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Research paper

The impact of new technologies on governance and quality management in schools in morocco

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Abstract

Faced with the growing openness of the education sector and of the training on the digital world, the players in this sector are called upon to develop, alongside the disciplinary and pedagogical skills, other strategic and technological skills that enable them to offer the right conditions of management and to manage the interaction and complementarity of the educational components in order to optimize the learning of their pupils.
Our intervention is part of a technical-pedagogical approach and will focus on an action research work in which we will try:
First, to present on line an accessible digital device that facilitates and organizes project planning and provides means to govern and control the quality of administrative acts.
Next, We will show the first results of the experimentation of this tool in our context of research represented by 54 directors of the secondary schools of the provincial delegation of Taza. Morocco, pointing out all the constraints and limitations that hampered its implementation.
Finally, we confirm that the use of this device by our sampling has caused a triple effect on their pedagogical practices: the professionalization of strategic planning on the one hand, and the governance of resources and the rationalization of pedagogical decisions on the other hand and immediate evaluation and regulation in the third phase.

Keywords: *Management; Governance; Digital World; Professionalization; Quality.*

1. Introduction

Over the past decade, technological reforms have revolutionized the global economy through the accessibility, simplicity, speed and efficiency of innovative tools and contribute to the globalization and promotion of several public and private sectors.
The educational domain in turn has been integrated into this technological reform by adopting the new information and communication technologies as mediums for the transmission of knowledge on the one hand or the tools of management and governance of projects on the other hand without neglecting the area of evaluation where the impact of these renovations is very striking.
The digital device then as an intruder in this educational field but its professionalizing mission and its effect of optimizing the performance of students have occupied a large place in the daily practices of teachers.
Although the use of digital technology has a direct impact on improving the quality of the managerial practices of educational stakeholders and facilitates the monitoring and regulation of hot and cold objectives and their use in education has opened the field of sharing and communication in order to break definitively with the old practices [1]. But its use by the directors of Moroccan schools is almost absent and this is due to several personal, professional and contextual reasons.
The aim of this study is to assess the use of ICTs by Moroccan school managers (planning, management, evaluation) in both private and public sectors and to justify the results based on a study of the nature of available equipment and context, the technical level of the participants and the nature of the training received in order to identify the major problems likely to make it possible to envisage a vision of promoting the use of these technologies in education.

2. Theoretical framework

The use of digital technology in the teaching sector was no longer a coincidence; but the constant evolution of the technological field and the development of the services of schools have transformed the latter into enterprises based also on the principle of efficiency and excellence.
If the numerical device is defined in economics as: "a tool that ensures the smooth running of services and immediate correction of deviations" [2]. It is defined in the educational field as " the set of indicators classified and organized by a person or team to make the right decision and to monitor and regulate the activity of a given sector " [3].
In addition, the classification of ICTs has been the subject of several studies, notably in economics, some distinguishing between reverential and referential devices and computerized devices [4]. While others model the device as a preventive measure; strategic or also to the balanced [5].

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In this case, the multiplicity of roles and tasks within an institution favors the existence of not only one tool but several (director, censor, supervisor, professor and economist).The objective of the digital device is the same for all users, aiming to improve the resource management process to guarantee a high quality of service and optimal development of student performance.

3. Methodology

3.1. The engineering of the digital device

The engineering of our digital device is based on a comparative study of the models in order to detect a synthesis of an exhaustive example. Instrumentation highlights four major steps [4]: (Figure 1).

- Diagnosis of the establishment and logistics of the work and the specificity of the context
- The conception and implementation of the design of the digital device
- The implementation of the digital device and evaluation of the indicators
- The regulation of design, processes and contents

Our system is characterized by completeness and variety, it offers opportunities to plan in the short, medium and long term, plus its action of piloting and governing, as well as to evaluate in warm by referring to the legendary colors of the columns and the evaluated indicators or moving hands (red means an emergency of regulation, and the green reflects a controlled and mastered action.
Each criterion in turn is represented by modifiable indicators adjustable according to the needs of the managers (Figure 2).

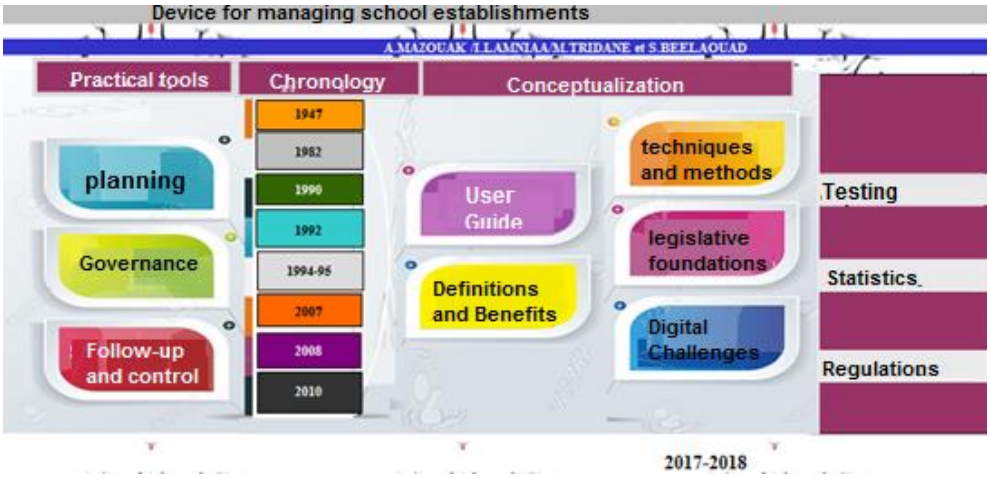


Fig. 1: Cover Page of the Digital Device.

