

QUALITY MANAGEMENT IN EDUCATION SECTOR PART I:

ADVANCED ANALYTICAL MAPPING

OF THE EDUCATION AND TRAINING MACRO-PROCESS IN MOROCCO

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Abstract

The quality of the diagnosis and management of such a system for strategic interest like the one in education and training depends on two factors:

- Perfect Taken into account of teachers' requirements whether implicit, explicit or latent;
- Evaluation of teacher's feedback with respect of major organizational changes, without which we cannot measure the difference between the impact of changes and teacher's expectations.

This work is the first of three preliminary interactive segments; it targets the development of analysis and measurement concepts of the organizational climate impact on teachers, as crucial segment to optimize the education and training macro-process. It integrates into methodological concepts produced on the subject of quality.

Mapping as visual product; is a main primer for any quality management system. It allows us to:

- Identify and describe the processes of management, implementation and support necessary to control
 activities and the satisfaction of the beneficiaries;
- Define levels of hierarchical and participatory analysis;
- Formulate process sheets related to the process of implementation that defining stakeholders, sequences and mutual interactions.

Following these achievements we have:

- Trace the perimeter of the perception sphere of teachers;
- Provide a high potential for a radical scanning of the education system and expose its elements in order to draw as much information about its operation.

These products provide a solid platform to introduce our future analysis and measurements.

Keywords: Process mapping, Sheet process, Perception, Standards ISO 9000, Concept of Deming.

Abbreviations:

MNE: Ministry of National Education HEC: Higher Educational Council

HAET: Higher Authorities of Education and Training RAET: Regional Authorities of Education and Training

PA: Parents' Association

1. Introduction

The reform of our education and training seeking input from all stakeholders forces of the country and mainly teachers; cornerstone of this change and the vital role which is to help people to develop their talents and take on a complex range of skills.

But one thing's for sure, the degradation of working conditions affect the performance of teachers and are proving poorly motivated, less productive and less respectful of educational guidelines and rules of the educational authorities. The actors inside a system that make the organization what it is. It therefore becomes important to understand how they perceive their work environment as well as the leadership role of their leaders (Brunet, Savoie, 2001) [2].

In an organization, the climate corresponds to a global perception, summarizing individual perceptions developed from a common real context (Crozier, 1994) [3], hence the need to identify and provide concepts for measuring variables of organizational climate can be considered as stimulating or inhibitors factors in the workplace. And it is in this context that appeared this research project in the regional academy of education

and training of Laayoune Boujdour Sakia Hamra in the South of Morocco, called "Macro-process of education and training in Morocco: Analysis and measurement concepts of the organizational climate impact on teachers" inspired by international concepts of quality and audit and particularly the process approach and Risk Analysis Strategy. The reforms arising from the National Education and Training Charter 2000-2009 and the 2009-2012 emergency plan leaves appear that educational and financial indicators relating to learners ravaging our educational system - for example in terms of success or dropout rates - while the psychosocial indicators for working conditions of teachers don't exist in the statistical review and analysis of the educational authorities.

Our work focuses in the first part on the mapping of education and training macro-process as a first step towards optimization. And the cradle of our study begins with the formulation of a hypothesis that there would be a link between the perception of organizational climate by teachers and the functioning of macro-process of education and training. Order to better situate our research and before putting our hypothesis in test we have developed of prerequisites spread over three parts of which this is the first.

2. Definition of organizational climate: basic element of our notional system

To understand the concept of organizational climate, we must refer to the context of its operationalization. Fourgous and Iturralde (1991) define organizational climate as a set of objective characteristics and relatively permanent of organization perceived by individuals belonging to the organization, which serve to give it some personality and which influence the behavior and attitudes of these members [8]. For Brunet (2001), "Organizational climate is the perception maintained by members of an organization regarding organizational practices (policies, human resource management) that manage them [1]."

The diversity of definitions of organizational climate, unveils a term that can be qualified both as federator and inductor: it is perception. About the perceptual and subjective aspect of organizational climate, Likert (1967) states that an individual's reaction to any situation is not always a function of the absolute character of interaction, but of the perception conveyed by the individual [15].

According to ISO 9001: 2008, the term "work environment" is defined as the set of conditions under which the work is performed including physical, environmental and other factors (noise, temperature, humidity, lighting, climate conditions ...) [13].

In a general way the organizational climate is a whole composed of perceptions that teachers have of their work environment. These perceptions affect the way in which teachers' value fundamentally various variables relating to the work as autonomy, trust, recognition, fairness, leadership and cohesion, and reflected by the issuance of individual or collective behavior well-being or criticality. Such perceptions fluctuate according the evolution of educational system, as well depending on his level of sharing within the community of teachers. From the foregoing, it turns out that the organizational climate of a system referred to a multidimensional character and that the data from which can be measured derives of the perceived.

