Leaning at School in Algeria between Internalizing Data and Developing Critical Thinking

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Abstract

Teaching in at school in Algeria relies mainly on rote leaning and memorization. The rate of success in the Bcaloreat exam, undertaken at the end of the secondary school, turns arround 50% which seems to be acceptable. However, have learners who reached university level developed a critical thinking and metacognitive learning process that allow them to have a logical and pragmatic mind? Is it possible to qualify the schooling system in Algeria in a failure since knowledge is acquired but not structured? How can these drawbacks be solved? this work is divided in three main parts: the former sheds light on the schooling system in Algeria. the second step is a case study of the fifth year of the primary school which attempts to highlight the problem solving situationin the classroom. The latter concerns some proposals for this situation.

Keywords: Rote learning; Metacognition ; Critical thinking

1. Introduction

The learning process is mainly shaped by the mental capacities of the learner. There is somehow a wrong, misleading belief in our country where the role of the primary school is limited in learning to read, write and count. Theses norms do not correspond to modern education and Competency Based Approach phylosophy. This determinant primary level is the beginning of a long process shaped through the cognitive and metacognitive development and the role they have in the development of critical thinking in learning.

2. Developing Critical Thinking

It seems to be that many conceptions of critical thinking find their definitional origins in Dewey's writings. Paul (1995) points out from a philosophical point of view; critical thinking is primarily approached as the norm of thinking, the rational aspect of human thought and as the intellectual virtues needed to approach to the world in a reasonable way. The same concept is defined from a cognitive psychological approach in (Sternberg, 1986, p. 3) as "*the mental processes, strategies, and representations people use to solve problems, make decisions, and learn new concepts*" while *(*Halpern, 1998, p. 450) adds that it is "*the use of those cognitive skills or strategies that*

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increase the probability of a desirable outcome". Besides, critical thinking id identified as a purely cognitive and involves various mental capacities to process knowledge as declared bellow:

> seeing both sides of an issue, being open to new evidence that disconfirms your ideas, reasoning dispassionately, demanding that claims be backed by evidence, deducing and inferring conclusions from available facts, solving problems, and so forth
>
> (Willingham, 2007, p. 8)

On the other hand, among the educationalists who introduced critical thinking in learning is Bloom et al; (1956). When elaboration Bloom's taxonomy, the focus on three main domains: Cognitive Domain, Affective Domain and Psychomotor Domain. According to the taxonomy in question, 'knowledge' is at the bottom and 'evaluation' at the top whereas 'comprehension, application, analysis and synthesis' are the cognitive and metacognitive elements that process the data as shown in the diagram bellow:
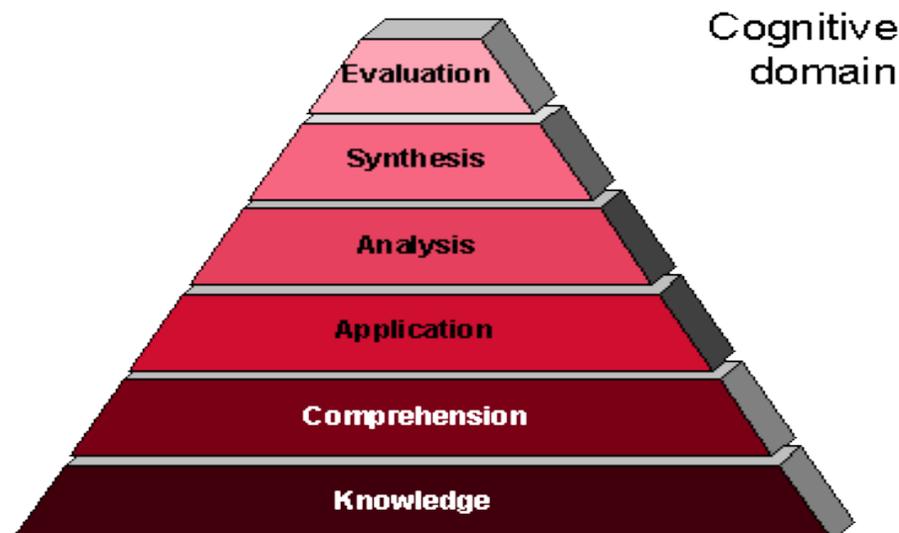

Figure 1
Anderson and Krathwohl (2001)

In the light of this classification, it is clearly noticed that data goes through various steps before the learner reaches evaluation and determines whether he has really grasped it and is able to use it when being in another learning situation. According to Vygotsky, acquiring culture develops and shapes the process of thinking for the child needs to be more involved in his social behaviour. This social insertion is achieved through interaction with others that starts at a very early age and confronts the child to different situation he is supposed to adapt himself in and various experiences he is asked to solve. Hence, all these processes are taking place at the same time and are vehicled by the mother tongue.

