



WHICH SCHOOL FOR CAMEROON'S EMERGENCE? THE URGENT NEED TO BREAK AWAY

ACT 2: RESEARCH AND DEVELOPMENT PROGRAMMES IN CURRICULA TO ADDRESS THE DAILY CHALLENGES FACED BY CAMEROONIANS

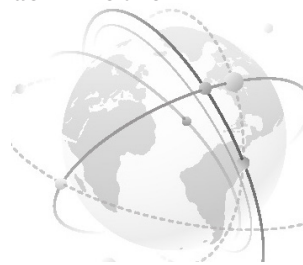
In January 2023, the Cameroon Policy Analysis and Research Center (CAMERCAP-PARC) released a study (study series #13) on the theme : *Which School for Cameroon's Emergence ? A Reflection Based on Choice Streamlining Approach: The Urgent Need to Break Away.* The study made a diagnostic and proposed solutions.

This study broadly brought up the issue of contextualizing teachings and making them endogenous right from primary school, in order to raise awareness to the ultimate goal of school, namely.... *"The primary goal of school is to mould a child into an adult capable of dealing with the problems of everyday life."*

This policy brief attempts to get into the heart of the burning issues in our country to *"tackle the problems of everyday life."*

It is not a secret, let alone a scoop, that the country has been going through major difficulties and dysfunctions for quite some time. Beyond the fact that problems are inherent to all human life, what is the most disturbing is the recurrence and the sense of powerlessness that the government and local authorities seem to be demonstrating to bring lasting solutions to these problems that hinder and undermine the daily well-being of the population.

1- <https://bernard-defrance.net/archives/bin/imprim.php?from=texteseleves&where=14>





Yet, since time immemorial, education in general and school in particular is about the quest for fire, the flame of knowledge² to move humanity forward and learn how to bind wood to wood, according to Cheick Hamidou Kane³, in view of improving the conditions of human beings. This is what development is all about.

Looking at Cameroon in November 2023, all citizens, regardless of political leaning or place of residence, are experiencing these difficulties, which can be considered as priority from any angle of analysis: they are (1) the issue of communication routes, particularly roads, according to the national nomenclature, (2) access to electricity (for all) and (3) domestic waste management in urban cities. This was the only item on the agenda of an extraordinary council of ministers presided over by the Prime Minister Head of Government (on 26 October 2023) on the eve of the meeting of Francophonie ministers (3-5 November 2023) in Yaoundé. Instructions were given for emergency actions. Weeks later and with a few more rains, actions were taken here and there; the situation has not changed in any significant and lasting way, and the overall appearance of the political capital has hardly changed for the better!

This state of resignation and powerlessness raises the following unrelenting question: with so many universities and university institutes (public and private), so many colleges and high schools, what is the use of our school to us? Why can't the Cameroonian school focus its mission on finding solutions to everyday problems before moving to universal teachings aimed at conquering space? If the development approach, like all evolution, must be incremental, it is obvious and natural that certain stages are pivotal (like in the foundation of a building) to give impetus to the higher dynamic. The 03 priorities mentioned above seem to be the foundations of the well-being of the Cameroonian people, and have been thus since independence (1960).

Illustration in the 03 priority cases mentioned above...

The United Nations Agenda 2030 of the Sustainable Development Goals (SDG) was adopted in 2015 with 17 goals, 169 targets and 230 indicators. In the conceptual scheme and the analytical approach of interrelations (interlinkages) between the SDGs, degrees of intensity of linkages emerged in three levels: weak, medium and strong⁴.

2 - According to the myth of Prometheus in the Greek antiquity

3 - L'Aventure ambiguë, novel published in 1961. It received the Great literature prize of black Africa in 1962

4 - Interested persons may visit the page <https://sdginter-linkages.iges.jp/visualisationtool.html>

Thus, communication routes (SDG9) and energy (SDG7) have VERY STRONG input linkages with all the others. Besides, in Africa in particular, the 02 sectors are part of the infrastructure sector, considered as cross-cutting and priority by Cameroon since the PRSP (2003) the GESP (2010) and the NDS30 which is underway since 2020. The fact that their implementation constitutes preconditions and prerequisites for the other SDGs is no longer an issue for debate.

