

# **Research Article**

# EXPLICIT TEACHING AND AUTONOMISATION IN LEARNING: THE CASE OF THE GOVERMENT BILINGUAL TRAINNING TCHEACER'S COLLEGE (GBTTC) IN MAROUA

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# Abstract

The present study is based on explicit teaching and autonomisation in learnings: The case of student teachers of GBTTC Maroua. The problem tabled comes as a result of an observation following which close to 70% of students' work is done out of past time in class, the house and in the absence of the teachers. The question to know if explicit teaching influences autonomisation in student teachers' learnings then came up? From this question comes the general hypothesis; Explicit teaching influences autonomisation of student teachers learnings of GBTTC Maroua. As methodology, a questionnaire and interview guide had been elaborated and respectively administered to eighty four (84) student teachers and four (4) teachers of GBTTC Maroua. This research is at the same time qualitative and quantitative, data treatment was done on the basis of SPSS 20.0 software. Results obtained show that explicit teaching influences autonomisation in student teachers' learnings at GBTTC Maroua.

Keywords: Explicit teaching, autonomisation, learning, Maroua.

# INTRODUCTION

Access to quality education is a major concern of countries around the world. This theme, raised at the Jomtien conference (1990) and endorsed by that of the Dakar forum (2000), urges all countries to make basic education accessible to all. This injunction receives a favourable response from education systems around the world and investments are made to improve the quality of education. Wwithin the same framework, the Dakar Forum in 2000 already invited States to implement policies aimed at improving the quality of their education systems and undertook to support them in their efforts. Today, promoting empowerment in learning is now a consensus in educational circles, but this consensus has gradually been built in the history of psychology and the sciences of education. In this article, the concept of empowerment refers to the acquisition and ongoing use of a set of technical, interpersonal, social, organizational and adaptive skills necessary to carry out daily tasks. In Cameroon, we are witnessing curriculum reforms to improve the quality of learning. We can see that this change in the official curriculum is reflected in changes in teaching practices at school. The current situation is that teacher training is developing with a view to professionalization and empowerment (Gauthier et al. 2001).Indeed, the teacher, whatever his level and his level of teaching, pursues multiple goals namely: to transmit, to transform, to form the judgment, to help to form, to help to transform and to educate in the choice (Lenoir, 2004; Fabre and Fleury, 2006 & 2013). This is why, since the beginning of the 1990s, Cameroon has initiated "a process of renovation of its education system with the convening of States General of Education in May 1995, the main conclusions of which were endorsed by the law of '1998 orientation' (UNESCO, 2011). From 2000 the school programs were modified. The main changes relate to changes in the social environment. There has in fact been an adaptation of the educational world to the evolution of society; hence the introduction of the explicit

teaching approach as a teaching strategy in Government Bilingual Teachers Training College (GBTTC) in 2016. In context, the training of the primary school and kindergarten teacher is carried out in the Government Bilingual Teachers Training College (GBTTC) in an alternating manner (theoretical and practical) with propositional curricular knowledge. In this daily teaching practices, the teacher is expected to be effective. It is in this context that explicit teaching has been adopted as a curriculum reference framework to improve the education system in general and the quality of education in Government Bilingual Teachers Training College (GBTTC) in particular. The main goal of school according to Philippe Meirieu (1993) is no longer to transmit only knowledge but to develop autonomy in the learner in order to make them later free and autonomous beings in society. It is on the basis of all this that we deemed it necessary to conduct research on explicit teaching and empowerment in learning among student teachers at GBTTC in Maroua. In this article, we will address the issue, followed by the theoretical insertion, then the methodology and finally results.

#### **Problematic**

In this section, we will discuss the study context, problem formulation and objectives.

# **Contexts of study**

The usual practice that the teacher should have is to check if the learner is able to fend for himself with the transmitted knowledge, it is not surprising to find that those who are already autonomous become more so, while the others are abandoned to tthemselves, without support and without help to meet the ever greater challenges. It is in the sense that Vygotsky (1978) showed, at the beginning of the last century, that abandonment is the opposite of empowerment. Leaving a learner who needs support to fend for himself therefore does not promote his autonomy, but puts him in a situation of failure due to abandonment. Over the past two decades, in the face of academic failure, Cameroon has undertaken educational reforms. Beyond the usual administrative changes, the Competency-Based Approach (CBA) and the constructivist and socio-constructivist discourse have been at the heart of these changes.

## Position of the problem

Nowadays, new pedagogy or active methods are generally concerned with the issue of learner empowerment. This concern comes up constantly in the school field, which makes it an official prescription of the common base of knowledge and skills. Empowering practices are developing today in training for children and adults, particularly in selfmanagement, self-training and self-regulation (Carré, 2010, Mottier-Lopez, 2012). They respond to a social demand calling on each learner to become more responsible for their learning and offer new tools and devices for learning and for matching training / socio-professional integration (Audran, 2007). Already in the 1920s, the French educator Célestin Freinet, who developed an original pedagogy, based on the free expression of children, in which he was very keen to develop student autonomy. Moreover, The Dalton Plan in the United States of America in 1920 marks the birth of the individualization of pedagogical tasks through a system of contracts (assignments). The idea of autonomy appeared explicitly in the field of education in the early 1970s.

In the work of certain researchers like Cosnefroy (2011) and Hadji (2012), on the empowerment of learning in the field of ICT, we can observe in the classes a drift consisting in considering teaching autonomy as a teaching of resourcefulness and individualism. This is particularly the case with working with files. The learner is offered an overly individualized path and it is up to the learner to force themselves to understand the content. In this way, there is no real interaction between the students and class life is threatened. Indeed, it was at this time that autonomous work developed in a European context where the search for individualization and activation of pupils became a dominant concern. In this sense, Margueron (1979) states that: "The global perspective is to form adults who can learn to communicate, capable of critical thinking and responsibility, capable of honouring a contract of carrying out a task until the end. These skills clearly play a decisive role in the labour market today. Workers are expected to take initiatives, a capacity to adapt to new situations, a constant desire to train and work in teams ". In this context, one could indeed wonder if independent work does not rhyme with individualism and each for himself. Helping students acquire more autonomy, whether in their work, in the classroom or in their relationship with adults, is an endeavour that effectively centers on the individual and his uniqueness. Philippe Meirieu (1993) denounces the fact that sometimes what is really taught in school by way of autonomy is a certain capacity for resourcefulness which contrasts with the values that the notion of autonomy carries in it and which gives the pupil attitudes which will allow him to achieve his personal ends. Yet, according to him, true autonomy is above all the learning of a certain conduct of oneself. If we transpose this definition of Kantian origin to pedagogy, it is perhaps a question of providing the student with tools in order to help him act alone, to make decisions, to make choices. These tools must be used in a group, in a relationship with others. If autonomy would be

dependent on the learner or individualism, the teacher would only have to think about it to create just the appropriate learning situations for this purpose. Such an understanding of autonomy is very complex insofar as this study is specifically interested in the peculiarity of the explicit teaching approach which is "guided practice". It not only takes into account the learner as the main actor, but it promotes the idea of group learning, dependent carried out with the support of the teacher. Within the framework of academic training, the teacher has his role to play, not in the transmission of knowledge, but in the marking out of a field in which the learner can gradually develop his autonomy to fully ensure his learning. .it seems necessary to remember that autonomy is not individual, isolated learning, but is fully embedded in a social context with its predetermined constraints and parameters. Little (1994) even used a very pejorative term, autism, to designate the learning situation in which the learner is completely independent of any context.

