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Research Article

METACOGNITIVE SKILLS AND AUTONOMY IN LEARNING: CASE OF CM2 STUDENTS FROM PRIMARY SCHOOLS IN THE SUB-DIVISION OF MANDJOU IN EAST OF CAMEROON

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Abstract

Traditionally the school is the place of acquisition of knowledge, know-how and know-how, in order to make the pupils fulfilled, autonomous and efficient. But this idea seems inaccessible, because in our school environments there are many students who experience learning difficulties, both in the use of metacognitive knowledge and in their autonomy. It is this reality that inspires us to ask the main question in these terms: does metacognitive competence influence autonomy in student learning? .the answer to this question allowed us to have the following general hypothesis: metacognitive competence influences autonomy in student learning. More specifically, metacognitive knowledge, metacognitive skills, awareness of one's way of learning influence the autonomy in the learning of CM2 pupils in primary schools in the sub-division of Mandjou thus, to support our hypotheses, We have convened four theories: the theory of mental activity management, the theory of awareness, the theory of identity construction and the theory of self-determination. The method used is qualitative-quantitative. The questionnaire and the interview guide were used respectively to collect data from 350 students selected from the stratified sampling technique and 07 teachers. The data collected were processed using SPSS software in version 20.0 while their analysis was done using content analysis and simple linear regression testing. at the end of the said analysis, metacognitive competence significantly influences autonomy in learning among CM2 students in primary schools in the sub-division of Mandjou

Keywords: Metacognitive competence, Management of mental activity, Autonomy, Learning, Self-confidence, Self-Knowledge, Sub-division of Mandjou.

INTRODUCTION

For a long time school learning was seen as a simple acquisition of new know-how by an individual and the process by which this new knowledge can be acquired. A few years later, a different acceptance appeared in psychological language, defining learning as: the appropriation by the student of the knowledge that one wants him to acquire through "mental work". It appears that if the child does "mental work" of the knowledge received, it involves factors such as the social, the affective and several mental processes of processing, analysis, synthesis and digitization. Cognitivists bring more to this thought by making a connection between the functioning of a computer and that of the brain. They thus put the complexity of the information processing system of it, which thanks to storage structures, memory and analysis operations transforms the student into a "cognitive agent". Which amounts to saying that the subject processes information autonomously during the performance of his tasks and to progress on this path, the student must be able to reflect on his knowledge and metacognitive strategies. While it is true that metacognitive knowledge facilitates the use and acquisition of information, many students do not use some of it. Metacognitive knowledge is in most cases unrecognized or misused. The active approaches such as: the NPA, the CBA used today have changed the place of the child who has passed from the pupil (the one who followed and copied the master holder of knowledge to the letter) to the learner, become an actor of his own learning and at the center of the teaching-learning Process. It has become evident that the use of learning strategies is important in the construction of knowledge.

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If these new approaches have revolutionized the educational environment, over time they have highlighted a major problem, namely the use by the learner of metacognitive knowledge allowing him to be autonomous in his learning. Many learners find it difficult to plan, to make a critical analysis. Today, metacognition is studied through the concept of learning regulation or self-regulation, of which it is a central part in education; it is often a question of developing metacognition in the higher cycle as in the primary and high schools colleges but less in.primary, as if primary school students did not need it. So it will basically be a question of seeing to what extent metacognitive knowledge can be a help for the autonomy in the learning of CM2 students in primary schools in the Sub-division of Mandjou. In this article, we will begin our work with the context and the justification of the study, the definition of the problem, the observation, the research questions and the research objectives, then will follow the methodological framework and finally the presentation of results and their discussion.

PROBLEM

In this point, it will be a question of analyzing the different delimitationof the problem. This necessarily involves the presentation of the study context, the position of the problem, the formulation of research questions, research objectives and the formulation of research hypotheses.

Context of the study

Nowadays, in the field of education, the acquisition of knowledge no longer takes place in the traditional way where the teacher alone had the monopoly of the knowledge that he transmitted to the learners through previously prepared

courses. In both primary and secondary education, in addition to participating in teaching/learning activities, students must engage independently in a series of tasks, including practicing problem solving, designing study tools like. Plans and many others in order to acquire knowledge, develop skills and be able, during assessments, to meet the requirements of teachers, learner autonomy being crucial in the management of their learning. According to the model of Viau (2009), a strong motivation to carry out a task, resulting from a perception of the pupil, the value of the task, his competence to be carry out and the degree of control which he on the course of its execution, implies the commitment of the latter on the cognitive level and his perseverance. Since the 1990s, metacognitive ability has appeared to be of great interest in the effectiveness of learning. We find, however, distant premises in all forms of pedagogy attached to autonomy and the motto "Learning to learn". Many works concern this capacity, as well as the means of strengthening it. However, evaluations have shown that it is often impossible to achieve a high level of training without metacognition having been greatly developed. According to his natural predisposition and character, the learner is more or less attentive to his way of learning, understanding and solving problems. In the same vein, many psychologists and sociologists such as Bouffard-Bouchard (1991), Doly (1996) have observed that students who fail are not metacognitive due to the non-use of control strategies, manage randomly without awareness, and rely on.On surface cues and mis-encode task, data; only to end up understanding nothing of what they are doing. They give up in the face of failure and are dependent from outside help, so they do not memorize by understanding when they succeed. Conversely, successful students are metacognitive and self-regulated due to the fact that they have a perfect knowledge of themselves and the choice of good learning strategies for an improvement in their performance.

