

Professional Development for Primary School Teachers in Madagascar: Around Teachers' Network

**Judith Raholdina-Razafimbelo, Célestin Razafimbelo,
Narisoa Ramanitra, Maminiaina Alex Andrianavalonirina
and Harinosy Ratompomalala**
(Ecole Normale Supérieure of Antananarivo, Madagascar)

Lina Rajonhson and Daniel Razanakolona
(Ministry of Education, Madagascar)

Abstract

In Madagascar EFA Plan of 2007, primary school teacher pre-service training was abandoned; it was replaced by in-service training. In addition to the in-service training implemented twenty years ago called “Pedagogical days” (JP), the “Teachers’ Networks” were created to cater for the profession development of neophyte teachers who have been massively recruited by parents’ associations (FRAM), but not excluding experienced teachers. A study was conducted to analyze the teachers’ network program, and to shed light on the contributions of the teachers’ network as a collaborative learning device.

Questionnaires, supplemented by interviews, were submitted to regional education officials and key actors involved directly in schools. Although “collaboration” is not really apparent in JP as there is neither voluntary work per se, nor symmetry criteria, “collaborative learning” can be observed in Teachers’ Networks and is appreciated by FRAM teachers. In fact, the findings reveal significant complementarities between JP and “Teachers’ Networks”.

1. Introduction

In Madagascar, the parents’ desire to send their children to school is strong. The relationship of the population with the school is relatively old (Razafimbelo, 2011), and school was viewed as a means to achieve social promotion that was accessible to all. It was a key element in the difficult road to development and was in actual fact one of President Tsiranana’s main priorities¹. During his second term of office, efforts were directed towards the rural primary schools, often as part of the “work at ground level”. These reforms, which were often conducted in a disorderly fashion because of the demographic pressure, had the effect of disorganizing the pre-

¹ Philibert Tsiranana: President of the Malagasy Republic from 1960 to 1972.

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service training of teachers. The democratization policy of education which was advocated by the Second Republic (1975-1993) led to a dramatic increase in parents' initiatives to create and open community schools. As the demands for teachers were rarely satisfied, parents' associations recruited teachers who did not have appropriate training. These teachers are called "FRAM³ teachers"; they are supported by Parents' Associations. This became common practice due to the freeze on the recruitment of civil servants imposed by the "Structural Adjustment Program" and the deficiencies of the Government.

2. Education for All and the Madagascar Education System Reform

Following Madagascar's adhesion to the Education for All initiative (EPT) in 2002, Madagascar's education system has gone through very important changes. Different decisions have been taken by the State namely:

- the bearing of part of the education expenses: elimination of school fees, provision of school kits to new pupils, allocation of a school fund, providing food to the school, the building of new schools.
- pedagogical initiatives: distribution of textbooks and other didactic materials, revision of the organization and management of the school syllabus, writing of a new curriculum, massive recruitment of teachers outside of the civil service and the provision of allowances to teachers that have been recruited by the pupils' parents and provision of in service training to all teachers.
- institutional reform: a reconsideration of the role of the pedagogical and administrative areas (ZAP)⁴ towards a decentralization of the school districts (CISCO)⁵.

Following those initiatives, significant progress was observed at all levels: from 2003 to 2010, the number of students in primary education increased by 30% (about one million of students over eight years). Important challenges still remain; both the dropout rate and the repetition rate are still high. Out of 100 pupils who enter the first year of the primary school, less than 60 manage to reach the fifth year.

In its desire to help all young Malagasy pupils to reach an acceptable level of competence as required by the modernization of the economy, the Ministry of Education, MENRS, in its 2007 Education For All (EFA) plan decided to adopt measures that would lead to the improvement of learning in seven areas:

- Improvement of the school infrastructure,
- Extension of learning time,
- Reform and modernization of the primary school Curriculum and of the teaching and learning materials,
- Provision of fully qualified teachers,

3 FRAM : Parent-Teacher association

4 ZAP : pedagogical and administrative areas

5 CISCO corresponds to school district and ZAP to municipality

- Improvement of the management of resources of pedagogical process at all levels,
- Monitoring of learners' acquisitions and assessment of elements aiming to improve cost effectiveness and finding the best strategies to improve pupils' learning,
- Provide support to pupils that are identified to be most likely to fail.