"[...] All learning is the product of interaction: the learner's autonomy does not come spontaneously from within the learner, but develops from the learner's dialogue with the world to which he is belongs [...] the total independence of others is not the mark autonomy, but autism, a defining characteristic of what is incapable of forming normal social contacts "(Little, 1994: 431).

Training for autonomy would therefore be learning to act alone in the interest of all, which gives rise to the idea of universality? In the same vein, Roger Brunot and Laurence Grosjean think that the pedagogy of autonomy is like a pedagogy of "hetero structuring", in the sense that we recognize that we learn everything from others, starting with language, but that "the others do not do everything" and that it remains to .appropriate if not reinvent knowledge to become autonomous and in turn play the role in social enrichment and "transmission" to others. However, it is also a pedagogy of "inter-structuring" because, one learns not only to work in a team but also to build one's knowledge with and through others. It is about autonomy by and for others.

A lesson using explicit instruction will take place in three phases. Initially, the teacher will use modelling to demonstrate how to proceed to perform a given task. The guided practice will then allow the learners to experience this task while receiving the necessary support. Eventually, autonomous practice will be achieved and will allow the task to be performed without assistance. Therefore, it is important for us in this work to involve the last phase of explicit teaching, which is consolidation. During modelling, the teacher performs a task in front of the students while making transparent his reasoning around the strategies he uses. Indeed, according to several researchers (Lafortune, Jacob and Hebert, 2000; Tardif, 1992), modelling is an educational intervention of choice to promote the acquisition of procedural knowledge. The modelling must begin with the awakening of the interest of the learner clientele. The teacher will try to motivate his class, to put the switches in the "open" position, using a scenario. Motivation will be more likely to be achieved with a meaningful scenario. This step is essential to remove the first barrier in the learning process, namely the anticipation of a minimum of pleasure by the limbic brain (Denommé and Roy, 2009). The links between the new knowledge to be acquired and previous knowledge should be clearly indicated. This will alleviate the feeling of insecurity perceived by the reptilian

brain in the face of the new task. Learning based on prior knowledge will be more effective, but recalling prior knowledge is not always automatic. The intervention of the teacher to recall this knowledge is therefore desirable (Ambrose, Bridges, Dipietro, Lovett, Norman, 2010). Then comes the actual modelling. The teacher should perform the exercise in front of his or her class by "putting a loudspeaker on his or her thought" (Bissonnette and Richard, 2001). This is to verbalize any reasoning used to perform the exercise. This modelling should clearly highlight the cognitive strategies involved, as well as when and how to use them. a summary of the steps involved in this modelling can be distributed as a learning aid, which will reduce the load on the working memory that would otherwise be busy memorizing these steps.

The choice of the task to be modelled must take into account the amount of information presented in order to respect the limits of working memory. .in fact, presenting too much information will overload working memory, which will impair comprehension (Bissonnette and Richard, 2005). Once the modelling is complete, it is necessary to ensure that the learners understand the modelling. It may then be wise to question them about what they have understood or to solicit a few who can guide the performance of another modelling (Gauthier, Bissonnette and Richard, 2013). A memory aid on the targeted know-how can then be provided to the pupils or, even better, it can be produced in collaboration with the pupils. Mmodelling constitutes the heart of the stages of explicit pedagogy, but we have observed that this stage is monopolized by certain teachers, the pupil is passive and receptive, the class becomes a place where the pupil opens his ears greatly, and the teacher dominates this phase without. Concretization of his knowledge with concrete didactic materials, nor visual projections. Regarding the modelling, we found that all seven (07) teachers or 100% do not ensure the understanding that the students have during the modelling. Gauthier, Bissonnette and Richard (2013) state that it may be wise then to question them about what they have understood or to ask a few who can guide the realization of another modelling. Some of the learners do not participate in the group work at all, as they leave it to the stronger to do everything in the guided practice phase.

The guided practice phase involves giving learners a task to perform similar to the one that was modelled. Usually, this work is done as a team, which allows those involved to exchange ideas in order to check whether their representations are correct. Bourgeois (2007), makes us aware of the fact that "social interactions are influenced by the structure of the relationship in which they are inscribed, by the type of task with which learners are confronted, by the way in which social interactions are organized and by the. socio-affective dimensions in which they take place" (Carré & Caspar, 2004: 310).teamwork facilitates feedback work since the teacher intervenes after an initial validation by peers. During our presurvey, we noted after the guided practical phase, five (05) teachers out of seven (07), i e a percentage of 71.42%, tend to say "Are there any questions?". "These five teachers believe that in the absence of the questions, the learners should be considered to have understood the material. Many learners do not dare to demonstrate their incomprehension. To this end, Jolicoeur-Yelle (2013) thinks that it is a trap to be avoided when practicing explicit teaching. Likewise, Rosenshine (source?) Recommends checking all learners' answers to really make sure they understand the lesson. In guided practice

phase, out of seven (07) lessons observed, five (05) teachers or 71.42% out of seven (07) do not organize this phase. They give presentations, brief explanations and question the learners; under these conditions learners are likely to make many mistakes immediately. This shows that all learners do not work together and each does not get involved and contribute to the construction of the communion of purpose of the group, which negatively impacts the empowerment in learning. As a departmental delegate for normal education in Diamaré underlined, in an interview, a teacher who neglects this principle will probably have great difficulty in achieving his declared objective, which is to encourage his learners to build their autonomy by achieving objectives. Previously formulated. Among the seven (07), five (05) teachers or 71.42% do not give time, do not guide the learners and take this phase seriously. In the consolidation phase, we noted that among the seven (7) lessons observed, five (5) teachers or 71.41% regularly practice the consolidation phase. At the end of each lesson the teachers give exercises either they correct with the learners in class or send them home to treat them. In the same phase, four (04) teachers or 57.14% revise the previous lesson at the start of each new lesson. To this end, we find that, those who practice this phase promote repetition and continuity in learning, consequently, this increases memorization and positively impacts the empowerment of student learning. Five (05) BEPC IIA students tell us that, the more the teachers multiply the exercises in class or give them exercises to do at home, as well as the revision, the more this allows them not only to be autonomous but to compose the sequential assessment or even exams end of term with certainty. In addition, out of seven (07) teachers questioned, four (04) or 57.14%, affirm that the consolidation phase is punctuated by activities that they describe as boring. "It's a waste of time, because the learner is going to go home to learn and we will then be assessed during the various exams. « However, if this were practiced rigorously, it would promote the empowerment of learners, as stated by Odile and Jean Valentin (1981), "the correction of exercises, like any act of evaluation, needs time of attention, both on the side of the correctors and on the corrected. It is a heavy activity, because of its implications in the experiences of each other and its consequences ".