While much has been announced (the great ambitions), much has certainly been initiated or done (the great achievements), the bitter and sad reality is that the results are yet to live up to expectations. This begs the following question: What have we missed? Where did we go wrong?

A word of wisdom from the forest people (EKANG) states that while you are looking for the chicken's "horn" on its head, it is actually on its leg (heel or foot). This analytical approach brings us back to the foot of the action pyramid: **Is SCHOOL, our school, Cameroon's school consistent with our idea (vision) of development or well-being?** Should we persist on this path and die or, driven by the instinct for survival, accept to break away? .

A. - The issue of roads and communications routes in Cameroon (SDG9 and SDG11)

The Cape Tow region in South Africa, or Lagos in Nigeria are indeed wetlands. The cities of Shanghai and Hangzhou in China are built on water, by the same Chinese who build roads here in the country. So, why the difference or the problem?

We wonder why are classified and unclassified roads in Cameroon unable to stand the test of time and are shortlived despite their very high unit cost per kilometer? The reason brought forth here and there is the quality of the soil, which we inevitably cannot change. We can only adapt to it, comply with it⁵.

And that is where the School comes in. To this end, the country has several polytechnics in Yaounde, Douala, Buea, Maroua, representing the different agro-ecological zones along with IPES and technical high schools. It is possible that within five years, a first approach of solution can be found and launched for a follow-up over 10 to 20 years, in order to make a large-scale evaluation with real data collected.

5 - "What cannot be eschewed must be embraced", William Shakespeare

It is clear that the solution to the problem requires a structural approach. This is to remind us that recurrence will not be avoided by cyclical solutions.

It seems to us that the model will have to be in the following three dimensions :

- a). The quality of material adapted to the nature of the soil and the environment for a long lifespan ;
- b). The quality of human and financial resources allocated for construction/road maintenance projects, and;
- c). The quality management of the engineering mobilized (the combination of the first two).

In the end, a breakaway approach implying or even imposing the adoption of new national standards and habits. Take, for example, the case of certain cities/countries that adopted (1) reinforced concrete roads foundations, (2) the use of carved stones (paved), for pavements (3) the experience with earth road, which was tested (Nkol Afamba) but abandoned, the project having been thwarted? etc.

Studies and researches have certainly been undertaken in the laboratories. Admittedly ! This is good for the head and diplomas. However, this is the right time to move on to the development, ownership and dissemination phase for the well-being of the population.

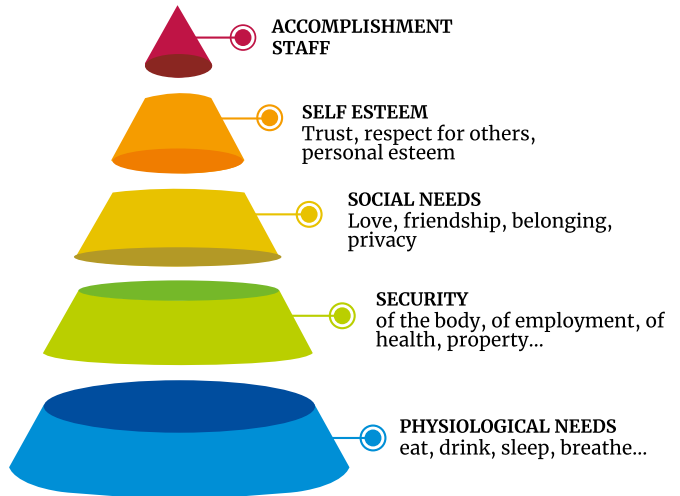
To achieve this, it will be necessary to make CTDs responsible and therefore review the government architecture which is an impediment to any initiative in this direction⁶ even in terms of partnership.

B. Access to energy (SDG7)

Every person, beyond their professional or political functions and responsibilities is first and foremost a member of a household. At this level, needs are of the human order (stages 1 to 3 of Maslow's pyramid). And the availability of energy (water and electricity) seems to be an essential condition for the fulfilment of these needs. Yet, for years and decades, independent Cameroon is struggling to find its balance or its tolerance threshold (failing satisfaction) in these areas.