In Cameroon, where the field of education faces many challenges such as the consumption of narcotics, violence, delinquency in the educational environment, learning has become, so to speak, a real challenge for learners as well as for teachers. In the East region, we were able to observe, at the end of a preliminary survey carried out among 30 learners and 10 teachers from the public primary school of Mandjou, a low rate (35%) of learners engaging independently in their learning activities. "These students in the classrooms certainly give good answers at some point but afterwards they can no longer give their own strategy which they used to find the solution" this is reported by 8 of their teachers; succeeding in a task does not only mean giving the right answer but is above all to adopt the right process because the student is called upon to carry out on his own what he was doing before with the help of the teacher. These students find it difficult to understand that most often, the sequence of questions has a logical sequence, and for example, to get to the second it is absolutely necessitate to use the first. At this level, we see that they mismanage their mental activity in problem solving. Faced with a failure, these students do not know what they know or what they do not know, they do not control their learning and throw themselves into the task in a haphazard way without realizing it or even give up quickly without effort. They lose sight of the purpose and tasks requirements because they do not understand it correctly and finally they have trouble memorizing knowledge and transferring it to others in times of their learning. As a result, we see that they have not developed the metacognitive knowledge that could help them become autonomous.

The work carried out by Barbot and Camatarri (1999) show that the experience of learning actually consists of a continuous osmosis between what is outside and what is inside the learner, but taking into account this that the inner dimension is the one that decides the success of the learning process, since it is the interior of subject which decides, in an autonomous way, what meanings to attribute to external solicitations, but the majority of pupils do not know this or do not master this notion.

The authors also point out that the students who succeed best and who persevere in their studies are those who know how to take advantage of the help offered to them and those who know how to use metacognition. Also, the lack of self-confidence generates in the pupil a feeling of fear of doing things even if he defends himself against it and takes an attitude of incidence which mobilizes his mental resources; it then no longer has enough resources to use the memories it has previously built, whether be it academic knowledge proper or know-how such as knowing how to reason. The situation then constitutes a vicious circle: he has no self-confidence, he cannot mobilize his cognitive and metacognitive knowledge; but since he cannot use prior knowledge, he can only read to adjust the metacognitive skills necessary to understand and so to learn. This is the story of a student with learning difficulties. Law No. 98/004 of April 14, 1998 on the orientation of national education in Cameroon recognizes education as a national priority, these missions are summed up through the development of creativity, a sense of initiative and openness to the world. Education in Cameroon is trying to gradually move towards a better operationalization of teaching-learning, in particular through a migration of the paradigm from traditional pedagogy to forms of pedagogy more centered on the learners towards an approach by the skills more suited to our time and to scientific advances in education which, in general, is not implemented as it should be in schools. Following the same logic, Assoah Etoga (2018) affirms that "no regulatory device in this process is neither formally put in place, nor practiced, nor mastered by teachers in their pedagogical practices according to a metacognitive perspective so to bring students to their autonomy in learningin the East of Cameroon in particular and more precisely in Mandjou which is a priority education zone.

The situation of autonomy in learning is very disturbing if we refer to the work recently carried out within the framework of the Teaching-Learning Process in Cameroon (PEA).We noted that, whatever the obstacles that exist vis-à-vis the pedagogical, didactic and metacognitive relationships in connection with the heterogeneity of the class and the people targeted for learning, nothing is done in our schools to achieve real autonomyin student learning.so we can say that what is done should not be done and what should be done is not done. This assertion is justified by means of indirect observations and by interviews that we carried out with the pupils of level III of the primary schools of the sub-division of Mandjou in November 2020. 80% of them prefer the subjects where they don't do, they are only asked for a simple refund notions taught; the reason they give for this preference is the fact that it is just a matter of memorizing the concepts learned in order to be able to answer the questions. As a result, they experience certain difficulties in reinvesting what they are supposed to have acquired. indeed, the pedagogical approach in class being more transmissive for others, the pupils copy the teaching contents, do exercises given as homework only to avoid