The problem that arises is that much of the work of learners is done outside of classroom time i e at home and other places accompanied by substitute teachers. Moreover, it is regrettable to note that once out of school, many student teachers almost completely abandon the good didactic-pedagogical practices received during initial training. In short, they no longer perform their function with relevance and rigor. Aautonomy therefore seems to be a solution to make this educational exercise effective and this with a view to bringing its educational audience to solve alone the problems encountered in schools and to adapt better in professional life. The main question is formulated as follows: Does explicit teaching influence the autonomisation of learning among student teachers at GBTTC in Maroua? .from this follow three others, this time specific; does modelling impact the autonomisation of learning among student teachers at GBTTC in Maroua? Moreover, does guided practice promote learning autonomisation among student teachers at GBTTC in Maroua? Finally, does the practice of consolidation determine the autonomisation of learning among student teachers at GBTTC in Maroua? The answers to these different questions lead us to formulate the research hypotheses as follows, the general hypothesis which leads this research being the following: Explicit teaching influences the empowerment in learning among student teachers of the GBTTC of Maroua. More specifically, modelling impacts empowerment in learning, guided practice promotes empowerment in learning, the practice of consolidation determines empowerment in learning. The general objective of this study is to examine to what extent explicit teaching influences autonomisation in learning among student teachers at GBTTC in Maroua. More specifically, it is a question of verifying whether modelling has an impact on empowerment in learning. .to show that guided practice promotes autonomisation in learning. To show that consolidation determines the autonomisation of learning among student teachers at GBTTC in Maroua. This study will help to understand the teaching process and the empowerment in learning as well as the reflection on the factors that determine them. .this work aims to contribute to enriching the scientific literature, particularly on the issue of autonomy in relation to explicit teaching.

#### **Theoretical insertion**

More recently, Gauthier, Bissonnette and Richard (2013), based on the work of Rosenshine and Stevens and other works on the effectiveness of teaching, have described the model of explicit teaching, which has three stages: the preparation (P); interaction with students (I); the. Consolidation (C). These three times correspond to what Gauthier's team (2013) calls the "PIC" model. In addition, each of these times is associated with a series of proposed actions. Thus, during the first phase, preparation (P), the teacher must in particular specify the learning objectives; identify the main ideas of the curriculum and the prior knowledge necessary for learning, organize the curriculum from simple to complex, etc. Eeffective teaching as identified in many publications incorporates the elements stated above such as feedback, remediation and direct instruction. There are several models of effective teaching: direct teaching (Bereiter & Engelmann, 1966), precision teaching (Lindsley, 1990), or even explicit teaching (Rosenshine, 1986). Gauthier et al. (2013) group together these different models of effective teaching under the term instructions teaching (explicit teaching). These models have common characteristics: verification of the prerequisites and consistency with what was previously seen with the students, presentation of the material in small units, supervised exercises then independent exercises, the whole being accompanied by numerous feedbacks with learners. Explicit teaching is part of a pedagogical trend favouring a metacognitive practice modelled by the teacher (Bissonnette et al., 2010) and placing the learner at the center of his learning. This teaching method goes beyond knowledge of spelling rules, it leads learners to rigorous and autonomous practice of their knowledge and skills (Bonin, Fayol and Pacton, 2003). In the work of Rosenshine (2008) and Rupley (2009), explicit teaching is a teaching model based on a direct, structured and intensive approach. The emphasis is on careful preparation of lessons, the effectiveness of which is verified with learners and which is subsequently readjusted before being implemented on a larger scale. Here the trainer segments his lesson into different small steps and, for each of them, supports the learners in order to lead them towards autonomy and mastery of the concept. This teaching is particularly effective for learners with learning difficulties since it allows them to increase their pace of learning (Somerville & Leach, 1988).

The Modelling: Mmodelling is a pedagogical technique during which a teacher implements, in front of the learners who observe him, an act, a process, a process or a learning strategy while verbalizing his reflection aloud with the aim that the latter appropriate it and the reinvest (Gauthier, Bissonnette and Richard, 2013; Hollingsworth and Ybarra, 2009). Mmodelling allows learners to get answers to questions like "How do I go about it?" Or "What should I be thinking about while doing this action?" ". During this phase he performs a task in front of the learners and describes what he is doing as he is doing it. He reasons out loud and thus makes his own expert process explicit with clear language (precise and concise). The quality of the modelling will also depend on the quality and quantity of the examples and counter-examples chosen. Rosenshine, (2010: 14) argues that, "Providing learners with models and examples of previously performed exercises can help them learn how to solve problems faster. For this purpose, the information is necessarily presented in small units in a sequence which goes from the simple to the complex and the easy to respect the limits of the working memory (designated as such with reference to the number of information units with which the human brain is able to work at the same time) the teacher demonstrates step by step to avoid overloading this working memory (Rosenshine, 2010). It is important to present only a small number of concepts at a time, as the level of attention of learners is high. In this first step, the teacher takes care to present the information in small units, from the simplest to the most complex; it is the model on which the learner will then rely. In this model, it must explain all the reasoning and behaviours implemented to carry out the demonstration or presentation. There is therefore an explanation of cognitive and metacognitive aspects; it is not therefore a question of showing a "cooking recipe" to apply without understanding its organization. Once this step is well done, the teacher can move on to guided or guided practice.