⁶ - There is a conflict of powers between ministries on the one hand, and between ministries and CTDs on the other hand, concerning the effective transfer of skills as part of decentralization.

CHART 1 : Maslow's pyramid



So many projects, major projects ! So many speeches and promises and so many strategies ! We have certainly spent a lot of money, but in November 2023, we still have a long way to go.

What we are raising here is by no means new nor extraordinary as a discovery or invention. What we are certain of is the innovative and daring breakaway approach that we are proposing to the leaders and decision-makers at various levels: the contribution of the smallest intelligence for the quest for/formulation of solutions to the daily and recurrent problems around us. Two simple ideas standing as examples :

(i) The development of micro-electricity by schools in each Region.

Through the transfer of skills to CTDs established by the decentralization, Regions and Councils whose main political mission is to seek ways to improve the living conditions of the population, by the effect of proximity, should conceive and implement innovative and efficient solutions to problems encountered. Thus, the development of micro-electricity (hydraulic through all the rivers and wind or solar) could be part of projects that are both educational, social and economic.

On the educational front : Polytechnic and training institutes for engineers/technicians should have as applied academic research project the supply an area/region by its various alternative sources of energy at lower cost. This would be a useful way of contextualizing the school at the service of development by providing a concrete solution to a real-life problem.

On the social front : The students having taken part in the research and development of such a solution, then in the implementation of such a project, will no longer be unemployed. That is a school that creates jobs and resolves the problems of the population by improving their living conditions.



On the economic and environmental front : With access to electricity, the population will create and develop income-generating activities and could get out of structural poverty. This will be good points for the local and national economy.

The development of a small-scale power plant will certainly reduce risks of environmental impact as compared to large-scale projects such as major dams.

(ii) Restructuring the debt of the national electricity company and reviewing the legal and regulatory framework of the power sector.

Despite the privatisation of the National Electricity Company (Sonel), which became AES-Sonel (2001) then ENEO (2014), one of the arguments brought forth as major difficulty leading to the poor quality of power supply in Cameroon for some time is the State's heavy debt to this public company. As of August 2023, this debt was estimated at over FCFA700 billion. In order to avoid errors of liabilities transfer as in the case of former Camair (and its multiple restructurings) it would be advisable to consider a financial engineering arrangement, based on securitization approach. This debt would either be repurchased by financial institutions or private individuals, through the BVMAC financial market, or transferred to the company's capital by increasing/decreasing the State's share depending on the options. This will require the restructuring of the company's shareholder base and management.



Our opinion :



- a). **On the finance and accounting front**, business schools and economy and management faculties have enough material to develop an R&D programme with immediate practical application. Some will focus on the structure of costs/pricing, others on debt management/restriction through a financial engineering.
- b). **On the economic front**, others still on the overall business model of the company and the electricity sector in general, etc.

Although company data is protected by law (statistics of 20/07/2020), the obligation of transparency means that the minimum package to be published by all companies (public and private) should enable schools to carry out their work. In addition, an initial public offering (BVMAC) will require certain management information to be made public.

However, one condition to be met will be to improve the institutional and legal framework of the electricity sector in Cameroon, to guarantee the credibility and the confidence of stakeholders/investors towards the State.

To achieve all the above, it will be necessary to meet a prerequisite, namely liberalizing the sector for energy production and distribution by CTDs and ending ENEO 's exclusivity on distribution.

Nota Bene: To avoid any misunderstanding: the difference with the electrification projects of 1,000 localities through solar energy by Chinese

Following its firm commitment to work towards improving the living conditions of the population, especially in the rural area, the Cameroonian government has launched and is implementing, for some time, an electrification project of 1,000 localities through solar energy with the photovoltaic system with China's support. Some people might say that we are just stating the obvious in the case of micro-electricity.

It is not the case ! The difference actually lies on the **conceptual approach of the model** implemented. The said project carried out with the Chinese cooperation hinges on a classical and ancient practice based on extraversion and externalization, contrary to the endogenous approach that we are recommending with its positive advantages and externalities.