3. Teachers Network Selected by the Ministry in Charge of Education as an Appropriate Tool to Improve Teachers' Professional Competence

Considering the rapid increase in the number of pupils enrolling in the primary school and the demand for qualified teachers resulting from that increase on the one hand, and on the other, because of the State's inability to support the training of such a large number of teachers both technically and financially, the pre-service teacher training formula was abandoned in the EFA plan of 2007, for the first five years of primary education; it was replaced by in-service teacher training. Pre-service teacher training was maintained for "semi skilled" teachers for grades 6 and 7 of the new structure of seven year primary schooling⁶.

The Ministry of National Education and Scientific Research (MENRS)⁷ then developed a conceptual framework for in-service training of FRAM teachers (MENRS, 2008a). This was used as a working document for experimental projects such as the "Francophone initiative for the distance training of teachers (IFADEM)" and ATEC⁸ and it is currently a reference document for the in-service training of school teachers.

The in-service training provided an opportunity for FRAM teachers and enabled them "to link their status to their skills" (MENRS, 2008b). However, it should be noted here that the difficulties generated by the political crisis have made it impossible to implement this project and to articulate continuing education opportunities with career paths.

The Teachers' Network

Twenty years ago, under the "Malagasy Democratic Republic", primary school teachers took part in the pedagogical days (JP): every quarter, and later every two months, all primary school teachers were required to attend three to five days' training on topics which were determined by the CISCO teams of trainers. The organization of the JPs was taken care of by the CISCO and more recently by the regional department of national education (DREN)⁹ and

6 Under the educational reform initiated in 2008, it was decided that the duration of basic education level 1 (primary) would be extended from 5 to 7 years, the basic education level 2 (junior secondary) from 4 years to 3 and secondary education (Lycée) from 3 to 2. Thus, the duration of schooling from primary to secondary is still 12 years; it is the organization of the cycles that changes to 5+ 4+ 3 to 7+ 3+ 2. Meanwhile, a curriculum reform was initiated with 20 CISCOs (CISCO called CISCO with reform) and was expected to gradually expand.

7 MENRS : ministry in charge of education

8 ATEC: Partnership program between MENRS - USAID / EDC for Technological Support for Educators and Communities between 2006 and 2008.

9 DREN: Regional department of education

the ZAP chiefs were to be in charge of their implementation. The JPs involved trainers from the school district (CISCO), the regional department (DREN) or from the Regional Center of the National Institute for Pedagogical Training (CRINFP)¹⁰.

One of the key elements suggested by the conceptual framework to replace the training is the establishment of a local teachers' network. Its use reflects a commitment to the innovation of the training approach (collaborative practice) as well as a desire to reduce training costs. The in-service training device for primary teachers through teachers' network was implemented in 2008.

The Teachers' network aims to improve the quality of teaching/learning. It was intended to encourage collaborative learning by developing professional skills related to the profession, by promoting exchanges of experience, sharing and mutual help, by encouraging the search for solutions to educational problems, the production of documents, co evaluation and self-evaluation in order to improve everyone's practices. The model is based on three criteria:

- Location: teachers should be close to one another,
- Size: 5 to 20 participants,
- Heterogeneity: it includes civil servant teachers and non-civil servant teachers.

All teachers, FRAM or non-FRAM, are invited to become members of a teachers' network. The network members choose two facilitators (a primary one and his or her substitute) and the choice of the facilitators is validated by the ZAP chief. The criteria for selecting facilitators are quite simple: the primary facilitator must be a civil servant; the substitute must not be one. A brochure detailing the various roles of the facilitators, with suggested activities has been made available to the facilitators. The network members choose a name for their network. They determine the venue, the frequency and the duration of their meetings.

Collaborative Learning is the Learning Mode to be Preferred in the Network according to the Conceptual Framework

The confrontation of alternative concepts develops the heuristic sense by creating arguments to defend one's vision and listening to change it. According to Vygotsky (1985), it is through social interaction that the individual learns to solve problems that he is not yet able to resolve alone. A socio-cognitive conflict promotes the search for veracity in disciplinary concepts. Following in the footsteps of Vygotsky (1985), research on collaborative learning has sought to demonstrate the effectiveness of this learning situation.