sanctions; for them, it is enough to solve the problem regardless of whether they understand or not, provided that they just avoid punishment, they find themselves reviewing their lessons the day before an assessment or even the same day, thus creating a mechanical memorization that does not take into account an acceptable level of understanding. The data collected in the statistical report of the results at the end of the first quarter of 2020-2021 at the Mandjou EPP during one of our visits for our pre-survey on February 6, 2021 at 10 a.m., highlights difficulties in terms of performance by these students. students at the end of primary cycle, in subjects that require much more analysis, methodical understandings such as: French, mathematics, literature, the success rate varies between 39.25 and 40%; the general averages being between 8 and 9 among those students who excel in literature (A) in their basic subjects, that is to say, those who have the highest coefficient where they are supposed to have high marks, end up with averages marks (in French, the average general being 8.81/20 and in writing production, 9.88/20). For these pupils at the end of the primary cycle, in subjects such as French, literature and the production of writing and mathematics, their success rate varies between 43.22% and 44.5%. The conclusion is therefore obvious: most of the students, i.e. 80%, find it difficult to get involved effectively and above all autonomously in their learning. Subjects that require a spirit of synthesis or the establishment of links between previously acquired notions seem inaccessible to them for lack of concrete learning strategies. Faced with failure, these students for the most part only think of appealing to teachers or classmates for better explanations; in other words, they use little or nothing at all, in their metacognitive resources, so we see that these students are not autonomous in their learning even less able to use not even their cognitions to solve a concrete problem.

Theoretical orientations

From a cognitive psychology perspective, the term metacognition refers to the ability to reflect on our own thinking and control over our cognitive strategies. Viewed from this angle, it is desirable to distinguish between two important aspects of metacognition: knowledge and control. if we refer to the knowledge aspect, it appears that the learner is in the presence of a learning activity, and must "be aware of the demands of the task, the strategies by which he can achieve it adequately" (Tardif 1992: 59, quoted by Cyr 1998: 113). As to control; it refers to the learner's active and conscientious planning, regulation and evaluation of his or her activities throughout the learning process.

- The theory of mental activity management by Antoine de La Garanderie (2010)

In this theory, he reflects on the reasons for success and failure of learners, highlighting the different mental gestures involved in thinking and learning. He seeks to understand how everyone operates to memorize, reflect, imagine and be attentive. For this, he analyzed the mental learning strategies implemented by successful students. Antoine de la Garanderie affirmed that the success of a task depended, among others, the mental gestures that the pupils and students deployed. The data collected over many years allowed him to identify different learning profiles. These profiles are organized around mental habits that implement real mental gestures that can be described, compared and above all taught. To achieve this, three main axes must be developed.

- Lead to self-knowledge: the student must become aware of the mental habits that he implements during various activities. He must be able to differentiate between evocations and perception, this distinction is essential so that he can put forward the project structuring and evocation.
- Broaden skills: this axis allows an awareness of cognitive processes as well as an understanding of them, in order to develop them in an adequate way. Practitioners want to help everyone to develop the essential and to appropriate it. once the student is aware of their evocative habits. The teacher is then able to offer him other mental strategies so that he has a greater variety of mental habits. This diversity offers students choices to improve their performance.
- Lead to autonomy: the student is then placed alone in the face of choices and must determine what means are the most suitable for him and which, on the contrary, are less effective. This brings him to an autonomy where he is the "promoter, even creator, of his means of success".

It is said in this theory that, in order to be able to pilot these mental processes, one must first know them and then be aware of them. The student must distinguish when they use them and why; the more they are conscious, the more we can act on them and with them. The more they are explained, the more we can easily appropriate them. What is decisive for students in difficulty is the management of thought. They usually have problems with planning, control, regulation, and where they lack the knowledge to manage their thinking. We therefore understand, according to this theory that, according to the degree of management of mental activity, the individual is involved in demonstrating his performance or his personal ability to carry out a task. In fact, the theory analyzes what is going on in the head of the learner. It therefore sheds light on our study insofar as it emphasizes the cognitive functioning of the learner in order to give him support to develop mental gestures which are not used autonomously and which could bring failure during learning.

Goudeseune (2021) does not totally agree with the theory of mental management, because for the latter, the differences at school are due to the sensory nature of our memories, visual or auditory. a visual student will not optimally assimilate an oral lesson while an auditory student learns poorly from books, written materials, he needs to listen according to the management of mental activity, school failure would occur when the teaching was mainly visual for an auditory student or vice versa. For her, sensory memories do exist, but are of short duration, while visual or auditory information is elaborated in more abstract memories, the main ones for education and autonomy in learning are: lexical memory (morphology. words, graphics), semantic memory (meaning), image memory (virtual images, memory of things, animals, etc.) and also note that the learner's difficulties arise more from ignorance of the means he uses when he succeeds, hence the taking consciousness theory of Piaget (1974).- Jean Piaget's Theory of Consciousness (1974b)

The author also assumes that the acquisition of thought from experiences can only take place through awareness and therefore reflection on one's own cognitive development. In his theory, Piaget (1974b) commented on by Quiles (2014) interested in the notion of becoming aware of one's own cognitive processes through the development of the child.

He distinguishes between "succeeding" and "understanding"; to succeed is to understand in action of a given situation to a sufficient degree, to achieve the proposed goals, and to "understand" is to succeed in dominating in thought, the same situations until one can solve the problems they pose as to the why and how connections observed and otherwise used in action of success is therefore the materialization of understanding, visible through the results obtained by the learner. Thus, awareness consists of a conceptualization of material actions, that is to say a transformation of action schemes into notions and operations. Piaget distinguishes three stages in this conceptualization, which thus follow each other during the development of the child: the pre-operational stage, the stage of concrete operations and the stage of formal operations.