At this same view, Hall (2002) has referred in her book to the woks of Vygotsky (1978; 1986) and those of Wertsch (1991; 1994). Both of them agree that knowledge, acquired from culture,

assists the fulfilment of the different skills that make the child a more capable element in his society. The knowledge acquired is clearly defined by (Bruner, 1983:109) who did not consider it as thinking or as the outcome of the intellectual activities and experiments but as the *"internalizing of tools that are used within the child's culture"*. Besides, he also considered language as the key of knowledge for it is through words and symbols that what is felt and known is conveyed. Adding to this, *(*Burner, 1983:110) stated that language *"is the primary way that concepts can be taught and questioned. It is also the increasing ability to deal with a variety of activities simultaneously and sequentially"*.

In his definition, Bruner showed the importance of language in the development of knowledge considered as a whole process that starts at birth and goes step by step till it reaches a high levels and degrees with the help of members of the family and peers as it is stated in Doolittle (1997: 83-103) when describing the works of Vygotsky. Moreover, Vygotsky makes a difference between what the child knows and is able to do on his own and the achievement that needs help. All the interferences including what the child knows and what he is about to know, takes places in as named by Vygotsky (1978) as quoted in (Hall, 2002:49) Zone of Proximal Development (henceforth ZPD) defined as '*the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers'*.

When quoting Vygotsky, Hall (2002) raised an important element in the socio-cognitive development since she refers to the zone of the mind where all the connections are made. This zone is the place where the already acquired experiment paves the way to the new ones for what the child is unable to realise today; he will be able to do it tomorrow. (Tharp and Gallimore,1988: 185) reference to the diagram elaborated by where all these processes involving the various parameters are mentioned.
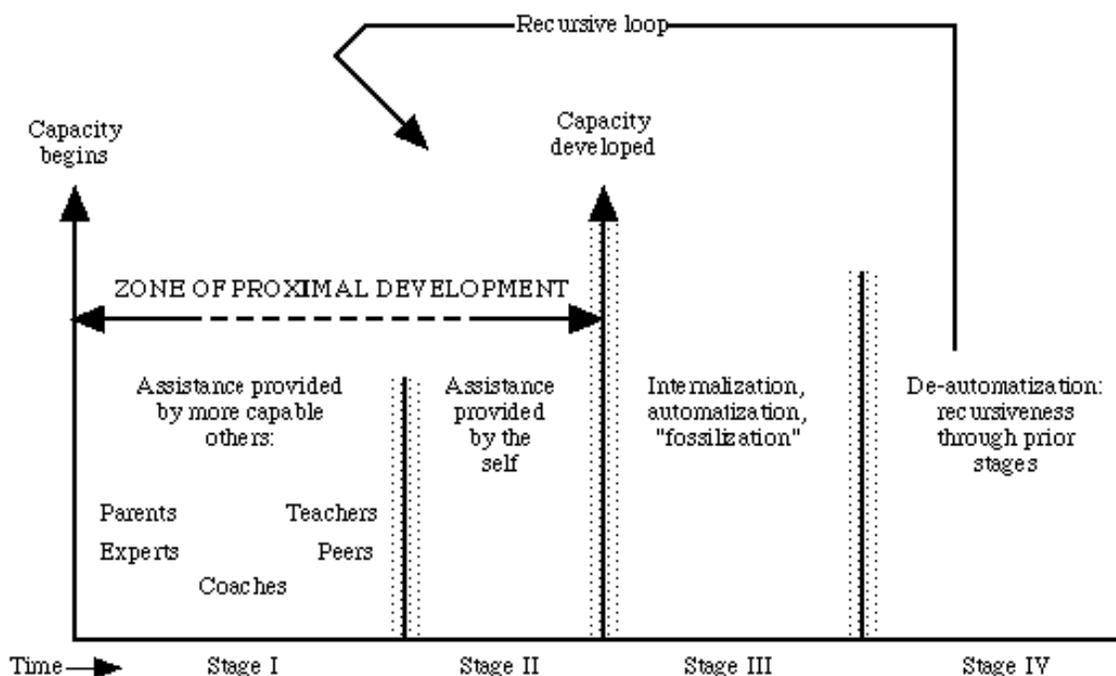
Figure 3.1
Genesis of Performance Capacity: Progression through the ZPD and beyond

With reference to the diagram, Vygotsky believed that acquiring knowledge goes through four stages. The first and the second ones take place in the zone of proximal development for when the child is in contact with new data his social environment including his parents; peers … assist him by giving him explanations for example. This takes place in the first stage whereas in the second one the child understands and starts to participate in the analysis by giving his own contribution to the situation. Nevertheless the process changes in the two last stages, it is no more a matter of assimilation but rather that of internalization. At the third stage the child internalizes what he has understood so that its meaning and use will be automatic and well established in his brain, meanwhile the last step is when the knowledge acquired becomes so clear and obvious for him that he uses it freely in a natural way. Thus what was the end of a whole process is transformed to the starting point of a new one.

Hence, acquiring knowledge is a natural process that starts at a very young age. It involves many parameters like language, family and peers, socio- cultural elements… It also needs a whole mental process that allows its internalization and allows its use in solving other experiments. Thus, it is an unlimited process that shapes thought and develops the cognitive and intellectual abilities. It does not concern the child only before school age but also when reaching it since the same process mental behaviour is used in the education learning process as it is the case in the Algerian school.

