members benefit from training courses to improve and develop their performance  | 0.320                   |
| 13     | University provides offices and decent places for faculty members   | 0.352                   |
| 14     | Free higher education is one of the main reasons for the high cost  | 0.515                   |
| 15     | University provides funding for scientific research projects  | 0.379                   |
| 16     | The cost of high education is high  | 0.493                   |
| 17     | Wage is one of the most important elements that lead to high education costs  | 0.321                   |

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Through the above table, we note that the lowest correlation (.316) is recorded in the sentence N. 4, and the highest correlation coefficient (.534) is recorded in the sentence N. 11, and all these correlation coefficients were significant. These results show the robustness of the teachers' questionnaire about the education quality.

Table-7. Internal Consistency of the Students' Questionnaire

| Number | Phrases  | Correlation Coefficient |
|--------|--|-------------------------|
| 1      | University student is satisfied with the financial support given to him  | 0.519                   |
| 2      | Services provided by the university for the student achieve his expectations   | 0.507                   |
| 3      | University contains the appropriate atmosphere for the student for education   | 0.427                   |
| 4      | University contains on the technological means to facilitate the learning process  | 0.528                   |
| 5      | University Library contains the appropriate scientific articles that serve the needs of students                               | 0.383                   |
| 6      | The curriculums contributed to the student's ability scientific and practical development                                      | 0.503                   |
| 7      | University contains the types of technologies and devices required in the educational process of teaching, such as data shower | 0.466                   |
| 8      | University contains suitable classrooms in terms of ventilation and lighting and other   | 0.449                   |

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Through the table above, we notice that the minimum correlation coefficient (.383) is recorded in the phrase N. 5, the highest correlation coefficient (.528) is recorded in the sentence N. 4, and that all correlation coefficients were significant. These results show the robustness of the students' questionnaire.

- Internal Consistency of the Questionnaire:

To examine the internal consistency of the questionnaire, we use alpha Cronbach's coefficient in an attempt to test the reliability of the overall consistency as well as the consistency of each phrase as it is illustrated by the following table:

Looking at the results below, it is shown that there is a high rate. This issue means that the questionnaire is internally consist, the fact that makes it suitable for study, analysis and draw conclusions

**Table-8. Questionnaire Internal Consistency by Using Alpha Cronbach**

| Coefficient Questionnaire | Alpha Cronbach |
|---------------------------|----------------|
| Professors' Questionnaire | 0.870          |
| Students' Questionnaire   | 0.770          |

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- Description and Analysis of the Questionnaire Results:

The below tables intend to describe the averages of each phrase in the sample addressed to professors

| Number | Phrase  | Mean  | Response Degree |
|--------|---|-------|-----------------|
| 1      | University contains the appropriate atmosphere for the professor to teach   | 2.923 | Neutral         |
| 2      | Library contains the appropriate scientific material that meets the needs of Professor  | 2.153 | Agree           |
| 3      | Concepts of quality in higher education are evident to professors with the progress in the teaching process   | 2.769 | Neutral         |
| 4      | Curriculum leads to develop the students' ability and skills  | 2.615 | Neutral         |
| 5      | University contains modern methods to facilitate the teaching process   | 3.230 | Neutral         |
| 6      | University keeps pace with the modern advanced technologies that help in the development of performance to improve the quality of educational services  | 4.00  | Don't agree     |
| 7      | University meets the needs of the faculty members and checks their ambitions  | 3.769 | Don't agree     |
| 8      | University gives the priority to scientific research field of economic and financial return of the community and its institutions   |       | Don't agree     |
| 9      | University contains the appropriate infrastructure necessary for the process of education in terms of workshops and laboratories to ensure the effectiveness of the practical side in educational process | 3.692 | Neutral         |
| 10     | University provides the necessary support for studies and research financial resources  | 2.846 | Neutral         |
| 11     | University adopts scientific research in the fields that have interests in the community  | 3.076 | Neutral         |
| 12     | Faculty members benefit from training courses to improve and develop their performance  | 3.153 | Agree           |
| 13     | University provides offices and places decent faculty members body  | 2.461 | Neutral         |
| 14     | Free higher education is one of the main reasons for the high cost  | 3.010 | Neutral         |
| 15     | University provides funding for scientific research projects  | 2.538 | Neutral         |
| 16     | The cost of the high education is high  | 3.230 | Agree           |
| 17     | Wage is one of the most important elements that leads to high education costs   | 2.00  | Agree           |

