The Complementarity between the Culturo-Techno-Contextual Approach and Large Group Pedagogy in Improving Student Outcomes

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Abstract

This article seeks to provide a lasting solution to a double complication. On the one hand, school massification, a global problem encountered in all the universities of the world. On the other hand, subject contents that only fill the head with knowledge are of no use to students, better to assimilate linguistic and/or scientific concepts that can be used in everyday life! Two teaching/learning methods, namely the Culturo-Techno-Contextual Approach and Large Group Pedagogy, were applied at the University of Burundi, in the Baccalaureate 2 class of the Applied Pedagogy Institute, in the French department, during the academic year 2021-2022. The results of the first session in the French semantics course showed that the class average and the percentages are higher than those obtained after using the magisterial method during the academic year 2020-2021.

Keywords: school massification, brainwashing, pedagogical strategies, digital and geographical environment, collaborative learning
1. Introduction

Academic enrolment in higher education institutions on all continents has grown steadily and dramatically throughout the twentieth century, especially since the Second World War. However, it was especially in the 1960s that this phenomenon began to attract the attention of researchers. The African education policy of moderately increasing enrolment has reached very exponential numbers in universities these days. All sub-Saharan African universities are experiencing massification with negative impacts on the quality of teaching/learning [1]. On the statistical side, Meyer, Pilon and Ravalihasy provide clarifications that show that over the entire period from 1970 to 2017, the student community in sub-Saharan Africa would have multiplied by 37.9 compared to 12.5 in Northern Africa [2].

In the case of Burundi, since 2005, the Burundian education system has provided free schooling at the primary level. From the 2013-2014 school years, the reform of basic education, known as Basic school [3], has started to provide free education and there has been a considerable increase in the number of students enrolled, which has also had an impact on higher education. The risk of this excess is that the student remains passive, as pointed out by Aoued[4] and Hajayandi [5]. On the other hand, the constraint of having to work in large groups should not prevent the setting up of conditions favoring the active participation of students in their learning. In an attempt to provide a solution to the various constraints mentioned above, our study focused on the complementarity between the Culturo-Techno-Contextual Approach and large group pedagogy in improving the results of students at the University of Burundi, at the Applied Pedagogy Institute, in the French department. These two methods were used to support the magisterial method which proved ineffective in improving the meaningful learning of sciences and languages, specifically the French language, in the "French semantics" course.

1.1. The magisterial method

Historically, the magisterial method, also called the traditional method or "grammar/translation", is inherited from the teaching of ancient languages (Greek and Latin) [6]. It is a way of teaching that often consists of a teacher transmitting the whole subject without any intervention from the students. But then, should the higher education teacher realize that lecturing has become inadequate for today's student population and that it poses serious pedagogical problems in recent days that need to be addressed in order to reduce the percentage of failures at university!

1.2. Large Group Pedagogy

The Large Group Pedagogy is a set of practices and principles for managing overcrowded classes. It is an implementation of strategies for organizing the class group so that its size no longer becomes a negative factor but a rewarding resource.
A. Definition and relativity of the large group concept
The term *large group* is used when the teacher is no longer able to satisfy all the learners. In a given teaching-learning situation, the number of students can become an obstacle to the transmission of the material [7]. All in all, the notion of a *large group* is relative because the sole criterion of the number of learners is not enough to confirm whether a particular class is overcrowded; all the conditions for teaching/learning in the classroom must be met [8]. In addition to the number of learners, it is important to consider other variables such as age, level of students, heterogeneity of students, subject matter, teaching conditions, prerequisites, experience, socio-economic status, socio-cultural, geographical and digital environment of the teacher and students.

B. Basic principles of large group pedagogy
According to Konsebo and Sylla [9], large group pedagogy is based on four basic theoretical principles:

a) The potential wealth of any large group
Let's not take a large class as a heavy weight on our shoulders, on the contrary let's take it as a rewarding fortune [10]. The large group can in no way generate superficial learning; on the contrary, it can represent a favorable context for the acquisition of knowledge by students [11].

b) Classroom organization: It is best for the teacher to divide the large groups into differentiated and complementary sub-groups.

c) Variety required: Is it also necessary to diversify teaching/learning techniques and assessment modalities to achieve good student results!

d) Mutual support among learners: It is up to the teacher to encourage collaborative learning among students without forgetting the emulation in the classroom, especially by setting up a system of rewards in an individualized way especially for students in need, while adopting motivational practices that are more in line with each one.