The establishment of a teachers' network is based on the development of teachers' professional skills through "collaborative learning". So, a brief reminder on the theoretical framework will be given first. There is also a need to clarify what is meant by collaboration in the Malagasy context.

Research and literature review about "collaborative learning" were conducted by Dillenbourg (Dillenbourg, Baker, Blaye & O'malley, 1996; Dillenbourg, 1999). These authors

¹⁰CRINFP: Regional Center of the National Institute for Pedagogical Training

reported that "...collaboration learning is a situation in which particular forms of interactions among people are expected to occur, which would trigger learning mechanisms, but there is no guarantee that the expected interactions will actually occur". Hence, a general concern is to develop ways to increase the probability that some types of interaction occur. Namely, these ways include the monitoring and regulating of the interactions by a facilitator.

Uses of the word "learning" in collaborative learning reflect two distinct concepts: a pedagogical method (it is *expected* that by collaborating, people learn efficiently) and a psychological process (collaboration is the *mechanism* which *caused* learning). Dillenbourg (1999) also reports a variety of meanings for "collaboration" itself. He describes the conditions which allow to characterize as collaborative the following four items: situation, interactions, processes and effects. Then, the theory of collaborative learning concerns these four items: criteria for defining the situation (symmetry of action, symmetry of knowledge, symmetry of status, shared goals, low division of labour), the interactions (interactivity, synchronicity and negotiability), the processes (grounding, mutual modeling) and effects. An explanation of the relations between them is also given.

In setting up the "teachers' network", the major concern was to create a situation in which primary teachers could learn together. They would select a facilitator among themselves. According to the criteria for defining a situation of collaborative learning mentioned by Dillenbourg, symmetry is not quite assured since some teachers are experienced and the FRAM teachers have had no professional training. However, they do have the same academic degree and after a while, it is hoped they will have achieved a same level. Thereby, the term collaboration is here taken to mean a situation in which all primary school teachers attempt to learn together.

For the same reason that has been mentioned in the previous paragraph, network members are referred to as "peers". According to their relative abilities, they will coach one another, so we use the term "peer coaching" to qualify their relationship.

4. Research Questions

As part of the seven areas where the Malagasy government planned to intervene in order to improve pupils' learning skills, the provision of qualified teachers to the schools is included. This implies an increase in the number of the teachers and in the improvement of their quality.

Because of the impossibility to do pre-service training due to lack of resources (human, material and financial), faced with the huge demands for primary teachers, the department has no alternatives: the Ministry of Education will continue to accept FRAM teachers without professional qualification. The problem therefore is the setting up of an appropriate in-service training that will improve the professional skills of the teachers in primary schools in the current context.

The Ministry of Education has asked the educational districts to continue the in-service training called JPs (pedagogical days) but in addition, a conceptual framework for the training

of FRAM teachers was drafted by the Ministry of Education (2007-2008), whose objective is to use all available resources (human, infrastructural, conceptual) in order to upgrade the teaching skills of FRAM teachers. This type of training was called “teachers’ network” and aims to promote collaborative learning among primary school teachers.

It must be stressed, however, that the political context since 2009 has severely disrupted the implementation and functioning of the “teachers’ network” that was supposed to play an important part in improving the skills of primary school teachers especially the FRAM teachers.

The following research questions were identified during this study.

1. Does the situation within the “teachers’ network” allow collaborative interactions which trigger an effective training/learning of primary school teachers in Madagascar?
2. To what extent and how do organizations and current operating modalities of the teachers’ network allow collaborative learning to achieve the objective of developing teachers’ professional skills?

5. Objectives

This research aims to analyze the implemented teachers’ network program that was designed to improve the professional skills of primary school teachers in Madagascar.

More specifically, it is to shed light on the impact of teachers’ learning modalities which can promote collaborative learning currently recognized as an efficient approach by the conceptual framework.