Guided practice: Guided practice is an essential instructional strategy and, unfortunately, many teachers usually do not spend enough time on it. .once he has presented the task at hand, once he has shaped what to do in front of the learners, the teacher puts them to work. At this time, rather than remaining at his desk, he circulates around the class to observe how the learners react to the requested task, in order to understand how the message sent has been understood. This stage is favoured by teamwork which allows learners to check their understanding by exchanging ideas with each other. Too often, we think that what we have said has been accepted as stated. To this end, Jean Pierre Astolfi (1995), underlines that autonomous work produces play, provokes changes of point of view on what knowledge is, and this is perhaps what learners lack the most, get a sufficiently precise idea of what the appropriation of the knowledge that they are practicing too blindly. However, there is usually a difference between what the teacher presents and what the learners retain. It is by walking through the corridors during the guided practice stage that the teacher will detect the level of understanding of the learners, the quantity and the type of errors they make, if the misunderstanding is limited to few learners or generalized to the whole class. In this case, it stops everything and resumes the lesson to prevent the learners from integrating the error as the rule. A crystallized error takes much longer to be corrected. So it is better to catch errors as early as possible in order to save precious time. To this end, the guided practice phase is the element that most distinguishes explicit teaching from traditional teaching. In traditional teaching, it is often the case

that learners do not receive feedback until the exercises are completed and then corrected (Bissonnette & Richard, 2005). Explicit teaching, through its guided practice phase, will ensure that mistakes are corrected quickly before they lead to misrepresentation. In addition to frequently questioning learners, it is also important to give them keys to understanding (procedural promt). Pressley and Woloshyn (2006), present a series of research-validated strategies to help learners complete required tasks. For example, to help learners compare one thing to another, the teacher presents them with a sheet to facilitate comparison: two columns, comparison parameters. This kind of procedure or prompt procedural in English guides the learner and makes it easier to understand and complete the task at hand. At the guided practice stage, elicit responses from all learners and continue practicing until a high success rate (80%) is achieved. If necessary, provide additional explanations and continue until the goal is reached. It is an explicit sequence of instruction emphasizing teacherguided practice. This form of systematic training is particularly used for the acquisition of metalinguistic and mathematical abilities (Watteau, 2001). It is a teaching-learning sequence based on the principles of inductive inference. This approach recommended by Barth (1987), allows the learner, with the help of positive examples, as well as negative examples, to go beyond the information initially given and to reach a new conclusion, making it possible to identify all the attributes of a concept. .So there are some common elements there such as the use of guided practice and the use of an established sequence of interventions to promote learning.

During guided practice, the teacher questions the learners to check their understanding. It is also referred to as directed practice. Indeed, the teacher "directs" the learner in the sense that it is a question of making him explain his implicit reasoning in a practice situation. The explanation of the reasoning by the learner is important because it helps to ensure that the answer was correct is the result of correct reasoning (and not the result of chance or faulty reasoning). In this phase the teacher questions the learners, gives them clues, reminds them of the modeling performed and gradually decreases the help provided. Two principles follow guided practice:

Questioning and feedback that allow the learner to validate his understanding and support his motivation; The recommended number of exercises for a high threshold for success. During this phase the support for learners in difficulty must be appropriate. It can be gestures, suggestions, directives, highlighting certain elements of the subject under study. It serves to attract attention, to act more effectively. According to Acher and Hugues (cited by Gauthier et al. 2013) several types of help are possible: physical (parrying a learner in gymnastics), verbal (reminders, questions, instructions given while they perform the task) and visual (posters, tables, cheat sheet).

**Consolidation:** Gauthier, Bissonnette and Richard (2013) group together the main strategies of explicit teaching in connection with the management of learning in three main pedagogical stages: preparation for teaching, interaction with learners and consolidation of learning. These three moments cover "the set of strategies that the teacher deploys in the classroom to facilitate the learning of the learners." The last phase of explicit teaching is to consolidate the learning achieved by the learners. Gauthier, Bissonnette and Richard (2013) mention three processes: homework, daily, weekly and

monthly reviews and also formative and summative evaluation. According to these authors, the revisions "offer additional opportunities to develop solid and automated knowledge in the learners". The same is true of frequent formative assessment which "stimulates learners' learning by demanding greater effort from them while providing rapid feedback" (ibid .: 221). Most of the authors referring to the notion of consolidation implicitly or explicitly attribute four properties to it: Consolidation corresponds to the fixing of the written record. The term "consolidation" itself expresses the idea that information undergoes a treatment which makes it more "stable" or more "solid" when it enters memory. We can therefore consider that consolidation, in its strict sense, is precisely the operation of fixing the trace; it would thus be necessary for the preservation of information in memory (Glickman, 1961; McGaugh, 1966). .therefore, the terms fixation and consolidation are often used interchangeably (Weissman, 1967; Davis, 1968; Alpern and McGaugh, 1968). Consolidation follows immediately after the acquisition.

The consolidation originates in the acquisition (operationally with the completion of the acquisition) and continues for a relatively short period of time after the completion of the acquisition. The time required for consolidation is generally estimated at a few minutes, this time being measured by the time during which most of the disturbing agents remain effective. The lability of the trace is an exclusive property of the period immediately following the acquisition; after this time, consolidation is achieved and the trace definitively escapes the action of the disturbing agents (Ghorover and Schiller, 1966; McGaugh, 1966). From a framework of cognitive, affective and pedagogical references, the research has identified three conditions likely to help the student to recognize the transfer relations that he performs between cognition and the communications, objects of his learning. The three conditions are the systematic support of a complete standard process of transfer to the learning achieved in each lesson (Tardif, 1999), the consolidation of learning by means of authentic situations for the learner allowing him to see the usefulness of the cognition in .various spaces of his life (Viau, 1994) and the use of a global thematic approach favorable to the creation of general interdisciplinary relations (Ivanitskaya et al, 2002). These three conditions form the referential framework of the project and originate from the standard transfer model proposed by Tardif (1999), on the one hand, and from the practices of interdisciplinary higher education set out by Ivanitskaya et al. (2002), on the other hand. The evaluation of learning aims to check whether learners are able to reinvest what they have learned during learning situations in evaluation situations. When a teacher subjects his learners to assessments at the end of their learning, he is in fact seeking to verify their ability to transfer the acquired knowledge, since the assessment asks them to apply their new knowledge in a context which is generally different from that which prevailed during the initial apprenticeship (Bissonnette, 2005) the end of the lesson during which the teacher ensures the consolidation of the learning achieved. Consolidation represents a privileged time to formally extract, from what has been seen, heard and performed in a learning situation, the concepts, strategies or attitudes that are essential to remember (Gauthier et al. 2007: 4). By selecting and summarizing the essential elements to remember, this step promotes the integration and organization of learning in memory. At the close, the teacher also announces the next lesson and continues the automation of learning. Finally, during the last phase, that of consolidation

(C), Gauthier and his collaborators (2013) propose the following actions: solidify learning through homework and weekly and monthly reviews; assess in a formative and summative manner; check the transfer of learning. During this phase, the teacher will focus on two main strategies to ensure the consolidation and automation of learning: assigning homework and carrying out daily, weekly and monthly reviews in class will later generate homework that learners have done poorly or not done. Generally speaking, the authors advocate short and frequent homework assignments that involve the use of simple skills. .the teacher carefully prepares homework, and learners practice doing them in class, then review them collectively weekly and monthly reviews: Reviews help organize new knowledge into a network and make it possible to mobilize it when it is needed. Effective teachers devote 15 to 20% of their teaching time to weekly and monthly review (Bacquet, Poujol, Soulié, Decour and Guerritte-hess, 1996).