The first stage is "material action without conceptualization" there is no conscious knowledge at this stage. The child succeeds in material tasks, but is not able to give the reasons for his actions. The second step is conceptualization from awareness. The child is then able to represent and describe the event, and also to explain why and how. In the third stage, "awareness" develops into a reflection of thought upon itself, or abstractionreflective. This allows the child to compare different steps, including those that he has not actually taken, and to consider different causal hypotheses. It is then no longer the action that is at the origin of the understanding of a situation, but the understanding that directs the action. Awareness, necessary for learning, can modify learning to make it more autonomous, in the sense that it will allow the student to know the functions he fulfills when he learns, to evaluate, to criticize his steps, to discover a relevant choice of strategies and so.To decide whether or not to regulate their way of learning this theory brings more light to our study insofar as it can help the student to structure his knowledge in a personal and explicit way, to be aware of what he is doing, to give meaning to his action and to follow his own path of development.

On the other hand, this awareness alone would not suffice to speak of a metacognitive knowledge; you have to have self-confidence because you can know something but later doubt this thing, if you don't have good self-esteem. Also, if Piaget clarifies for us what awareness is, he leaves a certain vagueness as to the states of consciousness that we access. We know how to access them but we don't always know how to name them without confusing the name of the level with that of the process that leads to it. .because when we say awareness of how you learn influences autonomy in student learning, what state of awareness are we talking about?

- André's theory of identity construction (2005)

Self-esteem is described as a fundamental datum of personality (André, 2005), building the very essence of the individual. It represents the attitudes and feelings, positive or negative, that the individual has about himself, both in terms of his abilities and characteristics as well as his actions and performances. According to André (2005) good self-esteem facilitates commitment to action, is associated with more reliable and accurate self-evaluation, and allows for greater emotional stability. A student with low self-esteem is very likely not to find the energy to engage in his or her school learning thus, this theory comes to clarify the choice of the variable "self-confidence" in our research, insofar as a bad self-esteem could have an impact on the learning of the pupils of CM2 of the primary schools of the sub-division of Mandjou because for now In theory, it is not so much the student's real abilities that count for him to learn, but rather those he thinks he has. Here, it is a question of getting the students to focus on the progress made and on the means they can acquire in order to better master the tasks to be carried out.

- The self-determination theory of Deci & Ryan (2002)

Self-determination theory holds that humans engage in actions at varying levels of commitment. Basically, human beings have innate needs for self-determination and competence, in particular the need for autonomy, the need for competence and the need for relationship with others. Here, the student must clearly understand that his responsibility is engaged and that it is his involvement that will be decisive in his success. According to this theory, in order to promote the student's motivation and commitment and encourage him to persevere, it is therefore necessary to create and implement work situations that promote autonomy and support feelings of competence and social belonging to encourage the student a spontaneous motivation and by choice these authors distinguish three main forms of motivation which they differentiate by their degree of self-determination, that is to say the degree to which an activity is carried out having freely consented to it and with a feeling of internal coherence, of agreement with oneself. Self-determined motivation has several consequences:

It brings a positive emotion,
It reinforces interest through activity,
It reduces anxiety and stress,
It activates concentration,
It increases the time spent practicing,
It promotes better learning and results.

The theory of self-determination sheds light on the notion of self-knowledge, which is one of our variables, by showing the close link it shares with the involvement of learners. .indeed, a learner who does not know that there is a relationship between his results and his performance cannot logically improve. .also the satisfaction of these needs is fundamental and beneficial for the learner since it causes him to adopt a self-determined motivation and positively influences his performance. .in fact, autonomy means the desire for choice and control, to be an actor in one's learning, to feel the will that accompanies one in any activity. It is recognized that a teacher should use an autonomy-supporting style in order to nurture the basic needs of students, to develop their self-determined motivation. But until now, these three needs have only been studied jointly, they have never been studied independently, which is why the exact link between each need and the development of self-determined motivation is little known. However, it is possible that a relation of effective dominance exists between these three needs which arouse the self-determined motivation in the student, therefore if the three needs are satisfied. One of them can influence the student's self-determined motivation more than the others, to date there is not yet a sufficiently detailed study to determine whether there is an order of priority in the satisfaction of needs .

Formulation of the problem

Autonomy in effective learning mobilizes on the part of the learner a strong responsibility at the cognitive, affective and

conative level; because we say "we only integrate well what we have learned ourselves" that is to say that integration takes place when there is an appropriation in his learnings. Without these notions, autonomy in learning would be called into question, this being so, the difficulties related to learning do not come only from the simple disturbance in the process of acquisition, motivation, commitment, but also from the level of metacognitive knowledge by the pupils which could constitute a real obstacle. Because learning is considered successful when the learner is able to use his intelligence outside the presence of his educator (Hameline, 1995), so learning independently means freeing himself from the grip of teacher in order to pilot his own cognitive activity. Indeed, in a school context where we advocate new approaches, we will ask the student to develop his functional autonomy and his intellectual autonomy, that is to say, to do it alone, but the observation is clear: he is not not uncommon to notice problems relating to autonomystudents in their learning due to lack of ownership by these students of their learning activities; the following phenomena then recur:

50% of students cannot detach themselves from their imagination. During evaluations, faced with exercises that require evocation, attention and understanding, they do not. They just want at all costs to find an answer to the problem. .these students are also in difficulty because they have no contact with their evocations, they do not know what is happening in their intellect and which could indeed be very useful to them in order to succeed.