3. Education in Algeria

Introducing CBA in the Algeria comes in a period where the whole world has been in change and when internet linked all the inhabitant of earth and facilitates communication among them. In a period of globalization, Algeria has adopted one of the most successful schooling systems which aims at paving the way and making ready people to be involved in the socio economic life of the country. Moreover, (Roegiers, 2006:52) believed that CBA is defined as *'making learning more active'* as declared in the following quotation (my translation):

> *Adopting competency based approach was synonymous of 'making learning more active'. In this respect, the focus is made essentially on developing learning situations that replaces lectures of teachers made of long discourses. The aim is 'to make the learner at the center of his learning' rather than a teacher at the center of the learning process.*

> *(Roegiers, 2006:52)*

In the quotation above, it is clear that in CBA the learner is more involved in his learning process and the source of his data is no more the teacher whose major task is to develop competence. In her investigation about the use and the perspective of CBA in Algeria, (Chelli, 2010:4) believed that adding to its educational task; this approach has a social one too since it aims at developing the socialization process of the child as mentioned in the following points:

- development of intelligence,
- development of positive thinking, positive attitude,
- development of autonomy, responsibility,
- development of motivation leading to self-development, self-realization

Besides, developing critical thinking in education makes learners to achieve better marks and become less dependent on teachers and textbooks by creating knowledge. Learners become able to evaluate, challenge and change the structures in society. Yet, CBA has been implemented in an environment that is not adequate as stated in the next quotation:

> *What I dispute most is that Algeria uses here another 'fad' to turn upside down an education system that needs stability. Besides, I always question any 'imported' theory for its 'implementability' and lack of concern for its ecological validity, not its own coherence. The CBA created in another cultural area needed some epistemological caution before its implementation in a totally alien context. This new development at school level has generated uneasiness of teachers who are supposed to teach through it but know nearly nothing about it. Furthermore, the textbooks that have been designed along CBA characteristics are posing problems to the teachers who return systematically to their old ways and practices.*

> *Miliani. M. (2010:71)*

In the quotation above, Miliani has linked the use of CBA as it has been elaborated in other countries and adopted without being adapted to the Algerian sociolinguistic and sociocultural

contexts. Many factors may seem to be a real handicap in the success of such an approach. The former seems to be the teachers who have not been really introduced CBA and who have been given new manuals dealt with the way they used the preceding ones. The latter is the linguistic situation in Algeria, more or less complicated as compared to other countries. As a result, when being in the classroom, learner may be lost and do not give enough importance to the process they are undertaking that reduces their motivation.

In fact, CBA's concepts is rarely followed for almost all teachers, mainly at the primary level, still use the traditional method when teaching since all the learning process is based on rote learning. All lessons given in the classroom need to be memorized and each week the teacher asks a group of pupils to come to the board to recite in order to have a grade. That is to say, they are evaluated.

As described in the exams of the first and fourth years of the primary school, the whole examination process relays on memorization and internalizing data. Although the pupil is not given a direct question the answer is always rote learning. In all the exams, the learner is asked to complete a passage, filling the gaps or define a concept but always refers to what has been learnt in order to answer. However, in geography, the teacher asks once the following question: 'what is the difference between the climate and the weather?' In four years only one time, such a question has been asked and pupils who have been able to answer are not those who have learnt by heart but only whose mothers asked them the same question at home when revising for the exam as shown in table 1.1:

	Number of pupils	Percentage
Number of pupils	50	100%
success	10	20%
Failure	40	80%

Table 1.1
Comparative Learning Results in Geography

In this question, the learner is asked to make a distinction between the 'climate' and the 'weather', two elements that may seem similar but totally different. The three answers are the same since both definitions are given and no modification occurred. In order to have more details about the situation in the classroom we asked the teacher the following questions:

Question one: do you think that the formulation of exams corresponds to CBA's philosophy?

Answer: (after hesitation) this approach is new, we prefer the old one; we have been using it for years and can not change. No training has been organized to make teachers familiar with CBA we heard about it but do not know what it is.

Question two: what is a good pupil?

Answer: a good pupil is the one who gets good marks.

Question three: do you mean who memorizes everything?

Answer: yes, rote learning provides the learner with knowledge and language.

Question four: what about the research paper learners should give at the end of each unit?

Answer: they are optional for not all pupils are able to do it and no need for 'copy paste'.

Question five: have you shown your pupils how to do it?

Answer: no time is devoted for such an activity (some of them do not use the computer).

Question six: what about developing competence?

Answer: at school the child acquires knowledge, if he is enough intelligent he will able to develop competence.

4. Conclusion

The schooling system, in Algeria, has witnessed many reforms yet problems and failures persist. Despite the high rate obtained in official exams learning outcomes show that knowledge is assessed and no importance is given to competency as it should be in CBA. Adding to this it seems obvious that the primary school does not fulfill its tasks correctly for it does neither develop cognition and metacognition nor reasoning and competency. No critical thinking is involved or developed in the schooling system although all these processes are achieved at the primary level otherwise they may be never reached. Modern research has shown that the best investment for developing a country at the economic and social level goes through the primary school whereas in Algeria this step of the schooling system is not given enough importance.

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