IMPACTS OF THE IMPLEMENTATION OF THE LMD REFORM ON THE PEDAGOGY AMONG TEACHERS OF UNIVERSITY ANTANANARIVO

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ABSTRACT

The globalization of higher education, the LMD system through the Bologna Process (1999), has led to profound changes in higher education in Madagascar at the socio-economic, pedagogical and above all cultural levels. All the universities of the big island have had no choice but to implement this reform, which aims to improve university results, the change of teaching and learning methods, and the facilitation of the obtaining of credits, the mobility of students and finally the standardization of the diploma on an international scale. But the contexts of application and the stakes are not the same because of certain parameters that must be taken into account.

Keyword: *LMD system, teaching and learning method, credit, student mobility, standardization of diploma*

I-INTRODUCTION

Madagascar switched to the LMD system in 2012. All Malagasy Universities have prepared an authorization file to implement this new reform. This has caused pedagogical, didactic and digital changes without accompanying measures (SALL, 2007) being present. In this article, we will see the case of University of Antananarivo: which prompts us to ask the following central research question: how to measure the impact of the implementation of the university pedagogy of the LMD system within the University of Antananarivo?

The objectives of the research are firstly to evaluate the implementation of university pedagogy of the LMD reform among teachers of the University of Antananarivo

Secondly to identify the blocking factors of this implementation of pedagogical changeous

Thirdly to Make recommendations to improve the implementation of the LMD system

II-CONTEXT

Introduction The total changeover of the LMD reform was made in 2012 by Ministry of higher education and scientific research with the preparation of an authorization file which will encourage teachers to work differently.

This reform was imposed by decree by the supervisory Ministry and teachers were obliged to translate this policy of change without being prepared for it psychologically (change of paradigm, way of thinking), materially (no accompanying measures) and pedagogically. (Problem of managing the SPW)
As a central issue, how are teachers doing in this context of implementation of the LMD reform at the University of Antananarivo? What are their reactions? What are their difficulties?
As a methodology, we favored the qualitative approach to try to provide explanatory factors of the knowledge, attitudes and practices of teachers in the face of the university pedagogy of the LMD reform.
- We interviewed 40 university teachers by categorizing by age, sex, status, function, grade, and specialty, and seniority, permanent or temporary teacher. We randomly selected teachers to be interviewed based on their availability using phone calls to schedule an appointment. We also sent e-mails to contact certain respondents. We used Bajoit's theory to explain the tensions experienced by teachers in the implementation of the LMD reform

III- METHODOLOGY

For a more scientific methodological approach, the qualitative study was adopted to better assess the knowledge, attitudes and especially the practices of teachers after the implementation of the LMD reform. Thus the following approach is necessary:

1- a pre-investigation or exploratory inquiry to properly prepare for the investigation itself:

- Secondary data collection (statistical data of teacher-researchers and individual contractors at the level of the 7 institutions of University of Antananarivo.)Design of a letter of authorization signed by the thesis supervisor (methodology of approach) Free or non-directive interview with the leaders of the University to know the state of play of the University, the LMD system, and also to know the availability of teachers for the survey, (face-to-face survey, or by phone or dissemination of an online form...) Test the questionnaires. Make a field chronogram

2- Actual investigation : qualitative work (interviews). The interview was conducted with 8 institutions with 40 respondents who bring together the faculty this panel represents the main characteristics of the faculty at the AU because all degrees are present (Assistant Master, Senior Lecturer, Professor, Full Professor),
As for the gender distribution, gender was taken into account, parity between male and female teachers, 23 women and 17 men, 32 permanent teachers and 8 individual contractors. Among the permanent teachers, there are 19 women and 13 men. Among the individual contractors, there are 4 women and 4 men.
We have tried to select university teachers with functions related to the LMD, that is to say the pedagogical teams (Head of school, Head of mention, head of course ....) The establishments were chosen based on their collaboration with ARES (IESAV, IESSI, PAR1 pilot site), the establishments where there are CAPTICE relay partners (ENS, EGS, Sciences, ESPA, etc.), and also teachers who have nothing to do with the ARES project (contract teachers).

