



Impact of the Implementation of Evaluation Model Centered on a Strong Interdisciplinary Approach in CBA (Competence-Based Approach): Case of Secondary School in the Francophone Sub-section in Cameroon

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

The aim of the present study was to highlight the impact of the interdisciplinary evaluation approach on the different actors around the ten schools selected all over the country for the experimentation of the concept. For that purpose, field and laboratory works were carried out. Many results were then collected. For all the 200 heads of Pedagogical Departments interviewed, this approach is the key that opens the way to permanent collaboration between the Pedagogical Departments of the same academic institution. All the 500 students interviewed up have noticed through this approach that all subjects are important despite some nuances noted within the comments of some. The heads of the ten establishments targeted across the country for this work have unanimously expressed positive judgments about this way of proceeding in an evaluation situation. In all ten Regions, seventy out of the hundred target families showed their enthusiasm directly after discovering the new configuration of evaluations in the institutions attended by their children. For the future, after two years, the approach should be applicable to the entire lower secondary cycle.

Keywords: CBA; interdisciplinary; evaluation; autarky; torture; shun.

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1. INTRODUCTION

Since the advent of the so-called European school in Cameroon, the education system has been changing [1]. This is how we have regularly moved from the NAP (New Pedagogical Approach) to the approach by objective, then recently to the CBA (Competence-Based Approach) [2]. In response to this, the emphasis is increasingly placed on the need to develop a type of assessment capable of inducing over the trials, the learner's ability to adapt to the permanent upheavals imposed by the advent of the concept of global village [3]. However, it is very often noted that the competence-based approach does not really seem to achieve the purpose assigned to it at the time of its implementation in the educational environment in Cameroon. Indeed, we can frequently notice around us the difficulties with which learners try to make the link between the sets of knowledge received and their daily lives. Moreover, when the time comes to bring together knowledge from various backgrounds to try to solve a problem in an unwavering intellectual gymnastics, the blockage is total [4]. This break can easily be justified by the poor perception of the concept of interdisciplinary by learners despite the permanent reminding made by teachers about. At this level, sensible people can already conclude that the situation has gotten poorer [5]; this position of theirs is motivated by their awareness about the importance for everyone today to be able to create links between all the knowledge received when almost carrying out actions; such a need is henceforth unfortunately compulsory since the globalization controlling the whole world today has generated a lot of mutations. Comforting that worry, [4] mentioned that the superficiality of their different knowledge cannot allow them to go to a higher level as far as the interdisciplinary approach is concerned. Supported that thought from Tuebue [4], Cros et al. [2] insists on the axial position of interdisciplinary within the CBA context.

In view of these facts and taking into account the seven years of CBA application in Cameroon, it would be interesting to make an inventory in order to first assess the seriousness of the evil. One could then try to propose local amendments [4], or even local or complete restructuring of the Cameroonian education system [6], with the aim of allowing young Cameroonians to truly profit from the advantages of the competence-based approach. The need to carry out such action is all the more relevant since today, young people from all sides are called upon to meet [7]. In the

track of [4], the employer or the evaluator will not be interested in the origins or the learning conditions of the candidates who will pass in front of him, but rather to highlight those of the most well-rounded, applying either for funding or for a position in a reputable company [8].

On a completely different level, the realization of a project requires the ability to set in motion a battery of knowledge, or else to bring together people from different specialties whose energies should be pooled to achieve the prefixed goal [9]. In these different cases, it appears that it is mandatory for the learner to be able to make an undeniable link between their different knowledge [10,11]. Therefore, if the approach led by the teacher has not allowed the learner to take the measure of the importance of interdisciplinary in his learning process [6], it rightly becomes necessary to just provide a set of signs that each learner must be encouraged to keep following, hoping that as puzzles, they could bring him towards the discovering of the importance to carry interdisciplinary reasoning in his academic environment from the outset, then in his daily life in a second time. For that purpose, Tuebue, [12] carried out a research through which he made a proposal for an evaluation model centered on a strong interdisciplinary approach in CBA (competence-based approach) for the secondary school in the francophone sub-section in Cameroon. After a year of its application in targeted school all over the country, it would be interesting to evaluate how this new way of doing things would have influenced the behavior of the different actors in the given schools; this is to say teachers, students, parents, and Administration staff among others. This is then the justification of the existence of the present work. It takes place indeed in a context where monitoring and remediation in the reforms adopted remain a major problem. It is therefore a springboard for people in charge of the implementation of concepts.