3. Materials and methods

3.1 Definition of action plan

Our intervention strategy to optimize the macro-process of education and training requires the definition of 5 areas:

3.1.1 Research context and current problematic

This research fits into the context of the contribution of professionals to improve the management of education and training system, and focuses on the detection of failures that affect the performance of teachers and therefore delays the change. The structural reform of the education system was marked by the launch of the National Decade of Education and Training 2000-2009, which was completed by the implementation of

the Emergency Program 2009-2012. The succession of these major and radical changes of the education and training politics has triggered a series of problems:

- Empowering and hesitant governance;
- Commitment teachers face difficult conditions for the exercise of their duties;
- Teaching model in difficulty;
- Financial resources between mobilization and allocation model;
- Deficit mobilization around the school, trust impaired;
- Lack of a comprehensive and effective integrated information system;
- Findings strong dysfunctions and deviations in frequency and intensity;
- Slow Pace of implementation of services;
- Tension in the social climate;
- Emergence of new expectations of the people.

These various system failures were mentioned in the report of the High Council of Education (2008): State and perspectives of education and training system [9] as well as in the UNESCO Report (2010) on education in Morocco: Analysis of the sector [19].

3.1.2 Reference texts

Reference texts that define the overall context of the search:

- National Charter for Education and Training [20];
- Emergency Programme [17];
- White Paper: Selection and educational guidelines for curriculum revision [16];
- Report of Higher Education Council in 2008: Status and prospects of the education and training system: volume 1: Successful schools for all. [9]; Volume 2: Analytical report [10]; Volume 3: Atlas of the education and training system [11]; Volume 4: Teaching profession [12];
- Special status on the staff of the Ministry of National Education [5];
- Private status of public institutions of education and teaching [4];
- Royal Decree on the creation of the regional academies for education and training [18];
- Decree on the establishment of the Ministry' delegations of primary and secondary education, and laying the status of delegates [6].

3.1.3 Extent and limitations of the research project

The optimization of macro-process is oriented toward thorough diagnosis who aims the detection of all variables influencing the functioning of the education system, and whose the perception by pedagogical actors mainly teachers generate a climate of well-being or anxiety. The implementation of the concepts derived from this diagnosis constitutes a critical phase that higher education authorities and training are invited to take into consideration.

3.1.4 Expectations immanent

The attitudes of beneficiaries are constantly changing, and their expectations become increasingly burdensome in terms of time of satisfaction or Time To Market "TTM", and therefore our educational system is facing the combined challenges:

- Improve the working conditions of teachers;
- Accompany the dynamic character of the macro-process operation;
- Satisfy the evolutionary character of the beneficiaries' needs.

3.2 Mapping of macro-process

3.2.1 Process approach

Our quality approach to mapping is mainly based on the process approach for two reasons:

- It's a method of analysis and modeling, which aims to improve the efficiency of the education system.
- It's a systemic and comprehensive approach that meets the criteria of the education system in terms of 1.organization size; 2.budget; 3.complexity; 4.instability; 5.innovation; 6.multiplicity of stakeholders; 6.internal and external challenges.

The macro-process works through a set of activities divided between different elemental processes. This cross-cutting nature, assuming many interfaces is often a crucial point improving services provided to beneficiaries. But according to Kotler (1997), the departmental organization reveals problems; departments often seek to optimize their own performance, sometimes to the detriment of the company. The walls of misunderstanding settle and the work of company is slowed down [14].

One crucial condition for mapping the macro-process is having a global locating of the organization's mission without which the diagnosis shall be rudimentary. Evaluation and measurement of the impact of organizational climate based on teachers' perceptions, requires a deep knowledge of the operating mode of the macro-process of education and training. Such knowledge allows for highlighting scattered and undetectable variables, and how their perceptions by the teaching population determine the quality of work life. Therefore improving the working conditions of teachers can be achieved only through the optimization of macro-process.

3.2.2 Concept of teachers' voice

The teaching team will be satisfied if the requirements are properly transmitted through the process chain as secure and confident way. In other words, it is essential that the echo of the teachers's voice be widespread throughout the education system. This echo is only the reflection of perceptual teachers.

3.2.3 Flexible mapping

While showing a great flexibility; we propose an original mapping which aims to optimize the macro-process of education and training in order to:

- Understanding the operation mode of the educational system;
- Define the interactions between process and clarify the consistency between interfaces entities;
- Transform or create new processes to meet new expectations;
- Trace a teachers' sphere of perception by identifying the variables that affect the well-being of teachers and disrupt the organizational climate in general;
- Improve positioning of the pedagogical team in particular teachers in the educational system;
- Better respond to hazard.

3.2.4 Definition of key processes

From a strategic point of view; all processes have priority. And in this context our optimization project consists of scanning the macro-process of education and training to seek for the situations perceived by teachers as generating sources of criticality or well being. This very broad scope of search and covering the whole system assumes that each process whether it be of Management, Implementation, or Support is suspected to be a critical process. This mission seems delicate because of the cross-cutting nature of macro-process. Pointing out that the modes of processes articulation define vital interfaces intra- or inter-process, this is where are located the areas of cleavage and potential improvement.

3.2.5 Characterize implementation process

This work revolves around a general mapping of the macro-process of education and training from which each process is characterized by 7 parameters:

- The pilot;
- The resources required: human, material and financial resources;
- The input elements: data or products;
- Requirements of the suppliers;
- The output elements: data or products, and can be finished products or input element for other elementary processes;
- Requirements of the beneficiaries;
- The measurement and supervision system.

There are several types of beneficiaries in the transmission of knowledge several during teaching delivery, students on the one hand, and parents on the other and farther away citizenship. This system of beneficiaries defined the image of the public school in society.