The interview will end when it is realized that there is redundancy of the data or we reach the saturation threshold during the analysis of the data
The interview will be recorded on Dictaphone or Smartphone to retain the originality of the data and to be able to check the quality of the data

3- The target people of the study are: Head of programme, Course leader, Dean/Superintendent, Educational Consultant, Teacher-researchers, individual contractors sampled at the level of the 10 institutions of University of Antananarivo.;
The teacher-students selected for the certificate in university pedagogy. For this first descent, we were able to interview 40 teachers at the level of 06 institutions of University of Antananarivo. (EGS, Fac Sciences, ENS, IESAV, IESSI, ESPA)

IV- RESULTS

1-LMD System Definition

The reform of the LMD system is a reform in education designating the introduction of a change in educational structures, contents and practices (PASTIAUX, G. and J., 2006). LMD is an acronym for Bachelor Master Doctorate. By LMD reform , we mean "all the changes or innovations introduced within higher education and which consists in a reorganization of the training system into three levels: Bachelor' degree, Master's and Doctorate." According to (ALTBACH 1991) the reform is also defined: "in a simple and equitable way like planned change in higher education. The term 'reform' usually applies to change in a basic structural organization or curriculum nature'.

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[1] For modernization and especially national and international promotion (mobility and integration professional) of students in Malagasy higher education, the ministry in charge of this Level of education is committed to the License-Master-Doctorate reform. From the year university in 2010, some higher education institutions have started to enter

2- The LMD reform at the University of Antananarivo

2-1A new organization of curricula

What are the main innovations introduced by the LMD reform at the University of Antananarivo?
Firstly, the introduction of the LMD system was accompanied by a reorganization of the structure of university education. Curricula are now organized into domains, mentions, paths.
The domains constitute coherent sets federating the main fields of pedagogical and scientific competence of the institution. Areas of training at the University of Antananarivo:« Science and Technology» for the Faculty of Science; « Arts, Letters and Humanities» for the Faculty of Letters and Human Sciences (FLSH) ; « Society Sciences» for the Faculty of Law, Economics, Management and Sociology (DEGS)« Health Sciences» for the Faculty of Medicine « Science and technology; Agronomic and Environmental Sciences» (license degree) and « Engineering Sciences» ; Agronomic and Environmental Sciences" (Master's degree) for the College Agricultural Sciences (ESSA) ;« Engineering Sciences» for the Polytechnic School of Antananarivo (ESPA) ; « Educational Sciences» for School Normal Superior (ENS).

2-2 Head of Programme.

The field of training is structured in several programme. The head of programme covers a relatively wide scientific field that makes it possible to identify the major theme of the training. It makes it possible to reveal the purpose either academic, research or professional.

Example 1:

Domain: SCIENCE AND TECHNOLOGY

Programme (Bachelor's and Master's degrees): Chemistry, physics and application, biology, Geosystem and evolution, mathematics and informatics

Example 2:

Domain: SOCIAL SCIENCES

Programme (Bachelor's and Master's degrees): Law, Economy, Management, Sociology

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Progressively in the LMD system". State Report of the Malagasy Education System, A sectoral analysis to inform a new education sector plan 2017-2021, February 2016, p.71.
[1] Germain GOURENE, Professeur IrieArsene ZORO BI, Maître-Assistant Yves-Alain BEKRO, Maître de Conférences (2006). Overview of the reform Licence–Master–Doctorat(LMD) in Ivory Coast p3 et 4
[1]Annexe 2
[1]Idem

2-2-1 Course:

The training offer is organized in the form of diversified and adapted courses. A training path is a coherent set of Teaching Units (UE) articulated together in order to offer On the one hand, a pedagogical progression adapted according to the origin of the student and his personal project, on the other hand, opportunities for bifurcation, reorientation or additional training at each of the levels.

Example 1:
Domain: SCIENCE AND TECHNOLOGY
Programme (degree Licence): BIOLOGY

Semesters	**Course**				
S6 S5	Biology of Organisms and Ecosystems **(BOE)**	Biochemistry and Molecular Biology **(BBM)**	Applied Entomology **(ENTAP)**	Physiology, Pharmacology, Cosmetology **(PPC)**	Biological Anthropology and Evolution **(ABE)**
S4 S3	Biology common core **(TCB)**				
S2 S1	Life and Earth Sciences Portal **(PSVT)**				

Example 2:
Domain: SOCIAL SCIENCES
Programme (Master's degree): LAW

Semesters	**Course**			
S10 S9 S8 S7	**P1** : Business Law	**P2** : Applied Private Law	**P3** : Domestic and International Public Law	**P4** : Political Sciences