6. Methodology

The preparation and use of tools are largely inspired from the International Institute for Educational Planning modules (UNESCO, 2005). The selection of the targets takes into account the institutional hierarchies of the education sector, namely, the Regional Department of National Education (DREN), the Regional Centers of the National Institute of Educational Training (CRINFP), the School Districts (CISCO), the Administrative and Educational Areas (ZAP). The second group of “targets” is composed of those people who are directly involved in the primary schools, namely, headmasters, facilitators, teachers and parents. As part of the sampling, eight axes were selected using the following criteria:

- Existence of a teachers’ network
- Presence of different target populations
- Geographic representativity: urban area, suburban area, rural area

Since the networks were set up in parallel with the reform of primary education, the representativeness of the CISCO where the reform was implemented was taken into account.

Altogether, the institutions that were selected for the fieldwork are 6 DRENs, 24 CISCOs, 50 ZAPs, 10 CRINFPs and 107 schools. These areas are presented on the map in Figure 1. There were 418 interviewees: 6 DREN personnel, 21 CISCO personnel, 38 ZAP chiefs, 10 trainers in

CRINFP, 68 headmasters, 32 facilitators, 173 teachers and 70 parents.

Questionnaires were designed for these target groups. The questions mainly focused on the organization and the functioning of the teachers' networks and of the pedagogical days according to each entity on the one hand, and their respective opinion on the in-service teacher training device on the other:

- The DREN staff was asked to indicate what support was provided to the teachers' network;
- Quantitative data on the number of teachers as well as information on their status were requested from the CISCOs;
- The Questionnaires handed to the ZAP chiefs made it possible to determine the number and status (public / private) of primary schools within the ZAP, the number and the characteristics of existing teachers' networks (location, components);
- In addition to questions about the organization and the functioning of the teachers' networks, the CRINFP trainers were also asked to give their assessment of the facilitator's function, the teachers' network and the pedagogical days;
- The questionnaires to the headmasters sought to determine the number, diploma, status and seniority of teachers, the existing classrooms and the number of students in the target schools. They were also asked to talk about the organization and the functioning of the teachers' networks, provide their assessment of these networks and of the facilitator's function, and clarify the relationship between the training in the teachers' networks and the pedagogical days;



Figure 1 : Areas of study

- The facilitators were asked to provide information concerning teachers' age, gender, seniority, qualification, status (FRAM teachers, civil servants or teachers in private school), to talk about the organization and the way network is operating. They were also asked to give their assessment of their role as facilitators, the effectiveness of the teachers' networks, the relationship between the pedagogical days and those networks;
- The teachers' surveys are based on variables such as age, gender, seniority, qualification, status. The teachers were also asked to give examples of the contents they had already proposed or would like to suggest for later training sessions within the teachers' networks, to provide their assessments of the teachers' networks and the pedagogical days, give their comments and make suggestions;
- As for the parents, questionnaires were used in order to know the number of children attending primary school, the costs and obligations toward the school, the salary of FRAM teachers, the monitoring of children's studies.

These questionnaires were supplemented by interviews and then closed questions were processed with SPSS and open questions with EXCEL. Analysis of data was performed in two steps: first of all the data were processed by the eight targets. Then a synthesis came out of a confrontation and a cross corroboration of the data collected.

7. Findings

According to the surveys conducted at the CISCOs, more than three quarters of the teachers in the regions have the BEPC (diploma at the end of junior secondary) and 22% have a "Baccalauréat diploma" (diploma at the end of Lycée). Less than half of these teachers (49%) have a teaching certificate certifying their ability to teach in primary schools. Most of them are civil servants (86%).

Half of the teachers in the target schools are not civil servants. They are recruited by parents' associations. In general the less qualified teachers work in rural areas, and they usually have not received any pre-service training. Moreover, their large number makes the implementation of such trainings difficult.

The strategy and the implementation of two in-service teacher training modalities ("JP" and "networks") during the current political crisis are presented below.

In-Service Training before 2007: The Pedagogical Days

The primary school teachers took part in an in-service training programme called "pedagogical days" long before the existence of the teachers' networks.

Teachers in the same commune are under obligation to participate in the pedagogical days which last from three to five days. However, over the past two years, the frequency of the JPs has slightly decreased. The trainers involved in the pedagogical days are the ZAP chiefs and the CISCO trainers' team or the CRINFP trainers.