4. Results & Discussion

4.1 Mapping macro-process of education and training

Mapping as a support for effective communication, consists to identify the contribution of process in achieving quality objectives and beneficiary satisfaction, and to describe the macro-process of education and training in order to draw the maximum amount of information concerning its operation and interactions. In this mapping are represented:

- The flow path;
- Beneficiaries input and output and whose their satisfaction is monitored by the continuous improvement process, it self linked to the management processes that reflects the involvement of management in the improvement process;
- The current position of our education system compared to trends of the educational market in which it operates;
- Elementary management processes: customer focus, definition of strategies, policies, objectives, internal communication and continuous improvement;
- Elementary implementation processes: administrative, enrollment, curricular and extra-curricular prestations etc;
- Elementary support processes: procurement, human resources, social bodies, communication, maintenance, marketing of educational provision;
- Mutual interaction of process.

Network processes and interactions performed in posters 1 and 2; covers all the variables that make up the organizational climate of teachers, it was designed using a systems approach that considers the elements of a complex conformation not isolated but overall, as integral part of a coherent set which the various components are in a relationship of mutual dependence. For this reason we targeted all bodies and institutions that influence the quality of life and working conditions of teachers according to two dimensions:

Hierarchical dimension: aims to expose the position of the institutions and the following factors to the macro process of education and training: 1. Schools; 2. Regional authorities of education and training "RAET"; 3. Higher authorities of education and training "HAET"; 4. Internal and external challenges; 5. Trends universal.

Participatory and partnership dimension: including 1. Parents' Association; 2. School councils; 3.
 Universities; 4. Public interest associations; 5. Trade unions; 6. Local authorities; 7. Training providers; 8. Business community.

The components of vertical and transverse axes are divided according to three families of processes: management, implementation and support.

During the mapping of macro-process of education and training we introduced 5 new elementary processes at the implementation and support process, because their lack creates problems. These elementary processes are:

- The preliminary assessment of student profiles before the beginning of the course to assess levels of prerequisites skills and talents;
- The referents office: providing services of psychiatrist, social worker, external guards and the listening clubs;
- The pedagogical traceability of students: it extends throughout the academic career of the student and allows good administrative management, educational leadership, school counseling, monitoring of school career, monitoring physical and mental health and collect more information about the social stability of students;
- The school support: This support animated by volunteer teachers and former pupils of school to the particularity to enhance the school career of pupils on the one hand, and to promote the link with the alumni of the school on the other hand. At the end of their contribution, the former pupils receive a certificate which consolidates their curriculum vitae;
- Extra-curricular prestations: to support talented students and strengthen their skills in art, sport, literature, etc.

These elementary processes are of paramount importance to the extent that they are used to supply the statistical database of the Ministry of National Education, and relieve tension among students. Also note that students are also sensitive to climate in the school, and their perception, can not only influence their behavior in the classroom but also their academic performance (Brunet, 2001) [1]. So relieve these pressures involves the preparation of a climate conducive to learning for teachers.

Mapping of macro-process identifies 4 levels of hierarchical analysis shown in table 1:

- Mission profile;
- School: Middle and high school;
- RAET: including academy et delegations;
- HAET: composed of the Ministry of National Education "MEN" and Higher Education Council "HEC" currently "HCET".

From table 1, when one moves from an organizational level to another, the tenants of processes change position top-down or bottom-up while keeping the teacher at the center as a stable reference.

Teachers cornerstone of change, equipped with their perceptive powers intercepts interferences that arise from various organizational levels be it near or far, for emit behavior of confidence or anxiety that we absolutely must measure (see poster 3).

4.2 Concept of PDCA

The four phases of the standard cycle of quality management picked up in many variations are: Plan, Do, Check, Act (Deming, 1986) [7]. And according this PDCA concept invested in our research methodology, we can see through the poster 4:

• Through the hierarchical levels, the Deming Wheel shows a spiral and evolving appearance, and when one moves from one dimension to another wheel diameter increases, it seems logical given the high

number of instances and institutions at the base of the flowchart of the education system. The size of the organization requires a huge mobilization of human and material resources to meet the implicit, explicit and latent needs of different stakeholders.

The evolution of Deming Wheel is explained by the amplification of the steps's echoes: Plan-Do-Check-Act upstream in the circles of the upper hierarchy as what happens when you throw a stone into a pond, concentric waves spread until it reaches the other shores.

Within the education system, we can operationalize the evolutionary phases of the Deming as in table 2.

4.3 Characterization of the implementation process

The process sheets allow presenting and documenting the characteristics that define the operation mode of the process and the objectives to be achieved. Table 3 shows the number of elements characterizing the process of achieving.

The movements of flows data are documented in the traceability process where the history of all operations related to the academic career of the student can be retained. But taking into account the size of the manuscript required by the publisher, we present only sheets elementary process marked by asterisks in Table 3 namely:

- Table 4: Preliminary assessment of student profiles;
- Table 5: Achievement of extra-curricular prestations;
- Table 6: Office of referents;
- Table 7: Management council;
- Table 8: Class council.

4.4 Coding system and movement of flows

The coding presented in mapping of the macro-process or in developing process sheet allows both to:

- Follow the path of the activities flow;
- Easily locate the variables in the organizational climate;
- Expose the interactions between processes.