Second, curricula are organized into creditable and transferable teaching units.
The Teaching Unit (UE) is the basis of the LMD system. An EU can be a subject or a set of subjects chosen for their coherence in that set. Some of these UEs are compulsory: they cover fundamental subjects and must be followed by all students enrolled in the training program. Other UEs are complementary: they complement the fundamental UEs of the path chosen by the student and they must be taken compulsorily in order to validate the student's path. Finally, other free UEs are left to the student's choice.
If the student has met the requirements associated with them, the UEs are transferable from one course to another; they are capitalizable since any Teaching Unit validation is acquired regardless of the duration of a course. Each content in an EU is called a Constituent Element (CE). Each TU Component (CE) also known as a TU subject or component is assessed according to a semi-annual review.
Third, the academic calendar is organized in semesters. Fourth, each UE or CBS is associated with "credits" instead of course hours. It is therefore a question here of measuring the expected workload of the student, and no longer of quantifying the number of hours of lessons given by the teacher. Fifth, the student's workload, within the EU and CBS, is measured by the time spent on face-to-face teaching – whether lectures, tutorials or practical work – and on personal work. A new concept has emerged with the LMD reform: the "personal work of the student".
Sixth, students can benefit from bridges between training courses. They thus have the opportunity to modify their pedagogical path during their schooling. The gateways allow the student to reorient himself if he realizes that the course chosen at the beginning no longer corresponds to his expectations or to enrich his training by access to other

courses, under certain previously defined conditions. For example, a student with a "research" master's degree will be able to obtain a "professional" master's degree subject to the obligation to follow certain courses or to meet certain requirements (internships, for example). A gateway is possible within the same establishment or between two establishments.
This principle of mobility is reinforced by the possibility of TU capitalization.
Seventh, all EU teachers forming a pedagogical path make up a training team, chaired by a teacher member of the EU appointed by the Dean of the Faculty.
Currently, the LMD reform has already led to some tangible results: the training of higher education institutions is already authorized; the courses have been reorganized into mentions and courses; they have been grouped into TU (teaching units); the expected workload of the student has been translated into credits; the courses were segmented into CM (lectures), TD (tutorials) and TP (practical work) and SPW (student's personal work).

3- Presentation of educational activities

University education is divided into three types during the academic year: TT or Theoretical Teaching; DT or Directed Teaching; PT or Practical Teaching.
The elements of pedagogy or transmission of knowledge are: the participatory method; the masterful intervention; group work; group presentation; online teaching or techno-pedagogy

4- The different types of university pedagogy

4-1 Active pedagogy

Among the proponents of new methods, we can mention Maria MONTESSORI (1870-1952), John DEWEY (1859-1952), Ovide DECROLY (1871-1932), Edouard CLAPAREDE, Celestin FREINET (1896-1966) AND Roger COUSSINET (1881-1973).
All this evolution, these advances led to the idea of an active method. "Active methods" are those based on the student's activity. The activity sought is of course that of the mind. "What is important above all is to employ methods that are excitatory of thought," according to René Hubert.
Active pedagogies[8] bring together a set of methods that have one thing in common: learning by doing. It is a constructivist approach, which is close to the theory of learning conceptualized by Piaget in 1923, according to which the activity of the subject is essential to build a representation of the reality which surrounds him active learning have in common that they place students at the center of the learning process: they must be cognitively active, that is to say think for themselves, experiment, formulate hypotheses, sometimes grope, discover independently. Here are some examples of teaching situations that can be part of active pedagogy : problems solving, learning by projects (generating learning from the production of a concrete achievement) case studies (to the extent possible contributed by the participants);cooperation and collaboration in groups on a task;discussions and debates,
role-playing games, simulations, gamification, collaborative concept map creation,
infographics, blogs, podcasts, peer-to-peer teaching, self-assessment of learning;–
some creative techniques.

[8] ACTIVE PEDAGOGIES: INSTRUCTIONS FOR USE - Enssib
https://www.enssib.fr › documents › 68474-pedag. 16BBF November 2018 Focus on ACTIVE PEDAGOGIES: INSTRUCTIONS Maud Puaud consulted on June 09, 2022

4-2 Pedagogy by objectives

For a pedagogy to be more operational in the system LMD, it must contain objectives (PPO). According to (TYLER 1935) (Quoted by D. HAMELINE, in Pedagogical objectives in initial and continuing training, E.S.F.) There are four principles in goal analysis:

1) For a pedagogical intention to tend to become operational, its content must be stated in the least equivocal way possible.