2. MATERIALS AND METHODS

2.1 Materials

In the French-speaking subsystem of general education in Cameroon, the subjects taught are organized into three main sets; the composition of these sets varies with the specialty [13]. According to [12], Secondary education in Cameroon has six areas of learning in the French-speaking subsection. A distinction is made between the subjects of the first group, the subjects of the second group, and the subjects of

the third group. The application to all Pedagogical Departments of the thematic evaluation seems a little difficult because of the orientation of their specific contents. However, the Pedagogical Departments that can be brought together are: SVTEEB (Life and Earth Sciences, Environmental Education, Hygiene and Biotechnology), PCT (Physics, Chemistry, Technology), French, EVA (Religion), Mathematics, English, Geography, IT, LVII (modern languages II). In Cameroon, the number of evaluations per term is set at two. But in confessional secondary schools, there are three and more rarely four, both theoretical. The system of evaluation highlights the autarky existing between the different Pedagogical Departments. Many subjects are experienced by many learners as a torture. In the specificity of scientific series indeed, language topics in general are completely shunned; the same reality is experienced in the literary series with regard to scientific subjects. So, through his study, Tuebue, [12] tempted to create a complementarity between the tests in Cameroon. He presented his idea then as the guarantee of the establishment of a "mirror" thanks to which learners will now see hidden behind certain subjects, others on the one hand. On the other hand, he also presented his idea as a convergent point in charge of generating among teachers a synergetic way of working. Moreover, he presented his idea as an opening for the administration staff of schools to consider possible changing within their evaluation process as same as the type of evaluation to be proposed. Finally, he presented his idea as a tool that could help parents to drag the attention of their offspring on the different activities performed at home on a daily basis, this done by insisting on the tight links existing between the knowledges received in schools and the daily actions to be achieved.

2.2 Methods

To achieve the set objectives, field and laboratory works were carried out. Field work dealt with the collection of various data from schools and from families. From schools, the results collected concerned the new behaviors noticed between the teachers, students, and the administration staff. From homes, those results were in direct relationship with the new way the parents react with their children as far as the links between the knowledges received from schools and their different domestic tasks are concerned. In addition, it was also a problem of talking with the Heads of Pedagogical

Departments in order to highlight their new ways of seeing the other Pedagogical Departments. In total, we revisited the 10 establishments targeted for this purpose, one per Region. In each of the Pedagogical Departments, the Heads of the Departments selected for the approach were interviewed, i.e. around 200 peoples. In each of the institutions, 50 pupils of the relevant levels were interviewed, making a total of 500 pupils. In each of these Regions, ten families were interviewed, making a total of one hundred families.

To guarantee the possibility of evaluating this work in the medium and long term, markers have been initiated for teachers, students, administrative staff, and parents.

For teachers, the established markers are:

- The turmoil within the Pedagogical Departments around the production of the different thematic evaluation themes;
- Originality in the tests;
- Seeking information from colleagues from other Pedagogical Departments;
- Proposals regarding possible future ramifications of the approach;
- The common situation as a breadcrumb between the tests from the Pedagogical Departments targeted by the approach;
- The concretization of this approach in the production of concrete and directly usable things.