#### Autonomisation in learning

According to Meirieu (1984), autonomy is at the center of all discourse. Training independent learners is already a major concern at this time. What is practiced in school would be training in resourcefulness instead of autonomy. .we train learners who are able to do their best with as little effort as possible, to pretend to listen rather than being really attentive, to interpret what the teacher wants us to say rather than to understand really what he says, to escape the sanction when we have .not doing the expected work, not to be questioned when you are not doing your lesson. This is how attitudes are built that make it possible to appear to be a good student rather than really being and to deal with the confusion of academic proposals. .school alone is not responsible for this confusion between autonomy and resourcefulness: there are a multitude of practices that go in this direction. But the school has a duty to resist and should not hesitate to work against the grain. .it must train for true autonomy, it must teach all learners to see the long-term consequences of what they do instead of sticking to immediate profitability. .according to Meirieu (ibid), the main goal of the school is not only to transmit knowledge but to develop the autonomy of learners in order to make them later free and autonomous beings of society. Meirieu (op.cit) adds that autonomy is built at the meeting of three educational concerns which should be those of every teacher. Regarding the teaching of autonomy, Meirieu (op.cit) identifies three dimensions:

On the one hand, education must ensure the formation of certain founding values, such as, for example, learning to think before acting or even not to act solely on the basis of current interests. .for this, the learner therefore needs limits which allow him to situate himself and adopt a condition favorable to learning. On the other hand, the teacher also has the task of training autonomy in the management of school work. .for example by offering the student (or better by building with him) working tools: a tool folder available, by organizing the class in a clear way and teaching students to better manage their time. Finally, he must be able to assess the level of each learner to make him work according to his aptitudes and difficulties. Here we find the idea of differentiation at work. According to Albero, the notion of autonomy has been the breeding ground for ideological debate in the world of education for forty years and, for the past ten years, the notion of self-study seems to have become an extension of it. Albero (op.cit.) distinguishes six main areas of application in

situations of autonomy in training situations (technical, informational, methodological, social, cognitive and metacognitive). It attempts to show that this notion encompasses, in the discourse of teachers, extremely diverse skills, the common domain of which is their possible acquisition. While it is indeed impossible to teach and learn to be autonomous globally, it is possible to envisage training and learning in a specific way. For Albero (2000), learning in autonomy invites us to think differently the teaching-learning modeling proposed by Houssaye (1988). It speaks of a change in the educational paradigm in which the teacher is no longer a stakeholder in the programming and performance of learning tasks, which requires the learner to set up a new relationship to knowledge, and from the teacher of supportive postures (Paul, 2004).thus, empowerment refers to the set of conditions created by the teacher to support the development of learner autonomy. The various empowerment experiences that have taken place in an institutional context (mainly at the University) remind us that taking charge of one's learning is not just about learning "without a teacher". .the creation of digital technology resource centers does not necessarily lead to empowering learning practices in learners. It is more the development of meta-reflexive capacities in the learner that allows him to build learning skills independently and to learn from experiences that are no longer organized upstream by the teacher. This "knowing how to learn" is essential to the empowerment process (Albero and Poteaux, 2010).moreover, the integration into a school environment of a learning modality mainly conceptualized with regard to andragogy is not without asking questions: "is autonomy in the school form still autonomy? .with the need to reconcile the learner's personal project with that of certification and programs, autonomy clearly becomes an academic or training good to be acquired "(Raab, 2016).

Despite an official framework more favorable to autonomy, the conditions for its implementation in a school context still raise questions. In particular, the pedagogy of autonomy has often been described as unfavorable, even excluding (Bonnery, 2007) for audiences from backgrounds less educated. However, supporting learners towards autonomy cannot simply be a techno-pedagogical response but it requires reinvesting in the pedagogical relationship in a different way, regardless of the learners. .some authors such as Raab (2016), for kindergarten, recommend integrating Care-related practices into the didactic repertoire of teachers in order to better support the empowerment of all learners. Autonomous learning practices are based on the levers of learners' "wanting to learn", "being able to learn" and "knowing how to learn". However, "beyond the intention to learn, the exercise of proactive and metacognitive control over the learning process is essential. The mere presence of an intention is a necessary condition for self-directed learning, but it is far from sufficient" (Carré 2000, p. 55 cited by Tremblay 2003, p. 133), only the support of the teacher can articulate these three dimensions wisely, giving shape to a "pedagogy of autonomy "which should be thematized according to the age of the learners and the means available to conduct it. Moreover, there is no one theory that seems better than the others, but they complement and criticize each other to point out the inadequacies of each of them and the added value. These theories have limitations in that they may take longer than the transmissive approach. They also show the place of good skills on the part of the teacher in the design of teaching sequences and classroom management.

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Table 1: Presentation of the targeted population

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BEPC I A	BEPC I B	BEPC II A	BEPC II B	PROB I	BEPC III A	BEPC III B	PROBII	BACC	BA
13	08	24	25	12	17	12	18	21	09
13	17	21	16	14	26	27	12	12	19

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Source: Dean Head Office; distribution sheet for student teachers at GBTTC Maroua 2019-2020.

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Finally, it can sometimes be difficult to determine the relevant problems to present to the learners, both from a didactic and disciplinary point of view. As for group dynamics, the coproduction of knowledge, we realize that it is often the same as invest themselves in the difficulties of changing habits, mental images, as well as the representations of certain actors. As for the opposition, the difficulty of finding an agreement, clearing the blockage, accepting the withdrawal or validating compliance with the opinion of the greatest number or the leader. After the theoretical insertion, we approach the methodology in the next point.