The complexity of the educational system requires us to provide a synthetic representation of the flow in terms of chaining activities and contribution of elementary processes in the execution of the teachers' mission in its real context. We include in table 9 for example a description of the school delay flow through various processes of implementation. The identification of teachers' requirements as being of key executors is a crucial step for the characterization of the process.

5. Conclusion

Mapping performed at the end of this section provides a global view of the operating mode of the macroprocess of education and training and has allowed us to:

- Display the elements that make up the macro-process of education and training while highlighting the three families of processes: management, implementation and support as well as their mutual interactions;
- Highlight the different levels of hierarchy and organizational analysis of the education system;
- Formalize the process sheets for all data that characterizes each process and mainly the implementation
 process in terms of: title, pilot, flow and mutual interactions with other processes and performance
 indicators, which allows better understand the mechanisms for accessing of quality education;
- A clear coding system allowing locates the elements that characterize the process: pilot, input and output elements, resources, requirements and performance indicators.

Also our mapping project is to implement changes intended to optimize processes and make them more efficient, these changes include:

- A change in depth of certain processes such as implementation in terms of chaining and coding;
- The integration of new processes deemed vital for the functioning of macro-process of education and training such as: 1. Offices of referents; 2. School support; 3. Pedagogical traceability of students; 4. Preliminary assessment of student profiles; 5. Extra-curricular prestations.
- A practice of good governance through better use of resources, improved working methods and management practices, a better distribution of workload and a better definition of responsibilities.

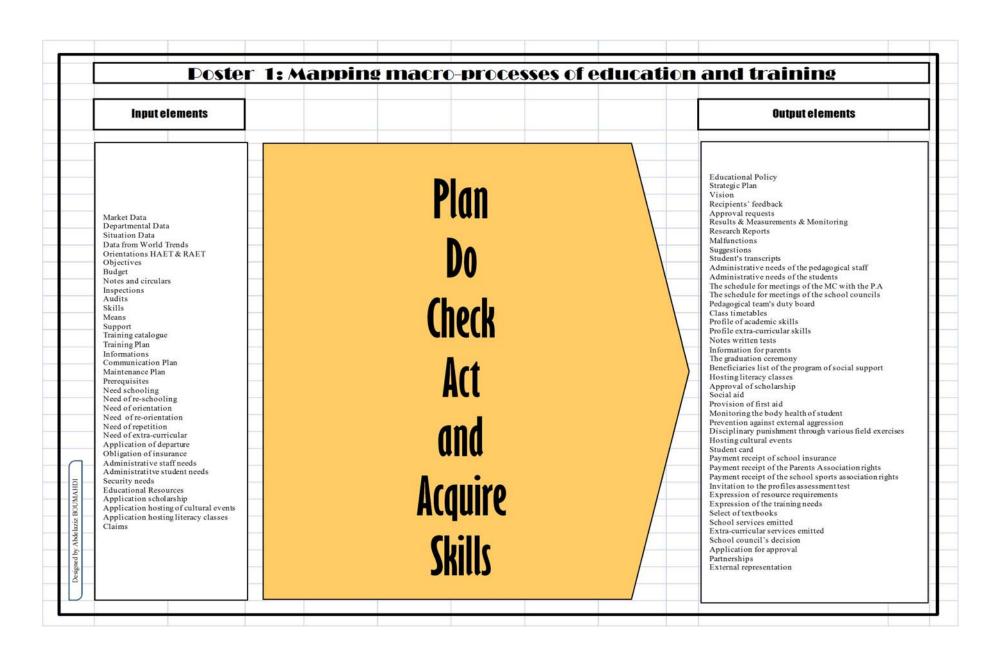
These results fit well the scope of search along the macro-process of education and training and to draw as much information regarding its operating mode, which fosters the highlighting of all variables generating risk or well-being for teachers and therefore deepen the next qualitative and statistical analysis.

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List of tables and figures in order of appearance:



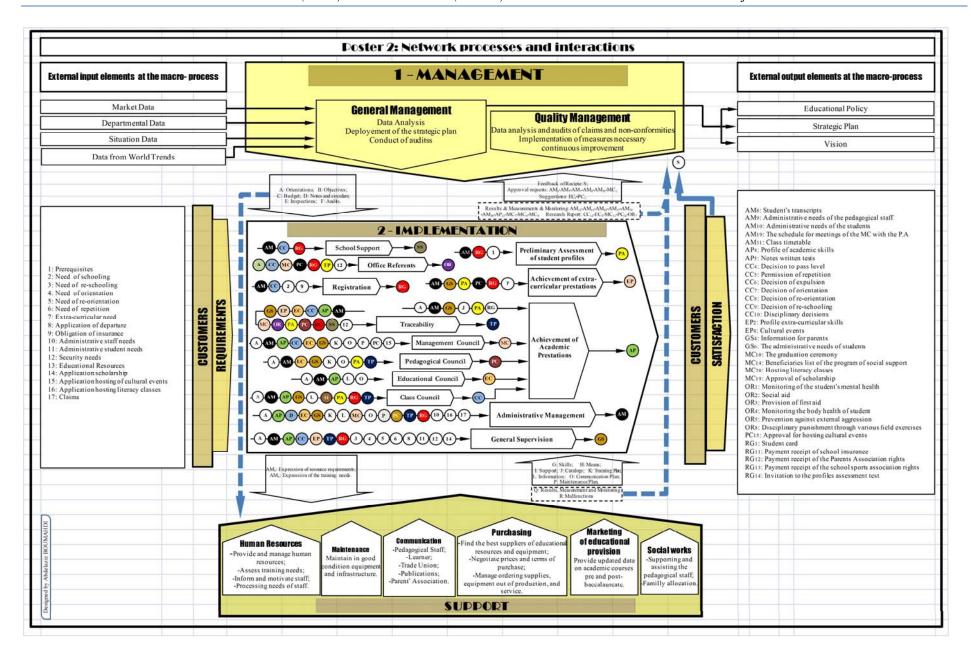


Table 1: Macro-process and hierarchical levels of analysis

Process Level of analysis	Elementary process Level included	Environment Contextual level	Phantom process Hidden level
HAET : MNE & HEC	RAET : Academy & Delegations	External stakeholders Global educational guidelines	That works following the occurrence of minor non-
RAET: Academy & Delegations	Schools	HAET : MNE & HEC	conformities undetected
Schools	Mission profile	RAET : Academy & Delegations	or neglected and that the cumulative effect can
			cause partial or integral
Mission profile	Teachers	Schools	failure of the system.

Table 2: Organisational levels according to the PDCA concept

Organizational lovel	Scope	Phases Deming				
Organizational level	of action	Plan	Do	Check	Act	
HAET : MNE – HEC	Strategic Intervention	Strategic visions	Resource mobilization	Performance Measurment and Audits	Review of educational policy	
RAEF : Academy-Delegations	Opérationnel Intervention	Regional projects	Implementation of project	Assistance and supervision	Improvement	
		School project	Administrative management	Measurement of performance.	Review of school's policy.	
Middle & high school: School administrators Teacher's team	Executive	Curriculum design	Achievement of academic prestations	School evaluation	Correction of controls	
School councils	Intervention	The meetings' agenda of school councils of management, pedagogy, education and class.	Decisions transmitted and projects executed.	Monitoring the implementation of decisions and projects.	Suggestions, Improvement and innovation.	

Table 3: Distribution of elements characterizing the elementary processes of implementation

Type of elementary process		Number of elements characterizing each process					
		Input elements	Output elements	Requirements -RQ-	Performance indicators -IP-	Resources -H&G-	Beneficiaries -BF-
AM	Administrative Management	38	50 AM	8	17	14	4
GS	General Supervision	40	39 GS	6	11	10	4
RG	Registration	7	14 RG	4	5	11	1
PA*	Preliminary Assessment of student profiles	4	2 PA	3	5	11	1
AP*	Achievement of Academic Prestations	21	21 AP	8	10	8	1
EP*	Achievement of Extra- curricular Prestations	10	10 EP	5	3	11	1
OR*	Office of Referents	12	8 OR	7	6	15	1
SS	School Support	5	1 SS	6	3	10	1
MC*	Management Council	22	20 MC	3	7	14	4
PC	Pedagogical Council	17	19 PC	5	9	10	2
EC	Educational Council	10	14 EC	6	8	7	2
CC*	Class Council	25	21 CC	7	10	11	2
TR*	Traceability	83	1 TP	4	4	9	2

Table 4: Elementary process sheet of preliminary assessment of student profiles

I-Dr-DA	Elementary process: Preliminary Assessment of student profiles			
Pilot	E ₁ : Teaching inspector			
Input elements Requirements	 AM₁₁: Circulars and departmental notes; RG₁: Student card; RQ₂: Compliance with internal school regulation 	 RG₁₂: Invitation to the profiles assessment test; 1: Pre-required school and extra-curricular skills. 		
Resources	 G₁: All teachers; G₂: Headmaster; G₃: Deputy Headmaster; G₄: General supervisors; G₅: Administrative and technical collaborators; G₆: Administrative, pedagogical and social assistants; 	 H₁: Offices; H₃: Desktop resources physical or digital; H₄: Educational resources physical or digital; H₆: School time; H₉: Administrative time. 		
Output elements	♣ PA₁: Data on the pre-requisites of academic skills;	♣ PA₂: Data on the pre-requisites of extra-curricular skills.		
Beneficiaries	♣ BF₂: Students			
Requirements	RQ ₉ : Evaluation test of pre-requisites academic skills;	RQ ₁₀ : Evaluation interview of extra-curricular skills.		
Performance indicators	 IP₂₄: Confirmation of pre-requisites training before classes start; IP₂₅: Level of using data from profile assessment; IP₂₆: Level of involvement in extra-curricular activities; 	 IP₅₈: Mastery of evaluation deadlines; IP₅₉: Coordination speed with traceability process. 		