C. The objectives of the Large Group Pedagogy
The Large Group Pedagogy has the following objectives:

✔ Adapting teaching/learning to the objective conditions of the education system,

✔ Helping the teacher to manage the classroom better. For example, the use of audio-visual support in the French classroom certainly improves student attention and reduces distractions,

✔ Getting all students, no matter how large their numbers, to participate actively in learning activities by arranging the classroom in sub-groups with appropriate procedures. In group work, the teacher is no longer seen as a dictator, policeman or gendarme, but rather as a resource person, a facilitator, a guide.
D. Some large group teaching/learning techniques

To better install the subject resources, the teacher can use one or other of the fourteen strategies mentioned below by Konsebo and Sylla [9]. Let us note that nine processes inspired us in our study, namely: case study, brainstorming, presentation, peer teaching, value clarification method, lesson debate, mini case, small groups, role play. The remaining five strategies were not very interesting for our paper because they have several disadvantages.

The fourteen strategies are as follows:

1. **The case study**: It is the use of a real situation, an experience, transcribed in oral, written or visual form with the aim of fostering knowledge. The advantage of this practice is that it applies the daily reality of the teacher and the students.

2. **Brainstorming**: Brainstorming is the process of gathering a variety of ideas from an audience of learners in relation to a defined goal. It is the democratisation of opinions.

3. **Presentation**: Each group of learners makes a presentation to the whole class on a given topic.

4. **Peer teaching**: This is mutual teaching between learners, teaching each other. The advantage is that the stronger learners help the weaker ones to understand the lesson and to deal with the exercises proposed [8].

5. **The values clarification method**: This is based on the premise that attitudes are often spontaneous and have specific causes that are socio-cultural, geographical, economic, religious, moral or psychological. This technique is very advantageous in that it facilitates the collection of ideas by taking into account the context of the teacher and the students.

6. **The debate lesson**: This is a process that consists of a set of sub-group discussions on a given topic, in which learners express more or less divergent opinions. The advantage of this strategy is that several points of view are collected at once from the different reflections of the different subgroups.

7. **The mini-case**: This involves splitting the class group into sub-groups of seven to eight learners and giving each group a part of the topic. The sub-groups reflect on sub-topics related to the overall theme. The plenary will produce a summary in the form of a synthesis.

8. **Small groups**: This technique consists of dividing learners into small homogeneous groups according to criteria defined by the objective sought.

9. **Role-playing**: This is a short drama lasting at least twenty-five minutes, performed between members of a group based on a theme simulating a real situation. The advantage of role-playing is that it develops students' creativity, problem-solving skills and teamwork.
10. Mini-drama: This is a teaching strategy similar to role-play. One of the differences with the latter is that learners do not prepare the dramatisation at all, they improvise.
11. The Philips 6/6: This strategy consists of a time-limited activity of six minutes in small groups of six people. Time is limited.
12. The flicker technique: This is done by a series of short and concise messages (1 to 3 minutes) on the most significant angles of the work of each sub-group.
13. Progressive elaboration: This consists of a minimum sub-group of two or three learners carrying out a task in a given time, and then progressively putting them together in sub-groups of six, twelve and then twenty-four in order to continue the task by redefining another time limit for execution.
14. The coat of arms: The process consists of filling in the boxes of a table in sub-groups in order to get the gist of the given subject.

1.3. The Cultural-Technical-Contextual Approach
A teaching/learning method invented by Peter Akinsola Okebukola in 2015[12], the Culturo-Techno-Contextual Approach (CTCA) focuses on how the synergy between the socio-cultural, geographical and digital contexts produces significant impacts on learners' learning and outcomes[13]. According to Oladejo[14], the implementation of this approach follows a five-step process. The first step is the announcement of the topic of the lesson. The teacher then invites each learner to reflect on indigenous knowledge or socio-cultural beliefs and practices related to the topic. The learner is free to search for information among family members, friends, peers, close and distant companions, the community and society, while using a computer, mobile phone or any other internet-connected device available in the environment. The social process is reinforced in the form of interaction with classmates to share individual reflections in a group, this is the second stage of the approach. In team activities, the teacher ensures that learners are grouped for interaction according to skill levels, geographical and numerical context, age, gender, socio-cultural background, etc. Each group sends the work to the other. Each group sends the work to the teacher via SMS or WhatsApp. After the presentation of the work done in the different sub-groups by the group leaders, which corresponds to the third stage, the teacher gives a conclusion in the form of a synthesis by sharing his or her knowledge and socio-cultural practices relating to the subject of the day's lesson, without forgetting to combine information and communication techniques (ICT), which is the fourth stage. The session is declared closed by sending the synthesis of the lesson to the students via SMS or WhatsApp, this is the last or fifth step of the lesson.

