

## Lesson Study as School-based In-service Training in Mali

### --- Case of community-based approach to support school project ---

Human Education

Global Education Course

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To achieve the desire to improve teachers' professional practices, Mali has adopted a new national education policy called the "Ten-year Development Program for Education and Professional Training" (PRODEC).

This policy, in its second phase PRODEC-2 (2019-2028) sets out the broad guidelines for continuing teacher training. Among these guidelines, it is stated that teachers are now the leaders and actors of their in-service training and that the school remains the preferred place for this type of training. The creation of a Teacher Learning Community (CA) in every school in the country has enabled these general pedagogical guidelines to be implemented.

Given the limited resources of the government to organize national training on large-scale, with decentralization in Mali, the regions have become self-sufficient. In addition to national development projects, communities are actors and decision makers in local development program. The community, through school projects for a high-performing school, seeks to improve the quality of learning through well-trained teachers in charge of their children's training.

The community in all these components has given itself the means in school projects that will lead to a good academic outcome through innovative educational practices for teachers. With the support of these partners, such as JICA, they have developed strategies based on the experience and expertise of these partner countries in the field of education. In order to link theory to practice, based on the Japanese

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educational model, the fundamental objective of this research is to seek how to integrate and support lesson study in the Teacher Learning Community, so that teachers can further improve their classroom practices, through improved model lessons taught with appropriate teaching materials based on the Japanese educational model.

The lesson study is not an evaluation of teachers, just a strategy of supporting teachers in order to collectively apply a new pedagogical approach to overcome the difficulties encountered in teaching. As the teacher learning community is recognized as a framework for teacher exchange and upgrading, the issue of improving teaching methods in Mali can be addressed by merging these two pedagogical approaches: Japanese Lesson Study and the Teacher Learning Community.

Bruner's theoretical framework (Bruner, J. 1996, Culture of Education) refers to learning as an active process in which learners construct new ideas or concepts based on their current or past knowledge. The teacher and students must engage in active dialogue. As part of the Lesson Study, the observation should focus on the teachers and study the interaction between the teacher and the students and also between the students in the context of group work.

Applied research methodology; quantitative and qualitative; questionnaires and interviews; data analysis uncovered the weaknesses of science education in Mali. In keeping with the research objective of improving teaching practices, areas of discussion and improvement

have focused on lesson content, student practical activity and blackboard management. Under the leadership of the School Management Committee, representing the community, with the support of classroom workshops and observations in pilot schools, the research focused on the attitudes of teachers and students in regular schools before and after the intervention.

With the support of Naruto University of Education Ex-trainees from Mali, the observation of two regular classes and two pilot school classes on the following criteria: teaching and learning strategies; the teacher's communication skills; learning and interaction between students, the objectives of the courses and the curriculum (conceptual understanding); class management planning; blackboard management and materials were recorded in the observation sheets.

The results of the observation sheets were shared during the workshop. The analysis showed concretely that students are not very interested in science, because it is difficult to understand, and difficult to teach also for teachers. The workshop of this research was based on the fundamental principles of the lesson study (Plan-Do-See).

By analyzing the results of the pre-test and post-test, we find that teachers in mainstream schools who, for the first time, collaborated to prepare and improve lessons together, which are difficult for some of them to teach, were able to discover for themselves the shortcomings of their teaching and the expectations of their students in science learning.

In Pre-test, teacher responses were mixed. About 55% of teachers thought the course was appropriate with this ordinary style of teaching, understandably, it's routine for them. After the workshop, in real class, these teachers, about 79% recognized that the old style of teaching is

not appropriate, obsolete. According to them, a science course focuses mainly on the activities of the students, so that they discover for themselves the new concepts during the lesson.

In Post-test, in real class, students enjoyed group work, discussion and exchange between them. The science course has become more attractive and interesting for students who are discovering new scientific concepts on their own. They are learning more with this new approach to learning. All the content of the lesson and these steps are visible on the blackboard. Analysis of the data clearly shows that students appreciate this new style of teaching. The student, who was a simple observer and script, became an actor of his own training. To the basic question: Are you satisfied with this course? From the mixed response in pre-test with about 52%, students after the post-test course recognize that, this new style of teaching is better, 92% of students are satisfied. They say they discover for themselves, manipulate and test material during the course. Scientific education has become more joyful, attractive, and informative.

Despite the limited number of participants (36 teachers, 86 students, 4 Malian NUE Ex-trainees, 6 CAP trainers), this research showed that merging the Lesson Study in Teacher Learning Community is REALISTIC and ACHIEVABLE. The Lesson Study created a climate of collaboration among teachers, through post-lesson discussion, to select and test appropriate teaching materials, and to propose group activities for students who are discovering scientific concepts for themselves. This new concept called "ELCA" discovered through this research is the fusion of Japanese and Malian concepts based on factors related only to the improvement of educational practices in the classroom. Through frameworks, through official texts or administrative laws, we can implement the practice of Lesson Study in Malian schools.