	Table 5: Elementary process sheet of achievement of academic prestations				
I-Dr-AD	Elementary process: Achievement of Academic Prestations				
Pilot	G _I : All teachers				
Input elements	A1: Teaching guidelines; A2: EC4: Setting up of evaluation of matter program; A2: Instruction of teaching inspector; A2: Instruction of teaching inspector; AC5: Program of pedagogical activities suggested for all disciplines; AM1: Circulars and departmental notes; disciplines; AM18: Planning of the meetings of school councils; AC6: Quarterly report of the educational council; AM23: Text book; AM23: Text book; AM25: Teacher's duty board; AM25: Quarterly report of the management council; AM26: Planning of distribution of classrooms; AM27: Quarterly report of the management council; AM31: Class timetable; PA1: Data on the pre-requisites of academic skills; CC11: Quarterly report of the class council; PC11: Quarterly report of the pedagogical council; CC18: General planning of written tests; PC13: Selection of suitable textbooks;				
Requirements	 RQ₁: Respect the public institutions status of education and teaching; RQ₂: Evaluation test of pre-requisites academic skills; RQ₁: Stable classes; RQ₁: 24 students per class. 				
Resources	 G₃: Deputy Headmaster; H₃: Desktop resources physical or digital; G₄: General supervisors; H₄: Educational resources physical or digital; G₆: Administrative, pedagogical and social assistants; H₆: School time; H₁: Teaching inspector. 				
Output elements	 AP₁: Teacher's diary updated; AP₁₂: Need for psychological support; AP₂: Sheet absences update; AP₁₃: Need for social support; AP₃: Academic prestation achieved; AP₁₄: Need for security; AP₄: Profile of academic skills; AP₁₅: Need for medical support; AP₅: Notes written tests; AP₁₆: Students off-class as a result the absence of the teacher or an off-peak hours; AP₆: Planning of written tests of matter; AP₁₇: Absences of teachers; AP₁₈: Suggestions for the review of the curricula; AP₁₈: Suggestions for continuous training; AP₁₉: Report on school delay; AP₁₉: Suggestions on the operating status of the school; AP₁₁: Report on bad lines; AP₂₁: Visit reports of the teaching inspector. 				
Beneficiaries	& BF ₂ : Students				
Requirements	RQ ₁₄ : Evaluating training to confirm the skills during learning; RQ ₁₆ : Overall assessment to confirm the acquisition of skills at the end of the unit or the semester; RQ ₁₆ : Compliance with teaching guidelines.				
Performance indicators	 4 P27: Attendance at meetings of school councils; 4 P28: Mastery of school time: text book is witness; 5 P29: Recordkeeping notes written checks and educational activities; 6 P30: The mean's difference between note of profile evaluations and continuous control; 6 P30: The mean's difference between note of profile evaluations and continuous control; 6 P31: The means's difference between note of continuous control and note of the regional examinations; 7 P33: Absenteeism; 8 P34: Non-compliance rate of class; 8 P35: Report of inspections; 8 P36: Assessments of the school's headmaster. 				

Table 6: Elementary process sheet of achievement of extra-curricular prestations

I-Dr-ED	Elementary process: Achievement of Extra-curricular Prestations					
Pilot	PC : Pedagogical Council					
Input elements Requirements	 AM₁₁: Circulars and ministerial notes; AM₁₈: Planning meeting of school councils; AM₂₅: Teacher's duty board; AM₃₁: Class timetable; GS₃₀: AP₁₆-Request for home students outside class; RQ₁: Respect the public institutions status of education and teaching; RQ₂: Compliance with internal school regulations; PC₁₄: Pedagogical clubs; 	 PA₂: Data on the pre-requisites of extra-curricular skills; PC₁: Pedagogic programs; PC₁₅: Approval for hosting cultural events; RG₁: Student card; 7: Need extra-curricular activities. RQ₁₇: Comply with the regulations of pedagogical clubs; RQ₁₈: No disruption of the normal operation of the school. 				
Resources	 G₆: Administrative, pedagogical and social assistants; AM₁₃: Budget; H₁: Offices; H₂: Classrooms and sports fields; H₅: Extra-curricular sports equipment, art and multimedia; 	 H₃: Desktop resources physical or digital; H₄: Educational resources physical or digital; H₉: Administrative time; H₇: Extra-curricular time; J₃: Catalogue of extra-curricular activities. 				
Output elements	 EP₁: Extra-curricular prestation emitted; EP₂: Profile extra-curricular skills; EP₃: In case of school wastage: students are animated in the center of documentation and information CDI; EP₄: Cultural events; EP₅: Report on school violence; 	 EP₆: Report on bad lines; EP₇: Need for psychological support; EP₈: Need for social support; EP₉: Need for security; EP₁₀: Need for medical support. 				
Beneficiaries Requirements	 BF₁: All pedagogical team; RQ₆: Compliance with the administrative procedures. 	♣ BF ₂ : Students.				
Performance Indicators	 RQ₆. Compriance with the administrative procedures. IP₃₇: Mastery of extra-curricular time; IP₃₈: Variety of activities; 	♣ IP ₅₉ : Coordination speed with traceability process.				