The said project is funded by Chinese (not without strings attached, although not officially stated)

to the tune of FCFA34.76 billion thanks to a buyer credit loan from Eximbank China.

It uses Chinese material and their expertise, namely **Huawei Technologies which manages the project**. It therefore means that we are promoting jobs created in China. The local workforce is confined to inferior tasks without skills transfer. Similarly, **the national education sector is completely sidelined and relegated to the status of beneficiary** rather than actors as in our hypothesis.

C. Waste management (SDG 12, Target 12.5)

Beyond the upstream management aspects, which requires the selective waste sorting that is a matter of sensitization and popular education of citizens, the genius of our school should also be able to express itself in the context of this yawning wound of garbage cities. Experiences of generating/producing gas with waste have been conducted by the main household waste collection company in Cameroon (Hysacam). It was a highly publicised demonstration on the Nkolfoulou site in Yaounde, leading to prizes awarded as part of environment protection. Over 10 years after, the project is dormant.

Other demonstrations made by civil society organizations that are active in environment protection issues also made news on social networks but, our cities are still littered with garbage. This call thus makes sense, for a reflection on/quest for a permanent and lasting solution. A national programme could be initiated and presented as a challenge in all engineering schools to find a long-term and optimum solution to this issue. The research can be done jointly between several institutes, various schools and universities in Cameroon and even Africa. The expectation is to bring about a perennial solution that is replicable within time and space. It should be recalled that the domestic waste crisis in Yaounde and Douala is not a new phenomenon. Situations similar to what is happening in 2023 occur almost every five years with a respite since decades.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



The inconsistencies of government architecture existing in the implementation of the R&D strategy

Countries currently rated as actual emerging and those that have already crossed the stage of developed/industrialized countries all have the common feature of having placed Research and Development in the heart of their development strategy. The main reason being that R&d leads to innovation which in turn also drives growth. The world ranking of countries according to the Global Innovation Index (GII) is a very good example in this regard. Yet, for innovation to create wealth, it must move from laboratories (research stage) and trials or prototyping (development stage) to mass production (industrialization stage).

That is why there is need to ensure the consistency of these three levels of articulation of a development strategy based on R&D. Yet, the current government architecture in Cameroon imposes partitions that do not favor the integration of R&D policies. Illustration :

- Schools, high schools and universities that have potentials and human resources for fundamental or theoretical research belong to three different ministries of the education/training sector.
- Institutes of applied research that are supposed to proceed with stage 2 of the Research and Development depend on MINRESI. This creates a distortion and a partition between these research structures (scientific and innovation) with the laboratories of universities under MINESUP and technical high schools (MINESEC);
- Beside this R&D/I component, the technological development component of innovation stemming from the R&D is borne by another ministry, the MINMIDT.

Under these conditions and in an institutional environment where the coordination of government action is barely a tangible reality, Cameroon is unable to capitalize on its research results. These results are taken up by other countries, to their great benefit and Cameroon's misfortune. Known examples abound in this series.



The MIPROMALO case



It is described as a public scientific, technical and professional institution under the technical supervision of MINRESI. It is a research and promotion structure. It can be considered as covering the first two stages described above: Research and Development. In terms of mission, MIPROMALO does not have the responsibility or the means to move to the industrialization phase. Yet, the implementation of the decision of the PM/CG establishing the obligation to incorporate a percentage of local material in public buildings could have enabled this institution to move to mass production via public order. The stimulation through the good example demonstrated by the State will encourage private actors to resort to the products developed by MIPROMALO. Thanks to economies of scale, production costs will drop, demand will increase and this will lead to a virtuous circle that makes R&D/I a source of economic growth through the creation of wealth and jobs.

It is not rocket science. The solution is at the reach of decision-makers.

Conclusion : Anticipating tomorrow's solutions

This policy brief is intended to be read/heard as an appeal, a call for a surge of pride within our education system (higher and secondary) and research institutes. We can better our daily lot by refusing to act as usual, whereas we are pushed to the wall.