		BIG	DATED	END
PRO 1	beginning	01/12/2016	152	01/05/2017
	Stage1	01/12/2016	32	01/01/2017
	S2	01/01/2017	32	01/02/2017
	S3	01/02/2017	29	01/03/2017
	S4	01/03/2017	32	01/04/2017
	S5	01/04/2017	31	01/05/2017
PRO 2	Beginning	01/12/2016	152	01/05/2017
	Stage1	01/12/2016	32	01/01/2017
	S2	01/01/2017	32	01/02/2017
	S3	01/02/2017	29	01/03/2017
	S4	01/03/2017	32	01/04/2017
	S5	01/04/2017	31	01/05/2017

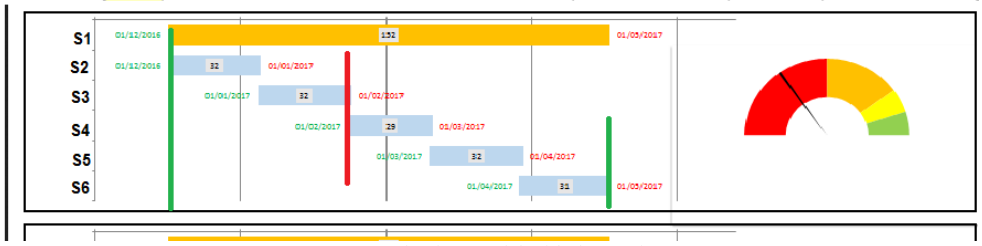


Fig. 2: Evaluation Model with the Device.

3.2. The scripting of the digital device

The use of digital is possible for all managers of all institutions and also other stakeholders in the field of education who want to develop their management and management of learning or institutions, with a wide margin of choice of language, colors and tools.
The sample of our experimentation was constructed in a probabilistic way. It is made up of 54 public and private leaders representing a qualifying education cycle. during the school year 2016/2017.
The request for information is made following 4 inquiries, two before the use of the device and two others immediately after.

Thus we left the free choice of indicators and criteria according to the needs of each director.
Enter your results in this section,summarize the collected data and the analysis performed on those data relevant to the discourse that is to follow.After presenting the results, you are in a position to evaluate and interpret their implications, especially with respect to your original hypotheses [4].

4. Results and discussion

4.1. Results of survey 1: before digital use

Table 1: Causes of Non-Use of Digital at School

Materials	Disciplinary	Social	Motivational	Computer skills	Other
10%	5%	0%	0%	85%	0%

ICST on managerial practices and consequently on the competences of pupils

Table 2: Problems That Limit the Use of Ict

	Use the ICT for PGE	Using You A Device	ICT facilitates planning	ICT facilitates management	ICT facilitates evaluation	ICT develops teachers' skills	ICT develops students' skills
Yes	10%	0%	10%	10%	10%	25%	10%
No	90%	100%	0%	0%	0%	0%	0%
Without opinion	0%	0%	90%	90%	90%	75%	90%

Reading the results in Table 2, it clearly shows that the major problem behind the non-use of ICTs by managers is the level of technological skills (85%) and since the motivational problems are null, this means that a simplified solution of the device making available to the directors with a short guide to professionalize their managerial practices.

4.3. Results of survey 3: after use of the digital device

Table 3: Contribution of the Digital Device to Managerial Practices

Skill	Project planning	Governing institutions	Internal Institutional Evaluation
Yes	100%	100%	100%
No	0%	0%	0%
Without opinion	0%	0%	0%

The results mentioned in Table 3 can only testify to the remarkable contribution of the proposed digital device to managerial practices, either creation of projects, management of the parameters of the establishment or also to regulate adapt and correct the contextual variables

4.4. Results of survey 4: after use of the device

Table 3: Satisfaction Relative to the Digital Device

Quality	Degree of Satisfaction		
	Yes	No	Without opinion
Accessibility	95%	5%	0%
Adaptability	100%	0%	0%
completeness	80%	20%	0%
personalization	100%	0%	0%
Self evaluation	100%	0%	0%
Accompaniment	100%	0%	0%

Table 4 reflects a reality of appreciation of this device and strong appraisal of its impact on the development of skills governance planning and self-assessment of educational institutions. In addition, all practitioners appreciated the customization option (100%) offered.

5. Conclusion

Today we can no longer deny the blatant contribution of ICT on the improvement of the quality of governance and the management of schools on managerial practices within schools.

Planning, Governance and Evaluating Institutional Projects with these tools has become not a demand of managers more than it is a demand of teachers and students, indeed a need of the people of this century.

The integration of the digital device confirms this reality since it has modified erroneous representations on technology. Moreover, its use makes it possible to decide with demotivating routines towards a scientifically demonstrated reorganization of daily administrative practices.

Finally, in-depth training in the use of ICT in the educational field is much desired in view of the growing gap between devices and applications that penetrate forcefully into the school sector and the limited technological skills of practitioners.

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