For the pupils, the markers relate essentially to the changes in attitude noted in them; it was then a question of following here:

- The attempt to simulate solution trials to face future challenges;
- The initiation of labor in advance;
- The beginning of the promotion of all disciplines;
- The attempt to distribute tasks to solve a group problem;
- The desire to create connections when possible between the different subjects included in the teaching program.

For parents, the established markers are:

- The frequency of invitations made to their children to accompany them in the various daily tasks;
- The types of questions they ask their children when working together;
- The relationship that the parent can try to establish between the tasks carried out

with his child and the knowledge received by his offspring.

For the administrative staff, the established markers are:

- Their impressions about the new orientation of the evaluation;
- The place given henceforth to this new way of evaluating;
- The procedure put in place to promote its appropriation by the various members of the teaching staff.

3. RESULTS AND DISCUSSION

At the beginning of this adventure, from the 160 Pedagogical Departments expected for the first trial, 120 participated. This represents a participation rate of 75%. We can therefore say that the quorum was more than achieved according to [14]. From the 25% of the Pedagogic Departments who did not participate to the trial, some were simply canceled from the list because of the delay of providing their respective tests. Such a situation is often when people decide not to anticipate on upcoming situations if we refer to [15].

We will now provide, on the basis of the markers, the judgements from the observations made in relation to the administration staff, teachers, parents, and then to the students in this innovative context.

3.1 Teachers

The Heads of Pedagogical Departments selected for the approach were interviewed, i.e. around 200 people for the ten Regions. For them, this concept is the key that opens the way to permanent collaboration between the Pedagogical Departments of the same academic institution; the validation rate was then 100% (Table 1).

According to Ouellet [16], this is a massive support for the project. However, membership was sometimes difficult in the Departments. This confirms the fact that new things not only generate new positive dynamics, but also sometimes adversities. This is consistent with the

observations of [17]. The tests proposed were original. In fact, the different contents of question paper from the Pedagogical Departments selected for the approach were built in a completely different way as proposed by Pellegrini [18] when talking about the concept of originality. With pleasure, it was noted many movements between colleagues from different Pedagogical Departments. This was justified by the fact that in a normal context, when someone is in the need of information or deeper explanation on some approach, he seeks for help from some collaborators. This corroborates the thoughts of [19]. Many Departments have made relevant projections of this approach for the future. This can be relevantly considered as a proof of theirs for having joyfully accepted the concept. In that point of view, [20] reveals that to make sure that someone adheres to an approach, one must gainfully evaluate how deeper he personalizes the given concept. Around the common situation, interdisciplinary activities have been judiciously conveyed in a simulated situation in the different tests. We really found ourselves in an approach driven by a common idea, characterized by the common desire of teachers from different Pedagogical Departments to successfully reach the preselected focus. Such a situation was previously commented by [21]. The concretization of this approach in the production of concrete and directly usable things has been noted in many Pedagogical Departments. For example, we can note within the department of SVTEEB (Life and Earth Sciences, Environmental Education, Hygiene and Biotechnology) the decision to replace one of the three theoretical evaluations by a practical assessment. They justified this choice by the fact that the realization of the smallest task is the result of the contribution of a set of knowledge from different fields, but harmoniously mixed up. Further on, they decided to use this new way of doing things as a tool to bring the young generation closer to their respective cultural identities. For [22], it is indeed about the school serving the reconquest of values that were once lost. For [23], it is a question of the school seen as a necessary tool for man in his permanent fight for survival.