2) For a pedagogical intention to tend to become operational, it must describe a learner's activity identifiable by observable behavior.

3) For a pedagogical intention to tend to become operational, it must mention the conditions under which the expected behavior must manifest itself.

4) For a pedagogical intention to tend to become operational, it must indicate the level of requirement at which the learning is required to be situated, and the criteria that will be used to evaluate this learning.

4-3 Project-based pedagogy[9]

Although old, project-based pedagogy has been increasingly present in higher education in recent decades. (Reverdy, 2013). For Proulx (2004, p. 31), "project-based learning is a systematic process of knowledge acquisition and transfer in which the learner anticipates, plans and carries out, within a given time, alone or with peers and under the supervision of a teacher, an observable activity that results, in a pedagogical context, in an evaluable finished product.

4-4 Problem-based learning (APP)[10]

This type of method, born from the question of the preparation of medical students for the reality on the ground (Leclercq & van der Vleuten, 1998), is a track to explore to prepare students for concrete situations in the professional world. The objective of this method is to propose learning situations similar to those that the student could encounter in the exercise of his future profession so that he can develop the skills needed to solve of various problems (Scherly, 1997). The APP also develops a series of "soft skills" such as communication, reflexivity, collaboration, regulation and self-regulation or autonomy. (Pastirik, 2006; Hmelo-Silver, 2004; MacKinnon, 1999; Dochy et coll. 2003; Lohman, 2002; cited by University of Montréal, 2018)

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[9] Professionalization in higher education. How to properly prepare students for professional reality? Page 3

[10] Idem

Teaching and learning

Here is a table that shows the difference between teacher-centered and learner-centered teaching[11]

Teacher-centered	Learner-centered
Knowledge is passed on from teacher to student	Students build knowledge through research and information gathering, critical thinking, problem solving, research and communication
Students receive information passively	Students actively participate
The role of the teacher is to be the first provider of information and the main evaluator	The role of the teacher is to be the facilitator and trainer. the teacher evaluates learning with the students
Teaching and assessment are decoupled	Teaching and assessment are integrated
Assessment is used to monitor learning	Assessment is used to promote and diagnose learning
The right answers are highlighted	Examining answers and learning from mistakes are highlighted
Desired learning outcomes are measured indirectly by test results	Desired learning outcomes are measured directly by essays, projects, performance, folders/portfolios and others
Unidisciplinary approach	Learning is compatible with a multidisciplinary approach
Individualistic and competitive class culture	Culture of cooperation, collaboration and mutual support
Only students are considered apprentices	Teacher and students learn together

5- Use of teaching materials

Those who use media and those who do not

In general, all respondents use materials in their theoretical, directed, practical course or to do the SPW, the most prominent are those of the ENS - The majority of respondents use paper or physical media (20) including (7) DT support or exercise and (3) in image, 13 course materials

"We always use paper media not only as a course material but also for exercise handouts"
- A first set of respondents use several types of support 2 types (8), 3types (4), 4 types (4), 5 types (2), 6types (1)
"We already use several physical and digital media in the theoretical, directed and practical course and even at the SPW level"
- A second set of respondents use digital media only (13) including (8) slide, (7) PDF and link and (4) video support (YouTube)
"We use different types of educational, didactic and digital materials during our face-to-face course"
- A third set of respondents use both digital and physical media (7), in the case of the ENS
"As we implement the socioconstructivist approach in our teaching style we use both physical and digital media"
- A fourth set of respondents say they do not use a medium (6)
"At the moment we do not yet use either physical or digital support in our way of teaching, we are still content with the lecture for lack of materials and connection" (Tendry, ESPA)
- A small number use physical media such as sketches and maps (1), rendered counts (1)
"In theoretical teaching, we still use maps and sketches to illustrate our courses"
- A small number of respondents use other technologies such as mailing, Facebook (1)
"We are starting to use certain communication technologies such as mailing and the social network Facebook to disseminate the courses and exercises to students"

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[11](Modified to Huba, M.E. and J.E Freed.2000. pages 8-15, 66-67 in Learner-centered assessment on college campuses: shifting the focus from teaching to learning. Allyn and Bacon, Boston, Massachussetts, USA) cité-na en bibliographie