We have the weak participation of the pupils in the tutorials or in the interactions in class, indeed the information collected from certain teachers affirm that nearly 20% to 25% of pupils do not participate in the room or during presentations when For example, there is a..work to be done on five students, so one student does the work.55% of these students do not master what they actually know; they are more for memorization and restitution when the time comes, without however having control over their ways of learning or over their skills and limits: many said they had only one learning technique, reading to recite during evaluations they have difficulty answering analytical or argumentative questions, some do not know how to proceed and others have no idea how to go about it; in front of a test they hasten to answer without however taking the time to understand the questions.

Added to this is poor self-esteem, which prevents them from engaging effectively in a task, from learning effectively, from being able to evaluate themselves in order to choose their learning goal and from having a personal conviction of what 'they do without doubting it regularly or self-depreciate 80% of these pupils rarely do monitoring or feedback and the few from the primary cycle that we had to meet at the Mandjou EPP do not wonder if they are achieving their goals, if they are doing it good manner. These students find it difficult to question themselves about what they really have to do when faced with a task. Faced with failure, they only think of turning to teachers or peers for better explanations. In other words, they use little or no metacognitive resources, all of which reflects a lack of autonomy in learning. Based on these findings, it is important to ask the following question: does metacognitive competence influence the autonomy in the learning of CM2 students in primary schools in the sub-division of Mandjou? more specifically, do the management of mental activity, awareness of one's way of learning, self-confidence, self-knowledge influence the autonomy in the learning of CM2 pupils in primary schools in Mandjou District?

The answers to these questions allowed the formulation of a general hypothesis and four specific ones in particular, metacognitive knowledge influences autonomy in student learning. CM2 primary schools in the sub-division of Mandjou?

More specifically, the management of mental activity, the awareness of one's way of learning, self-confidence, and self-knowledge influence autonomy in the learning of students. CM2 of primary schools in the sub-division of Mandjou.

The general objective is to show that the metacognitive competence influences the autonomy in the learning of the pupils of the CM2 of the primary schools of the sub-division of Mandjou Very specifically, we propose to show that the management of the mental activity, the taking of awareness of his way of learning, self-confidence, self-knowledge influences the autonomy in the learning of CM2 students in primary schools in the sub-division of Mandjou. A scientific interest has been established and this concerns the problem of students in difficulty concerning the fact that metacognition helps in the development of self-esteem and student motivation. This aspect is also based on the difference between failing and successful students; indeed the latter, because of their metacognition are aware that it is their actions that are the basis of their success thus, the failure does not appear as inevitable or uncontrollable from when a sense of self-efficacy develops and students can look back on themselves positively which helps to develop their self-esteem and their motivation to succeed gives meaning to their learning.

METHODOLOGY

It will revolve around elements related to the study population, the sampling technique and the sample, the data collection instruments and the data analysis methods. The target population is all the students targeted by this study from whom we want to collect information and extrapolate the results. .our target population is represented by CM2 students from primary schools in the sub-division of Mandjou, i.e. CM2 students from public primary schools in Mandjou, those from CM2 from private denominational primary schools, and those from CM2 secular private primary schoolsIn total we will have a staff of 633 students our sample consists of 195 students.We used the stratified sampling technique because the sample is drawn across the different levels of education; our choice of level III of the primary cycle is justified by the fact that at this stage, the level of cognitive development of pupils is already likely to takeawareness of their ways of learning and developing their autonomy on their own.Therefore we will have a representative sample for each level of education. The sampling technique is the stratified one. The stratum refers to learners in CM2 classes by order of education and according to gender. it is on the basis of this technique that the sample of the study is made up and we made use of this fact, of several instruments of data collection. We had to carry out semi-structured interviews with 7 teachers and a District Inspector. To collect information on this subject, we used two research techniques: the interview and the questionnaire. The interview guide is a written list of topics related to our assumptions and these themes or questions may not follow the order depending on the participants.

Table 1. Size of the study sample and distribution of students by level

Order of tacher	Size of the population	boys	girls
Private confessionnal	53	28	25
Public	91	48	23
Lay private	51	33	18
Total	195	195	195

This process is done face to face between the interviewer and the respondent. As part of our study, we used the interview guide that we established based on our research hypotheses, which constitute open themes with open questions. These themes of the interview relate to the management of mental activity, awareness of one's way of learning, self-confidence, self-knowledge and autonomy in learning. The questionnaire is made up of closed questions and puts forward a preamble, the identification of the respondent which is based on variables related to gender, class, and religious obedience; the body of the questionnaire being constituted by the variables of the hypotheses of Research

The questionnaire is presented in the form of small tablesIt offers statements for which the subjects must position themselves on a scale similar to that of Likert but including, for its part, four modalities:

Completely Disagree: The statement never applies;
Somewhat disagree: the statement rarely applies;
Somewhat Agree: The statement often applies;
Completely agree: the statement still applies

The data collected is processed using SPSS software in version 20.0 they are analyzed quantitatively and qualitatively using a simple linear regression test for quantitative data and content analysis for qualitative data.