According to the survey results, about threequarters of the training contents during the pedagogical days are set by the trainers' team of the CISCOs, based on the teachers' needs and on proposals made by the chiefs of ZAP. But in some areas, the proposals of the teachers, the headmasters and the ZAP chiefs are submitted to the CISCO trainers' team and then discussed again at DREN level before they are validated and implemented throughout the region (case of the Vakinankaratra DREN).

The Teachers' Network

As was mentioned earlier, the Ministry of Education has put in place a new in-service training device called teachers' network since 2007. This part presents the information given by the different actors about the organization and the functioning of the teachers' networks.

a. Organization and operation of the teachers' networks

During the investigations, we drew up a flowchart showing the internal structure of the teachers' networks, as perceived by the different actors. In each scheme, the facilitators, the teachers and sometimes the ZAP chiefs are mentioned because they are mainly involved in the system; the presence of other actors varies from one scheme to another. The network is first and foremost, a training device for peer coaching. The role of the different members of the training bodies (CRINFPs) or of the superiors has been redefined in this new framework, according to the result of our investigations.

➤ *The CRINFP trainers*

In principle, the trainers in the Regional Centres of the National Institute of Educational Training (CRINFP) to which the teachers' networks belong should be the promoters of the training. Since they are responsible for the evaluation of FRAM teachers along with the ZAP chiefs, they are the ones who should deliver the brochures to introduce the networks to the CISCOs and analyze the portfolios: the assessment tools for teachers' autoevaluation.

It has emerged from the interviews and the discussions with the stakeholders on the field that the role of the CRINFP trainers does not seem to be fully understood. Their roles remain a sort of isolated interventions. The trainers have therefore, completed only a small part of their mission compared with the general objective, such as the language training (Antsirabe). This may be due to the remoteness of the teachers' networks from CRINFP, to budget limitations and to the relatively small number of trainers making it impossible or extremely difficult to cover all the teachers' networks in their Region. But this could also be explained by the fact that CRINFPs are dependent on the political choices of the Ministry of Education, and the tergiversations that are blamed on the current political crisis.

➤ *The chief of ZAP*

The chief of ZAP runs the teachers' networks. He validates the choices of the facilitators who are selected by the network members. He participates in drawing up the schedule of

the different activities and helps the facilitators with the implementation of the trainings. He reports to the CRINFP and to the service in charge of pedagogy at CISCO level. He supervises the networks' activities and participates, if needed, in the facilitation of meetings and in the formative evaluation of the teachers.

➤ *Members of the teachers' network*

Teachers are the principal target actors in the setting up of the teachers' networks; they are the most important members of the network. Their presence is strongly recommended, even mandatory, and they are under obligation to take part in all of the activities of the network. These teachers, especially FRAM teachers, are encouraged to submit their training needs, which will be taken into account when planning training activities on the teachers' network.

Each headteacher in the teachers' network sensitizes and invites teachers to attend the training sessions organized in the network. He participates in the working sessions of the network, in the formative evaluation of the FRAM teachers and may propose appropriate remediation measures.

➤ *A new role: the facilitators*

According to the MENRS (2008a), the network aims to help the learner on the one hand, and the group on the other. The learner works to build up their knowledge; the group is a source of information, an agent of motivation, a means of self-help and mutual support and provides an excellent space for interaction and the collective construction of knowledge. The facilitator plays the role of a moderator.

The facilitators are members of the teachers' network. In each network, the members propose two facilitators, if possible, a civil servant and another who is not a civil servant. As members are generally familiar with each other, the proposed facilitators are those they consider to be the most competent, the most experienced and the most dynamic. Sometimes the facilitators are the headmasters but in some CISCOs, this practice is very unpopular. The majority of local trainers (80% of CRINFP trainers and 76% of headmasters) find the modalities of the facilitators' appointment relevant.

As kingpins to the operation of the network, the facilitators ensure the smooth running of the training sessions by organizing and facilitating the meetings. They are also responsible for the dissemination of information from the higher instances to the network members and for the preparation of reports. The substitute facilitator usually is charged with the secretarial function of the session in addition to his participation in discussion facilitation.