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# METHODOLOGY

The objective of this point is to describe and justify the methodological choices made in order to verify the hypotheses. Indeed, it will be a question of presenting the population, the sample, the data collection and processing tools. .the research in question here is presented as both quantitative and qualitative research. The research is being carried out at the Normal School of Government Bilingual Teachers Training College (GBTTC). .on the human level, the institution is currently headed by a director, assisted by a deputy director, a general supervisor, the various heads of services and offices such as the head of CAFS (Chief of Administrative and Financial Service), the Head of Service studies and internships (SES), the Heads of Offices for Administrative Affairs, Budget and Material, Education and Internship and a secretary. Each is occupied according to the missions that are his. The teaching staff, in total, consists of fifty-nine (59) individuals including twenty-three (23) men and thirty-six (36) women. .these teachers give courses in twenty five (25) disciplines constituting the training program. .. Regarding the learners, there is a total of three hundred and thirty six (336) student teachers of which one hundred and fifty nine (159) boys and one hundred and seventy-seven (177) girls for the year 2019 -2020 (global statistics table). In this study we chose a sample representing 25% of the target population, i.e. eighty-four (84) subjects including thirteen (13) for BEPC 1, twenty-one (21) for BEPC 2, twenty-one (21) for BEPC 3, six (06) for probation 1, eight (08) for probation 2 and fifteen (15) for .Baccalaureate. The choice fell on the technique of nonprobability sampling. For this purpose, we have opted for the snowball sampling method. .this choice came to us following the closure of schools following the decision of the Head of State communicated by the Prime Minister on 03/18/2020 due to the first case of COVID-19 patient in Cameroon. .the school being closed, it was not easy for us to find the student teachers at the GBTTC in Maroua, so we chose a few learners corresponding to the profile sought and asked them to give us the contacts of their comrades. In this part it will be a question of presenting and describing the data collection instrument, as well as its validation before the field trip. The questionnaire is the tool that allowed us to collect data in the field. It was addressed to the student teachers of the GBTTC in Maroua. The objective of this instrument is to verify whether explicit teaching promotes empowerment in the learning of the latter.

The data collection instrument comprises seventeen (17) items grouped into five (05) major headings. After the preamble, we have the identification of the respondents, consisting of five (05) items which provide information on the section, level, grade repetition, sex and age. .the third section deals with modeling in the teaching / learning process. It has three (03) items. The fourth section concerns guided practice, it contains three (03) items. The fifth section has three (03) items and relates to consolidation and the last relates to empowerment with three (03) items. The modalities are: Always / Often / Never. .As part of this work, we used semi-structured interviews which include a mode of investigation, a grid of structured themes which is defined beforehand. .its aim is to retain the views of fifteen (15) GBTTC teachers on the effective practice of the explicit teaching approach in this school. Including modeling, guided practice and consolidation practice. The data collected in the field from the questionnaire was processed automatically by SPSS software version 20.0 and propositional content analysis was used for the qualitative data and allowed inferences to be made by objectively identifying and .systematically the characteristics of the message. This section has been devoted to the methodological approach; in the next one, we will present the results and their discussion.

TOTAL

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# RESULTS

It will be a question of presenting the results and discussing them.

Tableau 3: ANOVA<sup>a</sup>

Mo	odel	Sum of squares	ddl	Mean of squares	D	Sig.
1	Régression	,303	1	,303	,554	,459 <sup>b</sup>
	Résidu	44,840	82	,547		
	Total	45,143	83			

#### Modeling as the basis of learner empowerment

Table 2. Summary of models

Model	R	R-two	R-two <b>adjusted</b>	Standard estimation Errors			
1	,082ª	,087	-,005	,73948			
a. Valeurs prédites : (constantes), VI1							

The table above summarizes the simple linear regression model. it can be seen from this table that, the correlation coefficient (R) is of the order of 0.082; which demonstrates a very weak and non-significant positive correlation because it moves away from the number 1 and approaches the number 0 and the coefficient of determination R2 is of the order of (0.87) = 8.7%.; this shows that the VI1: "modeling" explains the DV "the autonomisation of the learning of student teachers of the GBTTC of Maroua" at 8.7% and the remainder 91.3% is predicted by factors outside the model . Which means that there is no relationship between VI1 and DV. So the relationship is insignificant.

- Si Sig > 0,05 alors Ho est acceptée et Ha rejetée ;
- Si Sig < 0,05 alors Ho est rejetée et Ha acceptée ;

Then, as p (0.554) greater than alpha (0.05), therefore (0.554>0.05) Ha is invalidated then Ho is confirmed. There is no linear relationship between the modeling and the autonomisation of the learning of the student teachers of the GBTTC in Maroua. Finally, with the 5% margin of error, HR1 is invalidated. Therefore, the modeling does not impact the autonomisation of student teachers at the GBTTC in Maroua. The results allowed us to see that modeling seems to be playing its part. But in reality its role is in contradiction with the principles conveyed by explicit teaching. The proof is that the approach practiced by the teachers is not producing the expected effect, that is to say developing the autonomisation of learning. The results on the ground show that the modeling does not have a considerable impact on the autonomisation of the learning of the student teachers of the GBTTC of Maroua. .in other words, the way in which the teachers of the GBTTC of Maroua use or practice the modeling stage of the explicit teaching does not impact the autonomisation of the learning of the student teachers of the GBTTC of Maroua.

This can be explained by the fact that the teachers of the GBTTC in Maroua do not yet master this approach. In addition, according to the explanations of the Director of the school and certain regional inspectors of normal education in the said region, teachers find it difficult to use teaching tools and teaching materials from the point of view of teaching. explicit. Therefore, the main ideas that emerge from these explanations are that some teachers find it difficult to switch from PCA to explicit instruction. Others seek to comply with the demands of explicit teaching, but their lack of continuing education and mastery of the approach prevents them from making the most of them. Moreover, Lieuga, Nizegha & Nwayin (2013) believe that student teachers are the first obstacle to their own autonomy. .certain behaviors such as untimely outings, telephone calls in the classroom, abusive requests for permission and more often during the explanation of the course as well as delays are frequent among student teachers. .it proves that many lose track and others are not focused during this time. Moreover, many student teachers believe that training at GBTTC does not necessarily guarantee them a job in the public or private sector. Motivating these learners is not easy for the teacher, but it has to come from the learner himself. Indeed, the first condition of autonomy for learners is awareness. According to Overmann (2007), the first step towards autonomy is taken when the latter recognizes that he is responsible for his learning. Another condition for learner autonomy is motivation. Research (Usshioda 1996) has indeed shown the link between intrinsic motivation and autonomy. The more a learner wants to learn, the more they will engage in what they are doing and the more independent they will be. .This means that without these prerequisites, autonomy is practically impossible because we cannot make a learner autonomous, we can only help him to become so by giving him the necessary tools and by guiding him.

# The contribution of guided practice to building learner empowerment

Tableau 4. Recapitulative des model

Model	R	R-two	R-two ajustd	Standard estimation Errors
1	,281ª	,069	,068	,71211

The table above summarizes the simple linear regression model. It can be seen from this table that the correlation coefficient (R) is of the order of 0.281; which shows a very weak and insignificant positive correlation link as it moves further and further away from the number 1 and the coefficient of determination (R2) is of the order of 0.069 = 6.9% this shows that VI2: "the guided practice" explains the DV "the autonomisation of the learning of student teachers of the GBTTC of Maroua" at 5% and the remainder 93.1% is predicted by factors outside the model. which means that the relationship between VI2 and DV is insignificant.