6- Organization of courses in TT/DT/PT

Those who organize PT and DT and those who do not;
It will be necessary to move on to the analysis by referring to Bajoit's theory: what does he say about the committed identity?
Among the respondents interviewed:
Many organize their courses according to the pedagogical organization TT/DT/TP/SPW (20)
An average number organize their courses without the PT (TT/DT/SPW) (10)
A small number organize it without the SPW TT/DT/PT (3)
A small number organize it without the PT and SPW (1), without the TT (1), without the TT, the SPW (1)
And finally these few respondents say that their DT and PT are made by someone else (3)

7- Evaluation modalities

Those of respondents who use multiple types of assessment or those who use only one assessment technique
It should be noted here that 98% of respondents use the final exam as a method of evaluation.
A first group of respondents said they use several types of assessment: (5), (4) (3), (2) namely written exam, oral exam, presentation, continuous control or partial exam, internship report, or research, dissertation, quiz test
A second group of respondents do only a final assessment, (1) written or partial exam

Those of respondents who use the SPW assessment or those who do not assess the SPW:

A first group evaluates SPW in the form of a noted presentation (6),
A second group does not evaluate SPW in the form of a presentation, group restitution, report, group work, personal research, research report (20)
A third group of respondents do not do the TPe because of the unavailability of documents (3)

Those who work alone and who do not train; those who work in teams and who train; etc

Many respondents work in teams and are trained either by Ares (4) or by CAPTICE (16) and (02) other training or (22)
Some respondents work alone and do not train (08) of which 01 was invited by CAPTICE but did not come and one is interested in the training
Few respondents work in teams and do not train (5)
And finally there are respondents who work alone but are trained (4)
One respondent did not respond (1)
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V-DISCUSSIONS :

Here we touch on the social pole (Bajoit), that of resources and constraints.

As Bajoit says in his thesis on personal identity, or the work of rational self-management, AU teachers are victims of tensions because they are forced to change pedagogical practices, to work differently with additional workloads (change of syllabus, supervision of SPW) without being paid financially or materially supported (library and connection) or supported pedagogically (training) so there are structural tensions between the Social Pole (resources- constraints) and the Cultural Pole (unequal remuneration).

"*The LMD system is very similar to the LMD system outside, but there are many gaps too, anti-pedagogical, it is very stressful, we try to finish the courses in 4 to 5 days because it depends on the availability of teachers, the semesterization is too short, the SPW is not yet operational, no concrete results, lack of infrastructure, lack of material and financial means of students (no Android phone or smartphone, no money for connection), we must have a free connection, no free access for students concerning the computer room, not enough computer, only teachers have access to this room.*» (Paule, IESSI)

They are asked to make their mention work with existing means, (infrastructure problem, no library, not connection), nevertheless they are not demotivated in their work despite this work environment (case of the head of mining engineering mention of the IESSI, environment, those of the IESSAV ...). The conditions of their recruitment are their availability, and their ability to work under pressure.

- by involving the ENS : «no training, no time, we are busy making the schedule which is very busy, we are looking for partners like GTZ, no donation from the university, it is we who negotiate partnerships, WCS, sometimes we invest ourselves in terms of purchasing bibliography, we pay 200,000Ar or we make a subscription on amazon, so we briefly we look for funding ourselves, this is the case of teachers of the IESSAV, of the IESSI : « No lab for the TP, it is we the teachers who are looking for materials for the laboratories, example in TP of mineralogy, it is we who buy the useful materials for the TP, here in need of resourceful teachers, look for adaptive solutions, who do not hesitate to take money out of their pockets, we create partnerships to put the samples so that the students can make the observation » (Ranto, IESSI)

But the problem according to our findings that the application of the LMD system is not done in an effective way given the material, human, financial resources implemented that are not yet adjusted to the objectives of the implementation of the LMD system which are based on five principles namely: "teach differently, learn differently, evaluate differently, manage differently and finally the level of professionalization of training»

In the LMD system, teachers are also asked to update their pedagogical tools to confront the decrease in hours of face-to-face lessons and therefore become familiar with active pedagogy or active teaching technique to give the course and center teaching and learning within learners.

Let's consider three more specific questions, which are addressed on a recurring basis by respondents.

First, access to laboratory equipment.