Despite their heavy workload, the organizational problems related to the management of the network members, pedagogical, academic and language difficulties, the lack of material resources and other personal concerns, many of the facilitators (72%) claim they are enjoying their position. For them, the reinforcement of their skills and abilities, the opportunity to share their experiences with their younger colleagues, the pride of being facilitators chosen by their colleagues are significant assets that largely mitigate any inconveniences.

b. The contents of the training networks

At the beginning of the implementation of the teachers' network, a training module designed by INFP was sent to each network. This training was then, still related to the career path of the FRAM teachers. The topics were intended to make up for what was missing in the education of those who had not had any pre-service training, such as writing, lesson plans, drawing up annual and weekly plannings, spelling out the rights and duties of the teacher, developing group work and teamwork skills, and carrying out criterion-referenced assessments and remediation.

It was agreed that teachers could submit their requirements to the facilitators and that these would be included in the agenda of subsequent training sessions. Other topics on didactics such as strengthening the reading skills in French, the development of lesson plans in Mathematics, Malagasy, French, and History were also addressed in response to the teachers' needs. In fact, the majority of the target teachers (87.7%) said the proposed training contents they submitted for the teachers' networks largely concerned the French language, calculations and problems, both from the academic and the didactic points of view.

c. The teacher's assessment of the network

We collected the degree of satisfaction of the different actors on the network as an organ of local training, as an academic and pedagogical skills upgrading vector for teachers. Actors who completed the questionnaires had a choice between four levels: very satisfied, satisfied, rather satisfied, not satisfied. We then grouped in the "satisfied", all those who answered "very satisfied", and "satisfied".

➤ *The teachers' network as an organ of neighborhood training*

About half of the local actors expressed satisfaction with the closer proximity of training in the teachers' network. However, trainers in the CRINFPs did not (only 20% were satisfied). Indeed, the average distance between the target schools and the CRINFPs is 52kms but this is highly variable and can reach 160kms; thus, without appropriate means of transport, trainers' access to schools where networks are located is difficult.

Based on these survey results, half of the local actors are not convinced of the benefits from the so-called local training networks. This could be explained by the fact that schools are far from each other and teachers located in remote areas still have to travel long distances. Of course, the distance to the schools that are part of the network is reduced compared to the distance covered to participate in training in the capital of their district or their commune during the JPs, but more importantly, there is often no means of transport and travel expenses must be borne by the teachers. To preserve some kind of equity, some networks have chosen to adopt a rota-based system for the meeting venue so that teachers do not have to travel when the training takes place in their area.

The teachers in remote areas are aware that it will be harder for the trainers' team from the

CISCOs, the CRINFPs and chief ZAPs to coach them in their schools.

- *The network for the strengthening of teacher's academic knowledge and professional skills*

Teachers are the most satisfied by the contribution of the network in terms of academic knowledge and professional skills (85%). The chiefs of ZAP (about half of them) and the headmasters are also satisfied but to a lesser degree.

Comparing the levels of satisfaction with the contribution of the networks to the strengthening of academic knowledge and the reinforcement of professional skills, it also appears that only teachers seem to be satisfied. Other entities are more satisfied with the gains in professional skills than in academic knowledge. Half of the teachers are not satisfied with the contribution of such training in the mastery of school administration and legislation.

Nevertheless, the survey results show that the interventions of the facilitators and of their peers are the most appreciated by the teachers. They feel more comfortable in the training within the network than in any other type of training. About 50% of the actors believe that the teachers' networks contain real potentials for the improvement of school performance, although their impact is still quite difficult to assess.

Approximately two thirds of the target teachers claim they have received training in the use of materials and teaching aids, and three quarters in the use of textbooks. However, only about half of those who said they received training stated they were satisfied. That is maybe because classroom implementation could not take place during the training due to lack of financial resources.

- *The involvement of the civil servants*

The civil servant teachers, who are strongly solicited by the headmasters and the facilitators, are not always motivated to participate in training sessions. They feel they must contribute a lot during the exchange of experiences without getting anything in return in terms of teacher development.