Table 1. ANOVA<sup>a</sup>

Model		Sum of squares	Ddl	Mean of squares	D	Sig.
1	Regression	3,561	1	3,561	7,022	,010 <sup>b</sup>
	Residual	41,582	82	,507		
	Total	45,143	83			

This table, which is the ANOVA one, shows the F of Fishersnedecor. In this table we observe F (1.82) = 7.022 with the meaning P = 0.010. Then, as Flu (1.82) is less than calculated F (7.022) therefore (1.82 <5.146) and with p = 0.010, Ho is invalidated and Ha is confirmed. .there is a linear relationship between guided practice and the empowerment of student teachers at the GBTTC in Maroua. In conclusion, the guided practice promotes the learning autonomisation of student teachers at the GBTTC in Maroua. .the results of the present hypothesis corroborate Vygotsky's socio constructivist theory. So it turns out that the teacher is actually doing his job. Indeed, the socioconstructivist theory is based on the idea that all learning is the result of social interaction. Vygotsky (1934), thinks that in the ZPD, the role and function of the teacher changes: more than a transmitter of knowledge, he is a guide, a resource person, a tutor, a coach, a facilitator, a mediator. This idea is reinforced by Bruner (1996), for whom every teacher must develop in the learner three fundamental skills: anticipation, planning and regulation. Therefore, these skills develop the empowerment of learners' learning. According to socioconstructivist theory, the teacher as a mediator acts on the learner's ZPD by putting him in a situation of cognitive conflict, which allows him to progress in knowledge. Although a craftsman of his own knowledge, the learner always needs a guide. .It is this role of guide that makes the teacher special in explicit teaching. For educational psychologists, it is interactions that are at the heart of group work and that nurture or promote learning. .the term interaction designates "any joint, conflictual and / or cooperative action, bringing together two or more actors" (Vion, 1992). Michael Baker (2008), for his part, conceives of interaction in general as "a series of verbal or non-verbal actions which are interdependent, which influence each other". .It is only in the case where the mutual influences bear on the plane of the mental universes, that he reserves the notion of communicative interaction. .this then presupposes a certain degree of elaboration of a representation of the mental universe of the interlocutor, and of adaptation of the statements according to this representation "(Olry-Louis, 2003). From the above, compared to individual work, when learners work in groups, or support each other, they create group cohesion, provided that the group size is not too large to avoid the effects of domination of some compared to others. In fact, working together also favors what Bertucci et al. (2010) term "social support", both in terms of the overall success of each individual and in terms of interpersonal relationships. These same researchers also note that learners' self-esteem develops more in interactions in groups. This moment leads the teacher to check the quality of the understanding of the learners. .to this end, he offers them tasks similar to those performed during the modeling stage and through which he will question them in order to establish regular feedback. .this stage is facilitated by teamwork which allows learners to check their understanding by exchanging ideas with each other (Palincsar & Klenk, 1992). .guided practice helps learners to verify, adjust, consolidate and deepen their understanding of current learning, by linking this new knowledge with that which they already have in long-term memory (Rosenshine, 1997a, 1997b, 2001 and 2002).

# Consolidation as a decisive practice for building learner empowerment

Table 6. Recapitulation of models

Model	R	R-two	R-two ajusted	standard estimation Errors
1	,472 <sup>a</sup>	,086	,214	,65394

The table above summarizes the simple linear regression model. It can be seen from this table that the correlation coefficient (R) is of the order of 0.472; which shows a weak and significant positive correlation link as it moves away from the number 1 and the coefficient of determination (R2) is of the order of 0.086 = 8.6%. .this shows that VI3: "the consolidation" explains the DV "the autonomisation of the learning of student teachers of the GBTTC of Maroua" at 8.6% and the remainder 91.4% is predicted by the factors outside the model . This means that the relationship between VI3 and DV is significant.

Tableau 7: ANOVA<sup>a</sup>

Model		Sum of squares	ddl	Mean of squares	D	Sig.
1	Regression	10,076	1	10,076	23,562	,000 <sup>b</sup>
	Residual	35,067	82	,428		
	Total	45,143	83			

This table, which is the ANOVA one, shows the F of Fishersnedecor. In this table we observe F (1.82) = 23.562 with the meaning P = 0.000. As Flu (1.82) is less than calculated F (23.562), therefore (1.82 < 23.562) and with p = 0.000, Ho is invalidated and Ha is confirmed. There is a relationship between the consolidation signifying the autonomisation of the learning of the student teachers of the GBTTC of Maroua. In conclusion, the consolidation is significant in the empowerment of the learning of the student teachers of the GBTTC of Maroua. The results of this hypothesis corroborate once again the socio constructivist theory of Vygotsky, of Bruner which has a double meaning in the construction of knowledge, in the sense that the learner learns alone, but this is not sufficient hence, social intervention where the individual learns to .through others. It is because of these conditions that the teacher, although he guides, directs, supports and mediates, lets the learner work freely to build, consolidate and reinvest his knowledge on his own. In fact, in socio-constructivist theory, it is assumed that "knowledge is neither transmitted nor communicated, strictly speaking; they must always be built or rebuilt by the student, who alone learns "(Astolfi et al., 2008). Thus, the teacher's role is not so much to transmit knowledge as to support students in building their knowledge. The teacher must therefore promote the development of disciplinary skills and organize learning situations allowing students to build their knowledge actively and on their own (Vienneau, 2001). The student is active, more independent and interacts with his peers and with the teacher. .moreover, he is responsible for his

own learning, which can induce internal motivation, insofar as he transfers his skills into everyday life. Thus, Bruner, according to Labin (1975), recognizes that it is necessary to help the learner "... to discover for himself the truths which he must know, but to solve problems thanks to his natural creativity, with a minimum of stored knowledge ". In this context, a new distribution of roles is necessary in the classroom, with the learner's mission to solve problems and build knowledge; the role of the teacher being to create a favorable environment for learning, to choose situations, to organize group work. Moreover, he must place error at the heart of learning, because it is the expression of a form of knowledge (Girault, 2007). One might think that the daily review, exercises or learning achieved is a common practice among teachers. Yet it seems that, despite its recognized importance, it is not as widespread as one might think. This is why the last phase of explicit teaching is to consolidate the learning achieved by the learners. Gauthier, Bissonnette and Richard (2013) mention three processes: exercises, daily, weekly and monthly reviews and also formative and summative evaluation. According to these authors, the revisions "offer additional opportunities to develop solid and automated knowledge in the learners". .The same is true of frequent formative assessment which "stimulates student learning by requiring greater effort from them while providing rapid feedback" (ibid., p. 221). The evaluation of learning aims to check whether learners are able to reinvest what they have learned during learning situations in evaluation situations. when a teacher subjects his learners to assessments at the end of their learning, he is in fact seeking to verify their ability to transfer the acquired knowledge, since the assessment asks them to apply their new knowledge in a context which is generally different fromthat which prevailed during the initial apprenticeship (ibid., p.224). Similarly, G.nunziati in an article in the educational notebooks (special issue, May 1991) declares: "Whatever the goals one assigns to it, evaluation never begins when one" corrects "productions, any more than it ends with the last annotated leaf. It is part of an upstream process that affects both course content, teaching strategies, and individual reference models ". Thus, we therefore better understand the fact that a student teacher, being subjected to exercises, revisions and evaluations, he will be able to better consolidate his learning. This shows that the consolidation explains the autonomisation of learning for student teachers at the GBTTC in Maroua.