In reality, the material means or infrastructures are deficient well at the beginning of the implementation of the LMD system. The constructions were all made at the time of colonization, the laboratory equipment is old, archaic, in terms of budget the Ministry does not have the means to finance the universities, while in the new reform, there is a tendency to the professionalization of research which requires an infrastructure, of quality not only for the reception of students but the rooms must be equipped with video projector and connected.

At the level of the Faculty of Science, the classrooms are insufficient and not electrified, which causes problems in the finalization of pedagogical activities (DT, PT).

To be able to deal with this problem of material insufficiency, teachers and heads of specialization must use partnership to remedy it. We can use the tools or materials of the partners for the manipulation in PT (ENS, IESAV).

Internship research is also one of the strategies not only to strengthen students' theoretical achievements but to solve material problems (Sciences, IESAV). A teacher from the Faculty of Science said that: "the implementation of the

LMD is not effective, no accompanying measures, students spend money out of their pockets, if we want to do the TPE there is no connection, we cannot do the TP, no , no equipment, water and electricity are often interrupted, as soon as there are video projectors, the mention geology must make a descent of the field for the theoretical application, the students take care of themselves, it and the teachers also do not make the study trip, because of the non-existence of materials, (GPS, magnifying glass, hammer ...) so this causes harmful consequences on the teaching, which will be very theoretical, the students do not understand the course well, the teachers cannot deepen the course well. Infrastructures like laboratories, are destroyed, like microscopes, it has become theoretical courses without practice, reading» - (Domoina, Sciences)—

According to the majority of respondents, the LMD system is not yet operational in Madagascar, because of the lack of accompanying measures that should give a good image to this reform. Many teachers complain about the dilapidated infrastructure, and the University of Antananarivo does not equip equipment within the institutions

Secondly, the issue of Internet connection and access to documentary sources, as well as the use of TICE.

Lack of connection is really a handicap for some UA institutions (IESAV, ENS, EGS,) others like IESSI have but not yet operational and therefore creates problems in the realization of Student's personal work which are focused in webographic research and online documents, which is usually done after the course, except for the ENS which is a student-centered pedagogy is based on the personal research of the students, because they themselves are trained to teach, so must be self-taught.

« we are in full swing, it is a university of proximity, the creation of the sector is in line with the needs of the company, 80% for students and 20% for teachers, it is difficult the TPE, there are only 5 mega of connections, we need specialized staff for this connection, no electricity, solar pannel, we must make a personal effort to get a solar plate, if there is no connection we can't search, the books are very old and from time if there is not we give a lot of physical supports» (Pauline, IESSI)

The presence of an Internet connection and the use of ICTs are seen as a response to pedagogical difficulties. But will this really be the case?

Most teachers have also not been trained in university pedagogy and digital pedagogy which consists of using the ICT to give the course, because the LMD invites teachers to work differently by reducing face-to-face classes and increasing the TPE.

The majority did not benefit from training to reduce the face-to-face course that is to say to update the content of the course in a syllabus and organize the TPE, they had to solve their problem alone.

In addition, it creates an overload of work in physical or digital media productions, because it is difficult to work in a limited time without support, without help from the leaders of the establishment, everyone works in his corner.

Thirdly, the management of the Student's personal work

According to the surveys, several teachers use the SPW as a complement to courses, as a course support and also to evaluate in the form of presentation, report, and are graded. As for the way to conduct the SPW, some give instructions, indications, others bibliographical references, links, some do not do at all for lack of motivation because there is no financial recognition to do the TPE, only face-to-face work is paid in Additional Hours.

In the new system, we have reduced the number of face-to-face classes, and teachers are asked to do the Student's Personal Work, it is to teach differently using active pedagogy centered on the student, the latter is at the center of learning. Several teachers interviewed have a lot of trouble changing their syllabus, because they complain about the lack of time to synthesize their yard, teach those that are essential for a few hours, they were not used to working differently, to retrain, to update the content of their course, because teaching is also doing research, accessing punctual information, innovating means taking risks (Baillet, 2018)

The personal work of the student, new concept of the LMD system that makes students work, to help them to be autonomous in their way of researching, to build their knowledge, their knowledge, to be self-taught... students were used to middle school, high school and even in the old system passively receiving knowledge, and that it was the teachers who held the monopoly of knowledge, it is the traditional pedagogy (Houssaye, 2014.)

Now students must get involved, participate, to be active in the learning process to complement the knowledge taught, the scientific literatures that their teachers share.