Table 7: Elementary process sheet of referents' office

I-Dr-OR	Elementary process: Office of Referents					
Pilot	PC : Pedagogical council					
Input elements	 AM₁₁: Circulars and ministerial notes; CC₁₀: Disciplinary decisions; CC₁₃: Request for psychological support; CC₁₄: Request for medical support; CC₁₆: Invitation for participation in programs of the club soften misconduct; MC₁₃: Request strengthen security; 	 MC₁₄: List of beneficiaries of social support program; PC₁: Pedagogic programs; PC₁₇: Request of social support; RG₁: Student card; TP: Technical profile of student; 12: Urgent security request. 				
Requirements	 RQ₁: Respect the public institutions status of educteaching; RQ₂: Compliance with internal school regulations; RQ₁₇: Compliance with the pedagogical club regulations; 	* RQ ₁₈ : No disruption of the normal operation of the school; RQ ₁₉ : Parental agreement.				
Resources	 PC₁₄: Pedagogical clubs: Listening club; PC₁₉: Select group of students referents; E₄: Planning Consultant: Committee guidance and planning; G₁₄: Doctor or nurse; G₁₅: Psychiatrist; G₁₆: Agent of social support; G₁₇: Officer of external security; 	 G₄: General supervisors; G₅: Administrative and technical collaborators; educational G₆: Administrative, pedagogical and social assistants; H₁: Offices; H₃: Desktop resources physical or digital; H₉: Administrative time; H₇: Extra-curricular time; H₁₀: Equipment of first medical aid. 				
Output elements	 OR₁: Monitoring of the student's mental health; OR₂:Social aid; OR₃:Provision of first aid; OR₄: Monitoring the body health of students; 	 OR₅: Prevention against external aggression; OR₆: Mastery of non-compliant student behavior; OR₇: Report on student interests; OR₈: Implementation of disciplinary punishment through various field exercises. 				
Beneficiaries	♣ BF ₂ : Students.					
Requirements	RQ ₆ : Compliance with the administrative procedures;	• RQ ₂₀ : Anonymity of mental cases, and participants in the listening sessions.				
Performance Indicators	 IP₄₀: Complaint rate of verbal or physical harassment on the of the school; IP₄₁: Processing speed of requests for assistance; IP₅₀: Social quality of students; 	 IP₅₆: Physical health quality of students; IP₅₇: Mental health quality of students; IP₅₉: Coordination speed with traceability process. 				

Table 0. Flowerstown		of		
Table 8: Elementary	Drocess snee	oi man	lagement	councii

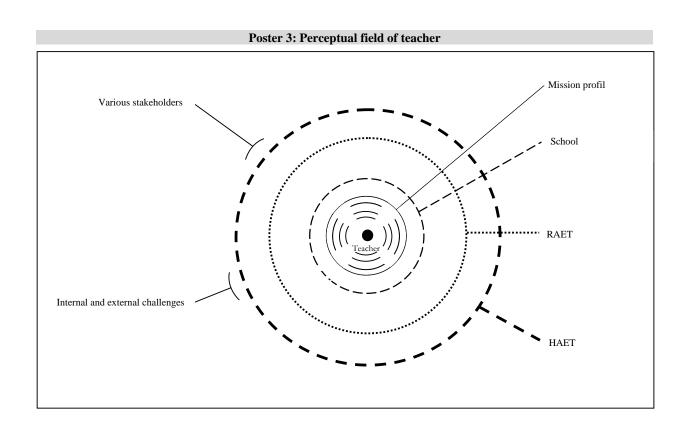
I-Dr-MC	Elementary proces	Elementary process: Management Council				
Pilot	G ₂ : F	G ₂ : Headmaster				
Input elements	 A₁: Major educational orientations; AM₁: School project prepared by the direction; AM₁₁: Circulars and ministerial notes; AM₁₄: Financial and accounting reports; AM₂₂: General report on the activities and operation of the school AM₅₀: Intervention request of the management council; AP₂₀: Suggestions on functioning of the school. CC₁₁: Half-yearly report of the class council; EC₇: Program of pedagogical activities suggested for disciplines; EC₁₂: Quarterly report of the educational councils; GS₁₉: Suggestions on operation of the school; 	 O: Communication plan; P: Maintenance plan; PC₁: Yearly pedagogical project; PC₂: Extra-curricular projects; 				
Requirements	 RQ₁: Respect the public institutions status of education at teaching; 	RQ ₂ : Compliance with internal school regulations.				
Resources	 G₁₉: Teacher representing the discipline; G₃: Deputy Headmaster; G₄: General supervisors; G₂₀: Two representatives of the administrative and tech collaborators; G₇: Bursar; G₈: Consultant in school guidance; G₉: Two student representatives; 	 G₁₀: President of the Parents' Association; G₁₁: Representative of the municipality; G₁₂: Useful guests; H₁: Offices; H₃: Desktop resources physical or digital; H₄: Educational resources digital or physical; H₉: Administrative time. 				
Output elements	 MC₁: Suggestion internal school regulations; MC₂: Study and approval of pedagogical council project; MC₃: Study and approval of pedagogical activities prograsuggested for all disciplines; MC₄: Study and monitoring of the implementation of the schoproject; MC₅: Monitoring the work of school councils and dadevelopment; MC₆: Opinion on the draft partnership conventions; MC₇: Study of the needs of the school for the next school year; MC₈: General annual report of management, pedagogy, education and class school councils; MC₉: Approval of the yearly report of administrative, financial an accounting school; 	 MC₁₂: Integration of educational council programs and educational in the school project; MC₁₃: Request strengthen security; MC₁₄: Approval of the beneficiaries of the program of social support; MC₁₅: Quarterly report of the management council; MC₁₆: Suggestions; MC₁₇: Study of suitable measures to keep school property; MC₁₈: Monitoring and treatment the major claims of general character; MC₁₉: Approval of scholarship; MC₂₀: Decision hosting literacy classes. 				
Beneficiaries	 BF₁: All pedagogical team; BF₂: Students; 	 BF₃: Parents of students; BF₄: Pedagogical partners. 				
Requirements	RQ ₆ : Compliance with the administrative procedures					
Performance indicators	 IP₂: Implementation rate of the school project; IP₃: Involvement rate of pedagogical team; IP₆: Animation quality of the council's team; IP₇: Quality of the relational climate; 	 IP₄₆: Mastery of meeting time; IP₄₅: Respect the periodicity of meetings; IP₅₉: Coordination speed with traceability process. 				