#### Conclusion

The work that has just been carried out focused on the study of the relationship that could exist between explicit teaching and the autonomisation of learning for student teachers of the GBTTC in Maroua. the general question was whether explicit teaching influences the autonomisation of learning for student teachers at the GBTTC in Maroua. We can therefore conclude that modeling is not a significant explanatory factor for the autonomisation of learning. .while guided practice and consolidation truly ensure autonomisation of student learning. Explicit teaching influences the autonomisation of learning for student teachers at GBTTC in Maroua.

# RÉFÉRENCES

Albero, B. & Poteaux, N. (2010). *Enjeux et dilemmes de l'autonomie. Une expérience d'autoformation à l'université*. Paris : Maison des sciences de l'homme.

- Albero, B. (2000). L'autoformation en contexte institutionnel. Du paradigme de l'instruction au paradigme de l'autonomie. Paris : L'Harmattan.
- Ambrose, S. A., Bridges, M. C., Dipietro, M. W., Lovett, M., Norman, M. K. (2010). Apports de la recherche à la qualité de l'enseignement. Paris : Publibook.
- André, B. (dir.). (1989). Autonomie et enseignement apprentissage des langues étrangères, Paris : Didier / Hatier.
- Audran, J. (2007). Dispositifs et situations, quelles articulations ? *Questions vives*.Paris : PUF.
- BAILLY, S., GUELY, E., NORMAND, C. & PEREIRO, M. (2012). Autonomisation et socialisation en contexte scolaire : Vingt ans après. Mélanges Pédagogiques. p. 93-102.
- Baker Michael (2008). Formes et processus de la résolution coopérative de problèmes : des savoirs aux pratiques éducatives. In Yviane Rouiller & Katia Lehraus (dir.), Vers des apprentissages en coopération : Rencontres et perspectives. Berne : Peter Lang, p. 107-130
- Bissonnette, S. et Richard, M. (2001). Comment construire des compétences en classe, des outils pour la réforme. Montréal : Chenelière/McGraw-Hill.
- Bissonnette, S. et Richard, M. (2005). Le cognitivisme et ses implications pédagogiques. In C. Gauthier et M. Tardif (dir.), La pédagogie, théories etpratiques de l'Antiquité à nos jours.Montréal : Gaëtan Morin, 309-332, pp.
- Bonin, P., Fayol, M. et Pacton, S. (2003). *Production verbale de mots*. Bruxelles : de Boeck.
- Bourgeois, E. (2007). Questions à Étienne Bourgeois, professeur de psychologie de l'éducation, Université de Louvain. In G. Chapelle et V. Dupriez (dir.), Enseigner. Paris : PUF,110-111,pp.
- Carré, P., Moisan, A., Poisson, D., Cyrot, P., Galvani, P. & Kaplan, J. (2010). L'autoformation – Perspectives de recherche. Paris : Presses universitaires de France.
- Carré, P. (2005). L'apprenance. Vers un nouveau rapport au savoir. Paris : Dunod.
- Cosnefroy, L. (2011). L'apprentissage autorégulé. Entre cognition et motivation. Grenoble : Presses universitaires de Grenoble.
- Daniel Willingham. (2018). Entrevue de Tom Sherrington. *Temps théoriques d'apprentissage.*
- Denommé, J. et Roy, M. (2009). Approche neuroscientifique de l'apprentissage et de l'enseignement, Essai en mathématiques (science de l'apprentissage). Montréal : Les Éditions Quebecor.

- Gauthier et alii., (2001). Comment planifier l'organisation des apprentissages ?Montréal : ERPI
- Gauthier, C., Mellouki, M., Simard, D., Bissonnette, S. & Richard, M. (2005). *Quelles sont les pédagogies efficaces* ? Un état de la recherche. Québec : Les Cahiers du débat.
- Gauthier, C., Bissonnette, S., & Richard, M. (2013). Enseignement explicite et réussite des élèves. La gestion des apprentissages. Bruxelles : De Boeck.
- Gersten, r. & Baker, S. (2001). teaching expressive writing to students with learning disabilities: A meta-analysis. *The Elementary School Journal*, 101(3), 251-272.
- Hadji, C. (2012). Comment impliquer l'élève dans ses apprentissages ? Paris : ESF.
- HOUSSAYE, J. (1988). Théorie et pratiques de l'éducation scolaire. Le triangle pédagogique. Tome 1. Berne : Peter Lang. How learning works. San Francisco : Jossey-Bass.
- Ivanitskaya, L., D. Clark, G. Montgomeryet R. Primeau, «Interdisciplinary Learning: Process and Outcomes», *Innovative Higher Education*, 27(2), 2002, p. 95-111.
- Jean-Pierre ASTOLFI, Cahiers pédagogiques n° 263.
- Little, D. (1994). "Learner autonomy: A Theoretical construct and its practical application". Dublin: Authentik.
- Margueron P., « *Travail autonomie, pédagogie de l'autonomie, deux décennies, réflexions et bilans* », in Enseigner l'histoire et la géographie; un métier en constante rénovation, AFDG, Mélanges offerts à Victor et Lucile Marbeau.
- Meirieu Ph. (1994). L'envers du tableau : quelle pédagogie pour quelle école ? Paris : ESF Éditeur.
- Meirieu Philippe, (1993). *Faire l'école, faire la classe*. Paris, Aubier Montaigne
- Mottier-Lopez, L. (2012). La régulation des apprentissages en classe. Bruxelles : De Boeck.
- Rosenshine & Steve, B. (1986). Vers un enseignement efficace des matières structurées – Un modèle d'action inspiré par le bilan des recherches processus-produit. Dans Crahay, D. & Lafontaine, D., L'art et la science de l'enseignement, Éditions Labor, p. 81-96.
- Rosenshine, B. (2010) Principes d'enseignements. *Pratiques éducatives, numéro 21*, 1-31.http://www.ibe.unesco.org/fileadmin/user\_upload/Publications/Educational\_Practice/E dPractices\_21f.pdf consulté le 22/11/2019.
- Tardif, J., Le transfert des apprentissages, Montréal, Les éditions logiques, 1999.
- Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, 23(3), 34-41

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