The results indicated in the table above reveal that the mean of the professors' total answers on the overall statements concerning the overall quality is neutral. This is due to the ambiguity and the lack of clarity about the Quality Management at the University of Adrar from the perspective of professors. This is added to the fact that the majority of the professors' responses about the high education cost (phrase 16) is almost positive (Agree)

In addition to this, the following table figures out the averages of each phrase of the sample addressed to the students

| Number | Phrase   | Mean  | Response Degree |
|--------|--|-------|-----------------|
| 1      | University student is satisfied with the financial support provided to him   | 3.037 | Neutral         |
| 2      | Services provided by the university to the student achieve his expectations  | 3.663 | Don't agree     |
| 3      | University contains the appropriate atmosphere for the student to learn  | 3.093 | Neutral         |
| 4      | University contains technological means that facilitate education process  | 2.934 | Neutral         |
| 5      | University Library contains the appropriate scientific articles that serve the needs of students                         | 3.588 | Don' agree      |
| 6      | The curriculum contributes to increase the student scientific skills   | 3.373 | Neutral         |
| 7      | University contains types of technologies and devices required in the educational process of teaching, such as data show | 3.177 | Neutral         |
| 8      | University contains classrooms suitable in terms of ventilation and lighting and other things                            | 2.644 | Agree           |

The results recorded in the table above show that the total average of the students' answers associated with the quality of education is 3.18 (Neutral). This issue indicates that the totality of the students is not familiar with the concept of total quality in education. Additionally, both phrases 2 and 5 indicate negative answers (don't agree) which means that despite the increase in education cost, they are still incapable to come up with the students' aspirations. In the same context, the fourth phrase about the university material, the majority of responses are positive which means that the university takes much care of the necessary requirements to ensure a good education for the student.

#### 4. CONCLUSION

The study aimed to shed light on what the total quality management in education by addressing the concept and principles of this issue at Adrar University. The findings of the research revealed that Adrar University lacks an efficient application of TQM. This result is based on the claims advocated by both professors and students alike. This outcome leads to present some specific recommendations such as:

- The necessity to establish efficiently a quality research unit as part of the University hierarchy in attempt to analyze the environment of the university and the requirement of the quality management issue.
- The necessity to set well determined quality criteria upon which the student is evaluated and the curriculum is established.

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#### REFERENCES

- Carven, B.M., B. Dick and B. Wood, 1983. Resource reallocation in higher education in Britain. *Higher Education*, 12(5): 579-589. [View at Google Scholar](#) | [View at Publisher](#)
- Christian, S., 2013. Fixing higher education: A business manager's take on how to boost productivity in higher education. Springer Gabler Research.
- George, P., 1995. The profitability of investment in education: Concepts and methods. Washington, DC: World Bank.
- Jane, L.J., 1978. The role of the student in the higher education production function. *Research in Higher Education*, 9(2): 169-179. [View at Google Scholar](#) | [View at Publisher](#)

- Jesse, C.M. and M. Trey, 2014. Measuring value-added in higher education: Possibilities and limitations in the use of administrative data. *Economics of Education Review*, 42: 64-77. [View at Google Scholar](#) | [View at Publisher](#)
- Joy, M., 2009. The wider social benefits of higher education : What do we know about them?. *Australian Journal of Education*, 53(3): 230-244. [View at Google Scholar](#) | [View at Publisher](#)
- Kent, H., H. Dennis and R.R. Tom, 2005. The value of higher education: Individual and societal benefits. W. P. Carey School of Business Arizona State University.
- Maureen, W., 2004. Cost-benefit analysis in educational planning. 4th Edn.: UNESCO International Institute for Educational Planning.
- Richard, R. and S. Michael, 1975. The returns to investments in higher education: Some new evidence. *Journal of Human Resources*, 10(2): 139-154. [View at Google Scholar](#) | [View at Publisher](#)
- Teresa, S.A., M. Christopher, M.F. William and S. Esha, 2012. Improving measurement of productivity in higher education. Washington, D.C: The National Academic Press.
- Walter, M.W., 1974. Policy issues in the economies of higher education and related opportunities in Britain and the United States. *Higher Education*, 3(2): 165-185. [View at Publisher](#)

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