The real issue that has been identified is the near hermetic partitioning between training/research and development on the one hand, and between these three areas and the production sector on the other hand. Beyond words and deliberate speeches on professionalizing teachings, which have been echoed for about 20 years, this

policy brief proposes a cohesive and practical approach: School-R&D-real sector. It will be similar to medical training where students are already involved in real-time medical action in a simultaneous manner, during academic internships (in the course of their training) in health facilities.

This is where specialization and the denomination of universities (and related institutions) derive their relevance and their ontological basis.⁷ Thus, the priority research and development programme of the public works school (Yaounde and Buea) and polytechnics should be (if not yet the case) the study of materials that are adapted to our climate and our environment for the construction and maintenance of roads (national, regional, divisional, and municipal).

In a nutshell, Cameroonian schools must ensure that their curriculum is **MAINLY GUIDED** by training and R&D programmes that are applied/applicable in our environment.

For a **USEFUL** school./-

Post-scriptum

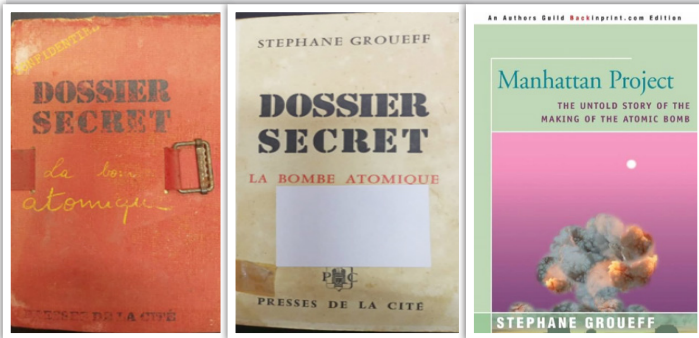
This dream (which is not utopian) will certainly come true one day. The adherence to this guideline equally beckons political authorities, with all humility, to achieve greater consistency in government architecture, towards an optimum efficiency. At the present state of things, the proposed R&D model would barely work between (1) MINESUP/MINESEC, (2) MINEFOP, (3) MINRESI, (4) MINTP, (5) MINMIDT, (6) MINEE and related structures.

That is what we mean by breakaway approach./-

⁷ - The need to name a technological University, or a scientific Institute with a specialized focus on a technological studies, researches and development. Rather than eleven (11) general denominations of State Universities as things stated today in Cameroon. The example of MIT, Massachusetts Institute of Technologies, is an impetus for the mindset that, we should be dealing with Technology

THE HISTORY OF THE ATOMIC BOMB

Although it is not ethically sound, in terms of the project purpose (on the civil front), this story is still very interesting and instructive on the pedagogical level of undertaking a project for honor. « *I like difficulty because it enables me go beyond the limits of the moment...* ».



The original English version was published with the title *Manhattan Project*, and was edited in French by Presses de la Cité, Paris in 1967. It is still available in bookshops and on the Internet. The project began in July 1942 and was completed in August 1945.

The project ended in 1946. At the initiative of the US Government during the war (1939-45), two countries allied with the US were associated, namely the United Kingdom and Canada.

For the national cause, the project was carried out in a context of extreme scientific and technological urgency. Beyond the ethical aspect of the project purpose, what needs to be commended and kept in mind in this historic and real story, is the wonderful illustration of the organization and functioning of several multidisciplinary teams under the political leadership of a nation facing a visible threat. We believe that the strict coordination of the teams and the mobilization of resources, in the face of incredible difficulties of all kinds, from laboratory experiences to the material realization, to achieve the ultimate goal, can serve as a model.

Where there is a will, there is a way. The same applies for Cameroon!





**DEUXIÈMES ASSISES NATIONALES SUR LA PROFESSIONNALISATION
DES ENSEIGNEMENTS UNIVERSITAIRES AU CAMEROUN**

**SECOND NATIONAL EXPERT WORKGROUPS ON THE ALIGNMENT OF
THE PROFESSIONALIZATION OF UNIVERSITY TEACHING IN CAMEROON**