GUIDED LEARNING PEDAGOGY OR MECH: AN ALTERNATIVE TO THE LECTURE FOR TEACHING KNOWLEDGE AT UNIVERSITIES IN AFRICA

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ABSTRACT

The paper presented hereby, aims to propose an original method, the guided learning pedagogy, also called Méthode d'Enseignement des Connaissances selon Hounmènou, MECH, (or Hounmènou Knowledge Teaching Method), as an alternative to the magisterial lecture method, in teaching knowledge, during the new university age characterized, in the whole word, and particularly in Africa, by the necessities of modernization and improvement of the quality of the teaching. After he has pointed out the unsuitability of the old magisterial lecture method in a context within barely every university are using the course book as a learning tool, the author clarifies the guided learning pedagogy as an interactive method, and some of its academic advantages for students, based on experimental results.

Keywords: teaching, university, knowledge, guided learning pedagogy, magisterial lecture, coursebook, interactive method, achievement

1.0 INTRODUCTION

If there is a teaching technique prized by university teaching, it is the lecture. To the point that many observers believe they are legitimately justified in thinking that university teaching is the same as the lecture. This observation, which is true for universities in the North, is even more true for universities in the South, heirs to the pedagogical traditions of the former. This is how Bogniaho (2009) was able to write:

"This is why for a long time, the university was not really concerned with the mode of transmission of knowledge, and teachers being confirmed masters, students, disciples whose heads had to be filled.

From then on, a little diversified form of knowledge administration follows: ex cathedra transmission through the lecture course…." (p3)

Even in these times when most West African universities have chosen to modernize their training system, through the implementation of the Bachelor-Master-Doctorate (LMD) system, the lecture course still reigns in teaching practices. Even though, at the same time, in accordance with the implications of the said reform, in particular those of teaching and learning differently, many of these universities now require teachers to systematically make course notes (or syllabus in Belgium, and coursebook in English) available to students.

Now, isn't the institution of syllabuses, course notes, or coursebooks in African universities precisely an opportunity for teachers to use more interactive, more inclusive of learners and more effective teaching methods than the lecture? The objective of this article, aimed at innovation, and which is part of the fundamental reflection based on experience in pedagogy, is to show that the introduction of syllabuses in our universities necessarily calls for teachers, an alternative pedagogy to that of the lecture to teach knowledge: pedagogy through guided learning.

Before explaining its characteristics and conditions, and especially explaining why this method is more appropriate today than the lecture, we will first clarify the concepts on which this reflection is based.

2.0 CLARIFICATION OF CONCEPTS

The concepts whose content it seems useful to identify in this development are: lecture, syllabus, interactive teaching formula, knowledge, and especially pedagogy through guided learning.

2.1 Lecture

According to Bruter (2006), the notion of lecture refers to a teaching method in which a teacher presents his knowledge in front of an audience.

Before her, Tilman and Grootaers (1994) had already emphasized that this pedagogical strategy consists of a transmitter-trainer transmitting objects of knowledge to receiver- learners, with the aim of recording the content thus transmitted by said learners. In this approach, the initiative is entirely in the trainer's camp. "In front of him, the learner is considered as a blank consciousness, available, ready to record the presentation.

It is as if the mental activity of the learner was reduced to imprinting the content of the speech in his memory. » (p 33)

2.2 Syllabus, interactive teaching formula

The term syllabus, preferred to the expression course notes, is used here in its Belgian meaning, designating the course support or document provided by a professor to his students, (Lebouc, 2006). More simply, the syllabus designates a mimeographed, photocopied or printed text covering the essentials of a university course. In general, it contains the plan or description of the course concerned (learning objectives, broad outlines of the content, teaching and learning methods, assessment methods, bibliography, etc.) then the development of the different constituent chapters, followed, as the case may be, by exercises. In doing so, the syllabus is supposed to facilitate a certain autonomy of the student in his learning.

A teaching formula is said to be interactive when it gives rise to a reciprocal action between the teacher and the learner that is to say to a dynamic relationship of communication and exchange of information within the class group (Raynal & Rieunier, 1997, 184; Crombrugghe & Romainville, 2015, 2).

2.3 Knowledge

In our discussion, the concept of knowledge refers first to its cognitivist meaning, namely the information, the exact or erroneous mental representation that the individual can possess on the world, ideas, beings, objects, culture, practices, concepts, etc. (Le Ny 1989; Richard,1992).