8. Discussion

On the basis of the surveys with the heads of the various entities involved, we will discuss the implementation of the scheme, both from the conceptual framework developed by the Ministry of Education and compared to experiments reported in the literature, always taking into account the prevailing context in Madagascar.

As was mentioned at the beginning of this study, despite its political willingness to achieve the EFA goals, the Ministry can only provide the means that it has at its disposal, namely, the implementation of an adapted in-service training scheme which is thought to be effective instead of the pre-service training for the teachers of the five year primary school.

The conceptual framework of the FRAM teachers training (MENRS, 2008a) recommends four learning modalities for the implementation of the scheme. Each of them corresponds to different ways of organizing and involving different actors in the education system, as presented

in Figure 2.

Training /learning modalities		Organisation modalities	
CRINFP	Face to face training	Grouping the teachers from neighboring districts in face to face training	During holidays
ZAP	Inter-network training	Grouping of the teachers from one ZAP during pedagogical days (JP)	Four days every quarter, and later every two months
	Collaborative learning in teachers' network	Teachers' network	Negotiated date
ON FIELDS	Self training	Valorization of prior experiences Self reliant work	

Figure 2: Training/Learning modalities and organization modalities

(Source: MENRS, 2008a)

These are i) self-training for those teachers who feel they possess the skills required to exploit the resources available to them or selected by themselves, ii) collaborative learning within local networks, iii) local training during meetings at ZAP level (pedagogical days) when the network does not have the necessary resources and iv) face to face training organized by the CRINFPs in neighboring districts during the holidays to check on some modules, assess or analyze practices. At each level of organization, needs, resources and constraints analyses are carried out, that will eventually lead to the drafting of requests which will then be addressed to the appropriate structure.

Among the different training types mentioned above, we shall look more specifically at the two ways specified in the scheme, namely the “JPs” (pedagogical days), the old form of training, and the “teachers’ networks”, the new one.

Pedagogical Days and Professional Skills Development

The pedagogical days gathered hundreds of teachers. These were training sessions involving two types of actors: a team of qualified trainers and teachers. Although the latter belong to relatively close educational administrative areas, they do not know one another or they just have superficial relationships. Their status and their levels are very heterogeneous: although trainers sometimes divide them into working groups, discussions are still very limited because asking questions is sometimes considered as an admission of incompetence by some teachers. Such a situation may be associated with a coaching situation and the appropriation of knowledge and /or expertise is not always guaranteed.

The training content is based on requests expressed by the teachers. The team responds to those needs and they are well prepared pedagogically but their efficiency is reduced as a result of the context. In addition, the JP operation is often problematic as no financial support is provided (there is no per diem, it is part of the teachers’ normal obligations) while on average,

the training site is relatively remote and the teachers are forced to incur costs, severely curtailing their already meager salaries.

JPs are also opportunities for policymakers to relay instructions from the administrative authorities. In short, we cannot talk of “collaboration” as part of the JPs since, apart from the presence of common goals that are defined by staff from the ZAPs, CISCOs and DRENs, there is no mention of voluntary work or of the symmetry notion. Furthermore, as a group composition depends on the issues in each session of pedagogical days, participants do not experience mutual trust or share a sense of belonging to a group.

Everything that has been mentioned above explains the frustration or lack of satisfaction expressed by more than half of the teachers about the JPs although it was expected.

The Contributions of the Teachers’ Networks as a Collaborative Learning Device

It seems, according to the pilot CISCO surveys, that the implementation of the curriculum was not easy for about half of the teachers, especially due to lack of supporting documents. Moreover, the new approach had not been properly assimilated yet, mainly in terms of knowledge acquisition.

Networks are designed to provide teachers with a structure allowing them to exchange experience, produce documents, in co- and self-evaluation in order to improve everyone’s practices (MENRS, 2008b). Networks are also designed to foster collaborative learning which, according to Dillenbourg (1999), describes a situation in which the triggering of the mechanism of learning as a result of specific interactions between people is hoped. Indeed, the network consists mainly of teachers who are either ordinary members or facilitators. There is therefore relative symmetry between the network members. They have common goals such as improving their professional skills, and there is a horizontal division of tasks between the members and the facilitators of the network. The heterogeneity of the group (civil servant or not) can lead to socio-cognitive conflict which promotes the search for truth in disciplinary concepts (Vygotsky, 1985).