RESULTS

In this section, it is a question of verifying the significant relationship that could exist between metacognitive competence and autonomy in the learning of CM2 pupils in primary schools in the sub*division of Mandjou.

The management of mental activity as a basis for autonomy in student learning

Tableau n°2 : Récapitulatif du modèle Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,413	,170	,166	,87073	1,599

According to Table 2, the value of the Dublin and Watson statistic which is 1.174 is between [0.4] so there is no autocorrelation of errors. Here, we see that the correlation coefficient is equal to 0.413, which means that the link between VI1 and DV is relatively average. R-two, which is the coefficient of determination, is equal to 0.170, which means that 17% of the variation in autonomy in the learning of CM2 students in primary schools in the sub-division of Mandjou is explained by variables related to the management of school Mental activity.

Tableau n°3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30,054	1	30,054	39,641	,000
	Residual	146,325	193	,758		
	Total	176,379	194			

The ANOVA table shows us a Fisher's F of 39.641 significant at the 5% threshold which is greater than (Flu) i.e. theoretical F, which means the good fit of the model at a level below 5%.

Tableau n°4: Finale de l'analyse Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,430	,117		20,690	,000
	La gestion de l'activite mentale	,324	,051	,413	6,296	,000

The table shows that the value of Beta 0 (2.430), Beta 1 (0.413), and the associated Student's t is 6.296 with a p=(0.000). According to the analysis of the linear regression model, this corroborates the prediction of hypothesis (H1) and means that the link between the two variables is positive and therefore the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. We can conclude with a margin of error of 5% to be wrong that the management of mental activity influences the autonomy in the learning of CM2 students in primary schools in the sub-division of Mandjou These results corroborate Antoine's conception of the Garanderie for whom learning the principles of mental management means becoming more efficient and autonomous in one's learning, whatever the field. During mental activity management sessions, we learn to become aware of our sensations, build a mental object through the interpretation of our sensations, improve our perceptual activity, evoke past knowledge. It will also be a question of establishing a realistic project for the learner and according to this author mental management is a journey within oneself, an introspective journey that will lead the learner on the path of autonomy and the performance. Mental gestures are essential in the learning process.

Awareness of one's way of learning as a basis for autonomy in student learning

Tableau n°5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,549	,301	,297	,79921	1,463

According to the table presented above, it appears that R, the correlation coefficient is 0.549 and that R-two which represents the coefficient of determination is equal to 0.301, which means that 30.1% of the autonomy variation in the student learning is explained by the variable of.awareness of how they learn.

Tableau n°6: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53,103	1	53,103	83,138	,000
	Residual	123,276	193	,639		
	Total	176,379	194			

On the Anova table, Fisher's F is equal to 83.138 which is significant at the threshold of 0.000 (lower than 0.05) and higher than (Flu) this confirms the good quality of the model at a level of significance of 5%.

Tableau n° 7 : Analyse finale de Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,538	,176		8,735	,000
	La prise de conscience de sa maniere d'apprendre	,602	,066	,549	9,118	,000

The analysis of the linear model shows that there is a significant link between the endogenous variable (autonomous in learning) and the exogenous variable (awareness of one's way of learning). Indeed we notice that the associated Student's t value is 9.118 so it is greater than 2 and that the significance is less than the 5% threshold. Then, the direction of the relationship is verified by the sign of Beta0 which is 1.538 and Beta1, 0.66 which are all positive confirming the positive effect of the explanatory variable on the explained variable. Thus, from the equation we can say that awareness of one's way of learning is a positive function of autonomy in learning. In the same logic Morin says that "the awareness of his reflexive way of learning mobilizes self-awareness and commits the subject to a critical reorganization of his knowledge" If the learner reaches the level where the mind considers itself itself, it will allow him ".self-description, self-correction and self-development of one's learning" Balas (1998) says that "when man learns, he uses more or less conscious and more or less effective approaches" through this sentence we see the importance of awareness in his act of learning and especially for that it is effective. In traditional education, to bring the student to a certain awareness of his learning, he is naturally asked "how did you do that?" How did you achieve this result? This allows the student to go back a little on his learning and to give meaning to his act of knowing.

Self-confidence as a favorable factor for autonomy in student learning

Table n°8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,580	,337	,333	,77847	1,284

According to the Model Summary table, the correlation coefficient is 0.580 and R-square is 0.337, which means that 33.7% of the endogenous variable is explained by the exogenous variable.