Then, the term refers to the meaning it has in the first subdomain of cognitive objectives identified in his taxonomy by Bloom (1969), namely that of behaviors where a learner remembers the material, ideas or phenomena. The subdomain in question, which is that of "knowledge" is divided into three (3) sets: knowledge of isolated information, knowledge of ways of processing information, and knowledge of abstract representations. Knowledge of isolated information relates to terminology, knowledge of particular facts and circumstances. As for knowledge of ways of processing information, it concerns conventions, trends and sequences, classifications, criteria, methods. Finally, knowledge of abstract representations concerns principles and laws, theories and methodical intellectual constructions. Therefore, in the present development, the term knowledge excludes the capacities, aptitudes and abilities identified by Bloom in his second subdomain of cognitive objectives: understanding, application, analysis, synthesis, evaluation. On the other hand, it fully covers two major categories of knowledge defined by other cognitivist theorists: declarative knowledge and procedural knowledge (Anderson, 1983; Gagné, 1985; Bonnet, Hoc, & Tiberghien, 1986; Tardif, 1992; Goupil & Lusignan, 2001). Declarative knowledge, which relates to facts, corresponds in Bloom to knowledge of isolated information and knowledge of abstract representations; as for procedural knowledge, relating to procedures and rules for solving problems, or to operations to be carried out to achieve an objective, they perfectly cover in Bloom knowledge relating to ways of processing information. The fact is that a good part, if not the majority of the knowledge that is generally exposed in syllabuses, course notes or coursebooks, is declarative and procedural knowledge. As Boko (2009) writes, "course notes can be defined as an information document (...) which provides in writing, the most important notions and factual knowledge conveyed by the course." (p 80). It is this major characteristic that makes this tool an excellent reason for teaching knowledge at university, using a guided learning pedagogy, rather than continuing to mechanically resort to the old lecture.

2.4 Pedagogy by guided learning

The concept of pedagogy by guided learning refers here to a teaching method consisting of the teacher providing the student with a support and guidance system, leading him gradually, independently, then with the teacher, to an integrated appropriation of the knowledge constituting the course presented in a syllabus.

It is true that some researchers had already thought about the question of guidance in university pedagogy. This is particularly the case of Leclerq and Denis (1998) when, dealing with the objectives and paradigms of teaching/learning, they put forward the concept of practice/guidance, as one of the three paradigms of learning/teaching at the initiative or under the control of the trainer. However, for them, guidance or coaching does not specifically concern the teaching of knowledge, but especially exercises, areas where it is important to proceduralize, automate, experimental protocols, technical acts, etc., (p 92).

The pedagogy by guided learning in this reflection, aims above all only to achieve the objectives focused on the mastery of declarative and procedural knowledge associated with a course. It can and must naturally be supplemented by other techniques borrowed from active methods, for the specific work of the skills, capacities and abilities targeted by said teaching. The teacher can resort for example to problem solving, exercise or case study, individually, or in small groups. But this dimension will not be discussed here. Our ambition is limited to showing why the pedagogy by guided learning is infinitely preferable to the lecture course to teach knowledge at the university, with the support of the syllabus or coursebook.

3.0 ON THE SUPERIORITY OF PEDAGOGY THROUGH GUIDED LEARNING OVER LECTURES

3.1 The inadequacy of lectures today

Indeed, the current university context in the world is characterized by the need for modernization and improvement of the quality of teaching. Consequently, continuing to use lectures to teach knowledge may seem incongruous, especially since the course is now based on a syllabus.

First of all, giving lectures on knowledge for which students already have the text seems unnecessarily and boringly redundant. Moreover, the temporal structuring of studies in the new context of the LMD system reserves more than 50% of the total learning time (or total workload) for the student's personal work. The student is supposed to use part of this time capital allocated to him to work on his syllabus or coursebook. And this faculty should be able to partially legitimize the implementation by the teacher of a pedagogy through guided learning, a pedagogy centered on the student, as shown by Eberly, Newton and Wiggins (2011) in their article with the evocative title: "The syllabus as a tool for student-centered learning". Then, the pedagogical effectiveness of the lecture is questionable, to the point that many researchers attribute to this process the massive failure of students in the first years of higher education. (Bruter, 2006; Freeman & al. 2014). Freeman & al. (2014) have notably demonstrated in their analyses that learners subjected to lectures as a usual teaching method are almost twice as likely to fail their final exams as their colleagues trained using more active and stimulating teaching methods. Finally, lectures have sufficiently demonstrated the limits of their relevance even on a pedagogical level. Certainly, this formula may have been useful for a time in teaching large groups of students. However, it is criticized, among other things, for only very little information retention by students, for installing students in a certain passivity, both in terms of participation in the course and in personal reflection. In addition, lectures do not facilitate the activation of the student's prior cognitive acquisitions, nor the verification of progress made in their learning. (Freeman & al. 2014). Hence, the need for teachers to adopt an alternative pedagogy that is more inclusive of the student, more interactive and more stimulating.