But the problem, first of all, is that students are not ready, no connection, no library to do personal or group research and they have to spend money on cyber to connect, there are financial constraints for students from modest backgrounds.

Secondly, it is an additional workload for teachers who are not motivated to do so because they are not paid financially while they are obliged to manage, evaluate and score the results of the SPW in order for it to be operational. Students must not be left alone, they must be supervised by instructions, they must be given physical media, (bibliographic references,) or digital support (link, website ...). Many teachers are not trained in the moodle

platform, techno pedagogy or online courses, (Ntibasikarandi, 2018) that is to say digital tools (computer and connection) to do distance learning. Course materials and exercises will be done online. Teacher-student communications will be done online or via email.

According to a teacher's interview, what is difficult in the LMD: « it is to manage and evaluate the TPE, we reduce the face-to-face work but the staff do not increase us only have to give the essentials of the courses so it gives an additional workload» (Anja, ESPA)

Problem of the SPW is the quality of the documents, many students take Wikipedia as their source, so we must make subscriptions to specialized digital journals to facilitate research (Bema, Sciences)

VI- CONCLUSION:

From this study that we conducted among the seven institutions of University of Antananarivo, we deduced that the implementation of the LMD system through the use of both physical (polycopes, booklets, exercises...) and digital (PowerPoint courses, courses projected by a video projector, online courses, video-conferencing, etc.) is being put into practice by teachers at the level of each school, for non-beneficiaries and beneficiaries of the training provided by the CAP-TICE.

In fact, we are witnessing the gradual shift of the new system not only on the theoretical level (habilitation file) but also on the practical level (the emergence of active and digital pedagogy) which connects the teacher and the learner and above all gives an atmosphere to the course, unlike the lecture before. Teachers vary their teaching methods from theoretical to directed teaching to practical work. Which is a good thing because this is the LMD, which means active pedagogy centered on the learner, and that it is the student who builds this knowledge, makes discoveries, makes personal research to complete the theoretical course and improve his learning.

Nevertheless some establishments still have problems in the application (ESSA, Letter faculty…) of the LMD system due to lack of equipment, connection and especially training concerning support in active pedagogy.

VII. REFERENCES

[1]. Alexandre, M. F. et Alain, Q. (2007) Publish during and after the thesis. Some advice for young sociologists in Journal of the French Association of Sociology

[2]. Altbach, P.G. (1991) Patterns in higher education development: Toward the year 2000, Journal The Review of Higher EducationVolume14 Issue3Pages293

[3]. Bajoit G. (2003) Sociological Approach to Contemporary Western Societies, Publishing Armand COLIN

[4]. Barrère, A. et Sembel, N. (1998) Sociology of education, Nathan Pédagogie, Paris

[5]. Cuin, C.M, Sociologists and social mobility, PU.F, p .217-221, Paris,.

[6]. DE Ketele, J.M.(2010) La pédagogie universitaire : un courant en plein développement dans Revue française de pédagogie, p.172

[7]. Durkheim, E. (1911). Article "Pédagogie" Reproduit dans Education et sociologie sous le titre : "Nature et méthode de la pédagogie", PUF.

[8]. Lebrun, M. (2002), e-Learning pour enseigner et apprendre

[9]. Lebrun, M. (2007).Des technologies pour enseigner et apprendre, Paris, Bruxelles: De Boeck & LARCIER

[10]. Lebrun, M. (2011). Impacts des TIC sur la qualité des apprentissages des étudiants et le développement professionnel des enseignants: vers une approche systémique. Sciences et Technologies de l'Information et de la Communication pour l'´Education et la Formation (STICEF), ATIEF, 18, 20 p. <hal-00696443>

[11]. Pastiaux G. et J. (2006) : La pédagogie, 3e édition, Nathan, Paris.

[12]. Randriamahenintsoa, E. (2016) « LMD Curriculum Reforms And Teachers' Perceptions Of Change at The University Of Antananarivo Madagascar (2005 -2015) Thèse de doctorat soutenue en octobre 2016 à l'Université d'Antananarivo à la Faculté des lettres et Sciences Humaines, Département d'études Anglophones ;

[13]. Sall H.N. (2007) : Enjeux et perspectives d'une réforme institutionnelle : les universités africaines face au processus de Bologne. UCAD, Dakar, 16 p.