Table 1. Impression of the different actors targeted

Heads of establishments			Heads of pedagogical departments			Families			Students		
N.P.I	N.P.A	R.P.A	N.P.I	N.P.A	R.P.A	N.P.I	N.P.A	R.P.A	N.P.I	N.P.A	R.P.A
10	10	100%	200	200	100%	100	70	70%	500	500	100%

N.P.I: Number of Persons Interviewed N.P.A: Number of Positive Answers R.P.A: Rate of Positive Answers

3.2 Students

In each of the ten institutions, 50 pupils of the relevant levels were interviewed, making a total of 500 pupils. They noticed through this approach that all subjects no matter their respective coefficient must be gainfully taken into consideration. However, some have expressed reservations, saying that if they were faced with a situation where only one subject should be worked on at a time, they would choose the one with the highest coefficient. According to Chaachoua et al. [24], this position can be justified by the fact that at a specific moment, the law of priority should resolve certain situations deemed embarrassing. Despite these ambiguities, we note that the approach made them aware of the reality that has always prevailed in their daily lives as students. We can also say that the validation rate is 100% (Table 1). According to Ouellet, [16], once again, there is a massive support for the project. In detail, many elements reflecting the change of attitude on the part of the students were noted. At the end of the first half of the second day of the intensive session, we heard many students saying that because of the observation made, they will make various tasks related to the situation and related to the Departments still in the running to better prepare; we can therefore see here the desire to anticipate in order to guarantee the success of the challenges to come as shown by Stiénon, [25]. We can therefore say without risk of being mistaken that among students, the initiation of simulative and anticipatory approaches have emerged. It was heard from many other students that they could have handled some mathematic tasks if they had taken the Science lesson a little more seriously. Such a concern highlights the complementary character that exists between the different teachings, as raised by Tuebue, [12]. The ignorance of such links between the subjects on the present and future teaching program constitutes a chasm which year after year swallowed up the hopes of many brilliant students, as Lenoir, [26] points out. This is therefore a major fact in the awakening and maintenance of new ways of seeing school by our young community. We could hear others still list the subjects that will always be connected according to their perception. This is once again an excellent start to an integrated vision of the school. Such a declaration is in perfect agreement with the foregoing. The approach planned specifically for the Department of Computer Science allowed students from year one and year two to practice their knowledge in

an approach that was first individualistic, then collaborative. This work was then done in three perfectly interlinked stages. For year one students, this work aimed to raise awareness among young people against the HIV pandemic; with regard to the pupils of the year two, it was a question of making an evaluation of the production of maize over the last ten years. This is in perfect harmony with the desire for teachers to concretize the interdisciplinary approach in the production of concrete and directly usable things, retained as one of the markers of the monitoring and evaluation of teachers as to the influence exerted on them by the new approach.

3.3 Administration Staff

At the end of the experimentation period, the heads of the ten establishments targeted all over the country for this work unanimously expressed positive judgments about this way of proceeding in an evaluation situation; the validation rate is therefore 100% (Table 1). In this sense, Mbarga, [27] shows that what is good hardly goes unnoticed, and can thus greatly positively influence human life for centuries. In some of these institutions, the Managers have simply instituted this approach as a marker that should allow the future to gauge the depth of the collaborative work between the different Pedagogical Departments present within the structure for which they are responsible. This choice is all the more relevant and fair since to succeed in such a way of doing things, as Tuebue, [12] previously noted, the different actors must realize that they are all working, each at their own level, for the achievement of the same final objective, which is that of promoting a skillful youth, capable of initiating, through formidable intellectual gymnastics, solutions to problems as complex as each other, all in a sometimes very hostile environment. Also, other heads of establishments have revisited the list of projects that were sleeping in their drawers. Then, some of them went back on the proposal once made to them by some of their collaborators. In view of the great scope of the new approach, they validated the idea of introducing the essentially practical aspects into the teaching and evaluation system of their students. Lessard and Bélanger [28], talking about this way of doing things, highlights the concept of the professionalization of the school. Supporting the idea, Martine, [29] reports that such an approach would be the key to getting many developing countries out of misery because, if training a man is good, contextualizing his training is even better. It can

also be pointed out that other School Managers have decided to emphasize the training of all their staff within the framework of such an approach; Bruneau, [30] sees in this a sign of commitment. In response to the successful experimentation of the concept in year one and year two, the different heads of establishments have decided unanimously that the approach will first be spread over the entire first cycle at the rate of one level per year. Concerning the second cycle, a more adapted vision will have to be developed.