3.2 Guided learning pedagogy: an interactive teaching method

The first step in implementing guided learning pedagogy is, of course, the design and provision of the course syllabus to students by the teacher.

This syllabus must be structured into balanced chapters, themselves subdivided into sections, so that either the chapter or the section can constitute the teaching sequence unit corresponding to the duration of each course session in the timetable.

For each chapter or section, the teacher will design a guide questionnaire consisting of 10 to 20 direct questions, depending on the density of the content of the text sequence concerned, in order to exhaust the essential informational content. These questions can relate to restricted, broad or very broad units of meaning, depending on whether the expected answer is just an idea, reducible to a simple proposition, the informational content of an entire paragraph or an entire page, or the synthetic reminder of a complex of ideas presented in a relatively long development. The essential thing is that the answer targeted by a question in the chapter or section that is the subject of the teaching session has a character of unit of meaning. The unit of meaning is a fragment of text that contains an idea enjoying a certain semantic autonomy in relation to the other ideas in the said text, "a set of sentences that express the same idea, that contain the same information". (Hounmènou, 2012, 55).

Here is the extract below from the syllabus of a course on contemporary pedagogical trends, which we ourselves gave to an audience of future secondary school teachers in Benin: The Competency-Based Approach

The competency-based approach is a philosophy of education, and in particular of general education, which has been developed since the 1990s. Among its main theorists, we can cite: the Swiss Phillipe Perrenoud, the French Phillipe Meirieu, the Belgian Xavier Roegiers, the Canadian Jacques Tardif. More precisely, it is a model for developing study or training programs, which consists of defining learning objectives in terms of skills.

It appears as an attempt to modernize programs, and to give more meaning to training objectives, by taking into account, in addition to knowledge, the ability to transfer and mobilize it.

The competency-based approach draws its justification in part from the principles and practices of vocational training, as well as from the vogue for skills in the world of economics and work.

In general school education, competence is then conceived as the learner's ability to think autonomously, about all the resources that must be used to accomplish a complex task or solve a problem. For Roegiers, it is the ability for the individual to mobilize an integrated set of resources in an internalized way in order to resolve a family of situations. In such a definition, resources designate knowledge, know-how, strategies, attitudes that the individual must possess in his cognitive and affective repertoire.

According to the proponents of the skills-based approach, the school can only develop this capacity for transfer and relevant mobilization of resources under two conditions:

- build knowledge from problems, rather than by unrolling the text of knowledge;
- confront students with new situations, allowing their ability to think autonomously, by taking risks, to be assessed.

These requirements explain the interest of this current for active learning methods, such as case studies, investigations, project work, laboratory work and experience, metacognitive questioning, the link between disciplinary knowledge and social practices, individualization and differentiation of learning paths.

The new pedagogical model is essentially based on cognitive psychological theories, in particular Piagetian constructivism and Vygotskyan socioconstructivism.»

Depending on the cognitive objectives targeted by the course, the teacher can ask questions on restricted units of meaning, for example: What is the competency-based approach? What are its foundations? What do we mean by competence? By what pedagogical methods do we recognize a teacher who has adopted the competency-based approach?

But the teacher can also focus his questioning on broader units of meaning, for example the following question, which concerns the entire extract quoted here: if you had to present the competency-based approach to someone who has never heard of it, what would you say?

Once the guide questionnaire has been designed for each chapter, or each section of the syllabus as needed, the teacher will ensure, before each class that the questionnaire relating to the textual sequence concerned is made available to students. At the same time, students are instructed to work on the target chapter or section, using the questionnaire given to them.

The course itself will consist in its first part, of a game of oral questions and answers between the teacher and the students, during which the teacher asks one after the other, the questions from the guide, to which designated students respond. These answers proposed by the learners, offer the teacher the opportunity to send them feedback as and when, either positive when the answer is relevant, or negative when it is inadequate. In the latter case, with or without the contribution of the other students, the teacher provides the necessary details, clarifications and corrections, before moving on to the next point of the questioning and the discussions to which it will give rise.