Table n°9: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	59,418	1	59,418	98,046	,000
	Residual	116,962	193	,606		
	Total	176,379	194			

On the Anova table, Fisher's F is equal to 98.046 which is significant at the threshold of 0.000 (below 0.005) and above (Flu); this confirms the good adjustment of the model. According to the table, there is a significant link between the dependent variable (autonomy in learning) and the independent variable (self-confidence).

Table n°10: Final Analyses of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,069	,208		5,130	,000
	La confiance en soi	,672	,068	,580	9,902	,000

Indeed, we notice that the Student's t value is 9.902 so it is greater than 2 and that the significance is less than the 5% threshold. Also note that the direction of the relationship is verified by the sign of Beta which is 1.069 and Beta1, 0.580 which are both positive, confirming the positive effect of self-confidence on autonomy in learning. we can therefore conclude that the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted with a margin of error of 5%. therefore having a good self-confidence influences the autonomy in the learning of pupils of CM2 of primary schools, We understand why in a tense emotional atmosphere and under stress, the pupil is not able to develop his cognitive skills and is not available for independent learning postel (1993), considers that an individual's ability to learn depends on his emotional state. Learning by oneself is not simply memorizing knowledge, in order to be able to learn effectively one must believe in one's ability to do so. Thus, emotions come into play think for example of a person who has some power over you like the teacher and who would say to you "I need you to do this task. I know you're not going to make it because you never achieve anything. But we can always try." How do you think you approach this task and what would be the end result? Undoubtedly there is a good chance that you will fail at this task. Self-esteem is defined as the positive evaluation of oneself. This is based on the awareness of one's own value and inalienable importance as a human being, it is not only a question of having qualities, skills, abilities and know-how, which all one each is provided. It is first of all a question of knowing them and of having become aware of them as being assets which make it possible to calmly approach any new situation and to succeed in it. "I suck in class", "there's no point in studying, I won't make it anyway"...these reflections are from students who don't believe in themselves, an experience of failure shakes the self-confidence of the student, following which he disinvests in the involvement of his learning and.is therefore at risk of poor performance. Research shows that a student's success is not only dependent on their "objective" skills, but also on their confidence in their learning abilities. Students with above-average cognitive skills may therefore have low self-confidence, with all the associated negative consequences. conversely, students with weak initial achievements but who believe in their ability to use them effectively can greatly develop their skills.

Self-knowledge as the basis of autonomy in student learning

Table n°11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,439	,193	,188	,85896	1,261

According to table 11, it appears that the cross between the independent variable and the dependent variable displays a correlation coefficient R of 0.439, reflecting a more or less good association. The predictive power of the model is measured by the coefficient of determination R-two with a

value of 0.193 or 19.3%. The latter would mean that our model is relatively weak and that autonomy in learning is 19.3% on self-knowledge.

Table n°12: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33,982	1	33,982	46,057	,000
	Residual	142,398	193	,738		
	Total	176,379	194			

Table 12 above shows that Fisher's F is equal to 46.057 which is significant at the threshold of 0.000 (less than 0.05) and greater than (Flu) i.e. the theoretical F ; this confirms the good quality of the model at a level of significance below 5%, hence the powerexplanation of the model appears satisfactory since Fisher's F is significant at the 5% level.Thus we reject the null hypothesis (H0) and we stipulate that the regression is significant as a whole.

Table n°13: Final Analyses Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,690	,211		8,029	,000
	La connaissance de soi	,419	,062	,439	6,787	,000

According to the table, there is a significant link between the dependent variable (autonomy in learning) and the independent variable and the dependent variable. Indeed, we notice that the Student's t value is 6.787 so it is greater than 2 and that the significance is less than the 5% threshold. In addition the direction of the relationship is verified by the signs of Beta0 which is 1.690 and Beta1, 0.439 which are positive, therefore self-knowledge influences autonomy in student learning. Lafortune & St-Pierre (1994) call "knowledge of oneself" as a learner, which refers to the knowledge that the learner has developed of his own characteristics, his own relationships and his comparisons to other people who learn, and. general knowledge concerning the learning that he was able to acquire, therefore knowing oneself well means being able to choose appropriate objectives, for achievable autonomous learning.