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2. Materials and methods

For the literature review, we consulted written and audio-visual documents available in different libraries and websites, related to the lecture method, large group pedagogy, the Culturo-Techno-Contextual Approach, semantics, culture, language didactics, the geographical and digital environment and evaluation. On the empirical side, we applied the quantitative and statistical method. This is the comparative analysis of the results of the first session of the French semantics course in the Baccalaureate 2 class of the French department, at the Applied Pedagogy Institute, during the two successive academic years: 2020-2021 and 2021-2022. The magisterial method was applied during the 2020-2021 academic year, while the Culturo-Techno-Contextual Approach associated with Large Group Pedagogy was applied during the 2021-2022 academic year. The overall sample size is 402 students spread over the two academic years, 213 and 189 students respectively. The course holder for both years is Bénédicte Ntirampeba, one of the authors of this article. For the academic year 2021-2022, Bénédicte taught the course combining the Culturo-Techno-Contextual Approach with Large Group Pedagogy, prepared the exam and developed the marking scheme, while a colleague from the department helped her with the proctoring and returned with the papers. In other words, it was our colleague who corrected the practical work and the exam. The statistics were based on the class average and the percentage average and the comparison of the results was made for the two ways of teaching/learning. The data processing was facilitated by the Excel software which, thanks to applied mathematics, gave us a very practical and easy to interpret graph.

3. Search results

The results of the research can be found in the table below:

<table>
<thead>
<tr>
<th>Academic year</th>
<th>Method used</th>
<th>Total number of students who worked</th>
<th>Class average /20</th>
<th>Average % of class</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-2021</td>
<td>Magisterial method</td>
<td>213</td>
<td>13.16</td>
<td>65.82</td>
</tr>
<tr>
<td>2021-2022</td>
<td>Complementarity of the Culturo-Techno-Contextual Approach and large group pedagogy</td>
<td>189</td>
<td>15.79</td>
<td>78.93</td>
</tr>
</tbody>
</table>
4. Discussion of the results

Graph obtained after processing the table in excel:

The figure below, obtained with Excel software shows that with the magisterial method, the students of baccalaureate 2 of the French department of the Applied Pedagogy Institute succeed in the French semantics course with an unsatisfactory average. However, with the Culturo-Techno-Contextual Approach in conjunction with the Large Group Pedagogy, the success rate reaches the distinction. Based on the results obtained, we propose the methodology of combining the cultural-techno-contextual approach with large group pedagogy as the best strategy to improve student performance. This complementarity between the two methods is more efficient and cost-effective as it adds value to the lecture often applied in Burundian post-secondary education. It can enrich students' lexical baggage and improve their results. This practice can also enable students to internalize, understand and master the meaning of concepts related to the French language.

5. Conclusion

This article shows that there is a way to overcome all the challenges that hinder the acquisition of knowledge in large groups by favoring the formation of subgroups of mutual aid between students, without forgetting that the teaching/learning of a resource should take place in a geographical, socio-cultural and digital context of the teacher and the student. The latter has an identity, a neighborhood, a family, school, extracurricular environment and people they care about. The teacher should not ignore all these details and focus only on the transmission of resources, but rather should play the role of a companion and facilitator in order to share his or her intellectual talents with the students! This being the case, the Cultural-Technical-Contextual Approach (CTCA) in combination with the Large Group Pedagogy is a way out to meet the challenge of
the educational policy of all continents in general and of Burundian higher education in particular. Duguet and Berthaud[15] affirm that even in France, the situation is such that the university teacher has been motivated for several years to train more in pedagogical innovation in relation to everything that is not related to the sacrosanct lecture[16]. In short, there is a great need for courses taught at university to be less lecture-based in order to adopt an approach that encourages student participation and improved results, whether in the exact sciences or in the social sciences and humanities.

References


The complementarity between the culturo-techno-contextual approach and ... 341


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