3.3 Advantages of the method

Very close to the interrogative method, which is one of the three major categories of teaching methods defined by Raynal and Rieunier (1997), alongside the dogmatic or expository method and the active method (p 229), pedagogy through guided learning, or Knowledge Teaching Method according to Hounmènou (MECH), has many advantages for teaching effectiveness. It is pedagogically appropriate, whether it is for small, medium or even large class groups with the technical possibility for students to be heard by their classmates and the teacher.

First of all, through the exchanges and especially, through the systematic feedback that it allows, it constitutes a privileged opportunity for the co-construction of knowledge by the teacher and the students.

Then, the learner is indisputably more active than in the lecture characteristic of the dogmatic method. And it is scientifically established that when students are made responsible for their learning, they have a greater chance of academic success, as Freeman et al. (2014) and Crombrugghe and Romainville (2015) have already demonstrated. Tilman & Grootaers (1994)

already noted: "An educational system that places a lot of emphasis on feedback therefore provides access to a fairly sophisticated body of knowledge. This is its main merit. The questioning that characterizes it and the effort of integration that it requires stimulate and develop mental capacities, thus contributing to making the individual more intelligent." (p. 36).

In addition, teachers can use their intervention time more usefully and more effectively. They no longer spend most of the class session shouting themselves hoarse for little result. Above all, they can use a good part of their teaching time to work with their students on the capacities, abilities and skills associated with the course in question, using the techniques and methods that lend themselves best to this: observation-imitation, case study, simulation, role play, exercises, training, problem solving, individually or in small groups, etc.

3.4 Some results of experimentation of the method

During the first half of February 2020, we experimented with this pedagogy through guided learning with an audience of 200 student-teachers of the 3rd year of Bachelor's degree, in initial training at the Ecole Normale Supérieure of Porto-Novo, in Benin, during a course on the Methodology of Learning Assessment. The same experiment was repeated with a group of 10 doctoral students in Theology from the Protestant University of West Africa, in January 2021, during the course on Methodology of Doctoral Research in Human Sciences.

At the end of these courses, each of the learners was invited to make a brief evaluation of the said teaching, by answering in writing on a small sheet of paper, to the following question:

What do you think of the method used to carry out this course?

The responses collected reveal a very enthusiastic reception of the course method by almost all the student teachers and doctoral students concerned: more than 90% of the student teachers and all the doctoral students in theology; 55% of the future teachers found this pedagogy through guided learning very interesting, very good, or very motivating, while these judgments were shared by all the doctoral students; for more than 50% of the student teachers and almost all the doctoral students in theology, the method used had the merit of making each learner work and participate; finally, almost all the subjects considered this method very effective, in that it allowed them to quickly understand the course.

A second experiment was carried out, in order to determine whether the pedagogy through guided learning or MECH, was more effective in the retention of the material learned by the student, than the classic lecture course. In February 2021, as part of the 20-hours course on the Assessment of School Learning, intended for a class of 180 secondary school student- teachers in the final year of the Bachelor's degree or Bachelor of Aptitude for Teaching in Secondary Education (BAPES) at the Ecole Normale Supérieure de Porto-Novo, an experimental group and a control group were randomly formed, based on the division into two groups of the same size, of the said class. The experimental group followed the said course under the direction of a Pedagogy Teacher, with the rank of Assistant Professor at CAMES; at the same time, the control group learned the course material, with another Assistant Professor in Pedagogy, who used the lecture technique. One hour after the end of the course, both groups were given a 30-minute multiple-choice knowledge test on the subject matter studied. The experimental group's

papers were given for evaluation to the teacher who had been in charge of the control group, while those of the control group were given for correction to the other teacher who had taught the experimental group. The results showed that 90% of the subjects in the experimental group passed all the test items, compared to only 65% of the subjects in the control group. The experiment therefore proved that guided learning pedagogy or MECH was more effective in teaching than traditional lectures.

4.0 CONCLUSION

By its interactive nature, by its relative centering on the student, by its numerous psychopedagogical advantages, and by its adequacy in these times marked by the concern for modernization and improvement of the quality of university education, pedagogy by guided learning constitutes an indisputable alternative to the lecture course. Not only is this Method for Teaching Knowledge according to Hounmènou (MECH) more appropriate for teaching knowledge, but also, it is similar to the most stimulating pedagogical methods of cognitive development and academic success of students.

It only requires the teacher to express his skills and talent, first in the design-writing of syllabus or coursebook, then in the art of asking questions, in writing as well as orally, and finally in the art of formative feedback.

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