DISCUSSION OF THE RESULTS

Management of mental activity and autonomy in student learning: In view of the results obtained, there emerges a statistically significant link between the management of mental activity and autonomy in the learning of CM2 students in primary schools in the sub-division of Mandjou. Indeed, the significance rate is relatively average, this is explained by the fact that 36.5% of respondents use their mental gestures very little. .most of these learners have a lot to develop mental gestures that are not used independently and are lacking during learning. The result being poor performance in several subjects. These mediocre performances are for most of these students a source of discouragement in their learning. The literature tells us that the management of mental activity has three functions: planning, control and regulation. Concerning the first function which is planning, Legendre (1993) tells us that "planning" has the sense of an operation of putting in order or in sequence a set of elements according to determined criteria. .planning becomes a possible action or procedure allowing to anticipate, to organize, insofar as it required to use the knowledge on oneself and on the tasks. This amounts to saying that by planning the student becomes necessarily active, autonomous and constructor of his learning process. Planning therefore becomes a very useful function for the student. Indeed, initially it allows him to organize each stage of work and thus select each strategy and procedure to be used at a specific time. This optimizes the student's activity in a second step because it generates an anticipatory representation of the action. By mentally projecting the actions and evaluating their potential results before implementing them, planning helps to identify a series of errors in the choice of procedures. The second function relating to control constitutes a phase of monitoring one's own behavior which makes it possible to ensure that the actions taken are in line with the goals set. It is also a question of evaluating the progression of the accuracy of the procedures used. to be able to exercise this control it would be necessary to have an idea of his preferences in terms of working methods. Finally, the third function, regulation, has two aspects according to Tardif (2006): heteroregulation (which concerns external elements such as the study environment or peer relations) and self-regulation. It is precisely the second aspect that interests us, namely self-regulation. The learner at this level examines his methods and what did not work in order to readjust them and from these readjustments, improve his learning. Ultimately, in view of the studies carried out and Antoine de La Garanderie's theory of mental management, we can conclude that there is a link between the management of mental activity and autonomy in student learning. However, it is up to the learner to make the effort to feed his mental representations otherwise the mental gestures would run empty.

Awareness of one's way of learning and autonomy in student learning: With regard to the results, it appears that there is a significant link between the awareness of one's way of learning and the autonomy in the learning of the pupils of CM2 of the primary schools of the Arrondissement of Mandjou The pupil must become aware of how to proceed in. learning or problem solving situation because everyone learns differently, there is no fatality or devaluation of presumed bad results, from the moment a student knows his way of learning, he can adapt to any type of teaching and to be able to be independent in their learning. The awareness we have of our ways of learning determines the will that we will put into our learning and success. Becoming aware of their way of learning is an integral part of the process, this allows students to become aware of their learning methods and take advantage of them to adjust and advance their learning by assuming increased responsibility for them. .however, the results obtained with these students and through the statements of their teacher's show that 88.7% of these students are not really aware of their way of learning and this has a negative influence on their school results or performance.

Self-confidence and autonomy in student learning: In view of the results, it appears that there is a significant link between self-confidence and autonomy in the learning of CM2 pupils in primary schools. For a student, to have self-confidence is to feel able to face the situations in his learning; it is based on a subjective feeling and an objective analysis of these skills. Feeling confident motivates him to exploit his various abilities. The act of learning is intrinsically linked to the student, who will have control over whether or not to enter knowledge. This behavior directly appeals to the student's self-confidence in addition, many studies highlight the links between emotions

and learning, it is about the importance of developing emotional competence in order to promote autonomy in learning (Shelton, 2000) the feeling of self-efficacy is defined as "a person's judgment of his ability to organize and use the various activities inherent in the performance of a task to be performed" (Bouffard-Bouchard and Pinard, 1988) in other words, it is about esteemof a person regarding their ability to perform a task. This concept shares, with most current conceptions of motivation at school, the idea that the learner's beliefs in his ability to succeed in his learning plays a crucial role in his commitment and his performance. Many studies indicate that students rarely invest themselves personally in an activity that they are not confident of carrying out. similarly, learners generally tend to lose interest in activities in which they feel ineffective, it is in this sense that Bandura (1997) confirms the existence of an important link between what an individual thinks of him in an area and their performance in that same area. Finally, the various works show that there is indeed a link between self-confidence and autonomy in student learning.

Self-knowledge and autonomy in student learning: In view of the results, it appears that there is a link between self-knowledge and autonomy in learning. However, one observation emerges after the surveys: 50% of primary cycle CM2 students cannot really state what they know, their skills, preferences or working methods, finally being able to be autonomous in their learning. Self-knowledge is seen as this skill which aims to develop in students the rewarding knowledge of their aptitudes, their physical and mental capacities, their tastes, their strong points on which they can rely in situations difficult of learning. For autonomous learning, it is therefore necessary to have an idea of one's preferences in terms of working methods. Sandrine Dirani (2019) is convinced in one of her writings that there is no successful learning without self-knowledge. self-knowledge is a basic quality for any individual, it is even more so for the learner because it corresponds to the path that each student agrees to, based on the awareness of his resources and his lacks, of his ability to overcome obstacles, rectify mistakes and. find solutions to act.ultimately we can say that there is an associative link between self-knowledge and learning. This association influences the autonomy of any learner, and can significantly change the results of even the weakest, when the latter is led to use it.

Conclusion

Ultimately, the subject that has been the subject of this study is called "metacognitive competence and autonomy in learning: case of CM2 students in primary schools in the sub-division of Mandjou". The purpose of this research, which is both quantitative and qualitative, consisted in verifying whether there is a link between metacognitive competence and autonomy in learning. .we have therefore come to the conclusion that the use of metacognitive knowledge significantly influences the autonomy in the learning of CM2 pupils in primary schools in the sub-division of Mandjou. In view of these results, each actor in education must give.for the obligation to be deeply involved in the teaching/learning process so that the use of metacognition is truly effective or at least partly in all learning activities in the school environment. a good action will go through a communicational synergy between these actors so that everyone is fulfilled, the student in his empowerment and the teacher in his teaching / learning process.

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