Dillenbourg (1999) identifies three criteria to qualify collaborative interaction: interactivity, synchronization and negotiability. Due to the relative symmetry in the network, decisions resulting from negotiations and interactivity are facilitated. As the networks operate within the framework of physical meetings, synchronization of activities and resource sharing are encouraged.

Collaborative learning takes place through peer coaching. According to the results of the surveys, teachers said they appreciated the interventions of the facilitators and of their peers more than those of other trainers because their status are similar; more discussions and exchanges take place as it is not the ideas of a superior, but of a peer who convinces through reasoning and justification. Moreover, according to Thorn, McLeod and Goldsmith (2007), peer coaching is based on mutual trust and moreover, it is a factor of personal development.

Regarding knowledge and skills, the FRAM teachers seem to be satisfied with the network

contributions, while the other actors are not. This is because FRAM teachers came without any previous training and found everything useful. From this perspective, networks are indeed an appropriate training tool. But what will happen if they feel they have acquired the necessary knowledge and skills? Indeed, it is important to note that civil servant teachers, after attending a few meetings of the network, are discouraged because they feel exploited because they do not get anything in return. The seeming symmetry reported above therefore presents, in fact, a weak point: the presence of both neophytes and experienced teachers (who are not facilitators) in a network creates a situation that is not conducive to collaboration and is worth reconsidering. Such resistance has been reported by Karsenti (2005) who advocates the necessity of a culture of collaboration and training implementation because it is not innate and professional development has no limit.

9. Conclusion and Prospects

According to our findings, it can be said that the teachers' network is an important element of the in-service training of primary school teachers. It provides a situation which uses peer collaboration to improve skills, including teachers' professional skills. The JPs and the network of teachers are complementary insofar as the JPs make qualified trainers available while the network allows peer coaching and facilitates the integration of knowledge and expertise which are only moderately acquired during the JPs, due to time constraints. In addition, it makes it possible to look into the professional problem of every teacher. This was confirmed by around 80% of the teachers interviewed.

Activities are complementary; contents which had not been included into the pedagogical days schedule are re-discussed in the networks or vice-versa. Indeed, if the JPs provide opportunities for teachers to explore the pedagogical innovations with the help of the more competent trainers, whereas the networks offer them the opportunity to conduct more extensive exchanges and discuss more freely and more openly.

The teachers' networks therefore, should be revived (they were suspended in 2010) subject to some improvements, namely, the provision of material and financial resources, motivation of teachers, revision of its organization and functioning according to the field realities. Namely, the role of the CRINFPs must be clarified and they should be given the means to allow them to fulfill their role as designers, trainers in JPs and as evaluators in teachers' networks. The facilitators' work seemed to be relatively well performed and well appreciated by all stakeholders.

These elements include the boosting of teachers' motivation according to their development needs. The articulation of the training system to a career path should be reconsidered in order to promote trained teachers.

The enormous need for teachers in our country has resulted in the recruitment of FRAM teachers whose levels of academic knowledge are relatively low. The networks alone cannot fill all the gaps in their knowledge, while this conditions their ability to provide quality education.

The recruitment level of FRAM teachers to the Baccalaureat should therefore be adopted.

Moreover, it is necessary to reflect carefully and thoroughly on the choice of the contents of the training to be covered in the networks. Studies (Beaumont, Couture, Fortin & Bourdon, 2007) show that pedagogical practices are the most discussed items in the context of collaboration. According to Supovitz and Turner (2000) teachers' professional development is the best way to change the practice of teaching. However, the prospect of professional development should be inspired by the six following criteria according to Villegas-Reimer (2003):

- Based on constructivism
- Perceived as a long-term process
- Perceived as a process that takes place within a particular context;
- Intimately linked to school reform
- Conceived as a collaborative process
- Very different in diverse settings.

Experiments in "lesson study" in Japan and Indonesia are a potential element of effective professional development of teachers in schools (Ono & Ferreira, 2010).

Will it be used in Madagascar to strengthen the network of teachers, after adaptation to the context and realities on the field?

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