Table 9: Elementary process sheet of class council

I-Dr-CC	Elementary proc	eess: Class Council
Pilot	G ₂ : He	admaster
Input elements	 A₁: Major educational orientations; A₂:Teaching guidelines; AM₁₁: Circulars and ministerial notes; AM₅₀: Intervention request of the class council; AP₆: Planning of written tests of matter; GS₁₂: Request to repeat the school year; GS₁₃: Request for orientation; GS₁₄: Request for re-orientation; GS₁₅: Request for re-schooling; GS₁₆: Report of students' non-conformities in the course; GS₂₂: Half-yearly report on the presence and conduct of students; GS₂₃: AP₉-Report of school delays; 	 ♣ GS₂₄: AP₁₀-Report of school violence; ♣ GS₂₅: AP₁₁-Report of bad lines; ♣ GS₂₆: AP₁₂-Need for psychological support; ♣ GS₂₉: AP₁₅-Need for medical support; ♣ GS₃₁: EP₅-Report of extra-curricular violence; ♣ GS₃₂: EP₆-Report of bad lines; ♣ GS₃₃: EP₇-Need for psychological support; ♣ GS₃₆: EP₁₀- Need for medical support; ♣ L₃: Data of pass level; ♠ O: Communication plan; ♣ PA₁: Data on the pre-requisites of academic skills; ♣ RG₇: Data about school's dropouts; ♣ TP: Technical student profiles.
Requirements	• RQ ₁ : Respect the public institutions status of education and teaching;	 RQ₂: Compliance with internal school regulations; RQ₃: Respect for administrative law and pedagogical management.
Resources	 E₃: Career counselor: Committee of school orientation and pedagogical planning; G₂₂: All class teachers; G₄: Surveillants généraux; G₂₃: One student class representative In cases where the class council is disciplinary G₂₄: Representative of the Parents' Association; 	 H1: Offices; H₃: Desktop resources physical or digital; H₄: Educational resources physical or digital; H₉: Administrative time; J₁: Catalogue of study programme; J₂: Catalogue of post-secondary studies.
Output elements	 CC₁: Monitoring the evolution of the class results; CC₂: Analysis and operation of school results; CC₃: School support project: planning of execution and forms of support; CC₄: Decision to pass level; CC₅: Permission of repetition; CC₆: Decision of expulsion; CC₇: Decision of orientation; CC₈: Decision of re-schooling; CC₉: Decision of re-schooling; CC₁₀: Disciplinary decisions; CC₁₁: Half yearly report of the class council; 	 CC₁₂: Research on schools phenomena of class; CC₁₃: Request of psychological support; CC₁₄: Request for medical support; CC₁₅: Request for School support; CC₁₆: Invitation for participation in programs listening club for bad behavior; CC₁₇: Newsletter for student parents; CC₁₈: Design general planning of written tests; CC₁₉: Data on dropouts during the school year; CC₂₀: Monitoring and treatment of non-conformities class; CC₂₁: Suggestions of post-secondary orientation.
Beneficiaries	♣ BF₁: All pedagogical team,	♣ BF ₂ : Student
Requirements	 RQ₆: Compliance with the administrative procedures; RQ₁₃: In case the class council is disciplinary council, the student involved must leave the meeting room after listening to his words; 	 RQ₁₉: Parental agreement for psychological support of student; RQ₂₃: The decisions of the classes' councils are final except in the case of re-orientation or errors.
Performance indicators	 IP₄₆: Mastery of meeting time; IP₇: Quality of the relational climate; IP₆: Animation quality of the council's team; IP₄₅: Respect the periodicity of meetings; IP₄₇: Coordination level with school councils; IP₄₃: Mastery time claims processing; 	 IP₄₈: Execution rate of the educational project; IP₄₉: Execution rate of decisions taken; IP₅₁: Compliance between student technical profile and choice of orientation study; IP₅₉: Coordination speed with traceability process.

Piloting Volunteer teachers Headmaster of the **Teaching inspector General supervisor** Teacher and former students school Input precursor Prerequisites element **Profile** Data on the Pre-Assessment requisites of I-Pr-PA Academic skills AP₉ Academic **Prestation** Report on I-Pr-AP School delay Elementary processes GS₂₃-AP General supervisor I-Pr-GS Report on School delays CC₁₅ Council Request for class School support I-Pr-CC School Strengthening support Academic skills I-Pr-SS Traceability Technical student I-Pr-TR profile

Table 10: Description of the school delay flow through the process of implementation



Poster 4: Character spiral and evolutionary of the Deming Wheel

Improved by Abdelaziz BOUMAHDI