In response to the solicitation of the staff of the various establishments to receive more advanced training in this approach, 220 heads of department at the scale of the country were invited to make proposals for themes from which the averages themes, one per term, were to be built. To everyone's great relief, the 220 heads of departments targeted made their different proposals on time, for a 100% engagement rate. This is an increase in the commitment of each other when comparing this rate to that obtained during the experimentation phase (75%). According to Ouellet, [16], this participation rate obtained in the first trial phase was already a sign of success for this audacious enterprise.

3.4 Families

In each of these Regions, ten families were interviewed, making a total of one hundred families. Thirty families (30%) said they do not always have time to watch everything their children do at school. Concerning the other seventy, they showed their enthusiasm directly after having realized the new configuration of the evaluations in the institutions attended by their children. We therefore have a validation rate of 70% (Table 1). We can also, according to Ouellet, [16], speak here of massive adherence to the project. An investigation carried out with parents revealed that after have heard about this concept in the schools joined by their different children, many decided to involve their children more in the various activities carried out regularly at home. Thus, during these tasks, they specify that when they deem the time appropriate, they mark stops in order to ask many questions to their children. These questions relate in turn to the reasons which justifies such or such action, the steps followed to carry out such tasks, the field of knowledge received at school having been used at different levels to successfully complete the procedure initiated. We can then note in the light of these observations a

commitment of another kind of parents to their children. This is in agreement with the observations of Bergonnier-Dupuy and Esparbès-Pistre [31]. From this new form of relationship that arises between parents and their children, we can find the very foundation of the pedagogical approach by skills, which advocates putting the school at the service of life according to Cros et al. [32].

3.5 Difficulties Encountered

Many difficulties were encountered in the different phases of the application of this approach. We will find here:

- The difficulty for some heads of establishments and departments to understand it from the first explanations;
- The difficulty of obtaining from the heads of departments the theme proposals of their respective departments in the allotted time;
- The difficulty of obtaining from them within the deadlines the average theme per quarter, built from the various proposals to be used for the production of situations adapted to each Department.

To make certain school managers and heads of pedagogical departments to quickly understand the approach, numerous meetings have been initiated; for slow learners, additional meetings took place. To finally obtain the proposals from each other, it was necessary at a certain point to go to each of them fairly regularly; also, it was necessary to work closely with others to produce their proposed themes on the spot. To lastly obtain the final themes, one per quarter, given the reduced number of the team designated for this purpose, it was easier to revolve around them; after a relatively short period of time, the so-called quarterly themes were produced. Contrary to what might be perceived as a contradiction at the first-test phase, many of the heads of departments moved forward easily because the topic for the period had been decided upon in advance and the situation around that topic produced; all that remained was for them to readapt the situation according to the requirements of their respective departments. What however caught the attention despite these difficulties, is that in the end, all the heads of department expected had the will to participate in this adventure. This is a perfectly normal situation with regard to the logic of life. In this sense, with GIL, [33], one can ask the question whether man can truly guarantee the result of an action he initiates.

4. CONCLUSION

Finally, for all the 200 heads of Pedagogical Departments interviewed, this approach is the key that opens the way to permanent collaboration between the Pedagogical Departments of the same academic institution. All the 500 students followed up have noticed through this approach that all subjects are important despite some nuances noted within the comments of some. The heads of the ten establishments targeted all over the country for this work have unanimously expressed positive judgments about this way of proceeding in an evaluation situation. In all ten Regions, seventy out of the hundred target families showed their enthusiasm directly after discovering the new configuration of evaluations in the institutions attended by their children. For the future, after two years, the approach should be applicable to the entire lower secondary cycle. So, at the present stage, the idea of implementing an Interdisciplinary Evaluation for the Cameroonian French-speaking Sub-section in Secondary School seems to be a wonderful thoughts for the entire educative actors.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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