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Evaluation of the "License, Master, Doctorate" reform in medical school of University of Lomé (Togo): strengths and weaknesses

Julienne TECLESSOU (tjulie06@yahoo.fr)
Universite de Lome Faculte des Sciences de la Sante https://orcid.org/0000-0003-2619-8396
Essossinam KPELAO
department of neurosurgy, Faculty of Health Science of Lome (Togo)
Bayaki SAKA
Department of Dermatology, Faculty of health science University of Lome (Togo)

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Abstract

Introduction: The License, Master, and Doctorate (LMD) reform which structured high studies in three cycles has been instituted since the Bologna declaration in 1999. To be conformed to international standards, the LMD system has been instituted in university of Lomé in 2009 to foster pathways between medical and paramedical training. The purpose of this study was to evaluate the strengths and weaknesses of the LMD reform since its introduction in medical school of Lomé. Method: It was an opinion survey conducted in 4 months in University of Lomé among the medical school's teachers about strengths and weaknesses of LMD reform since its application. The strengths were defined as all facilities brought by LMD reform in organization of courses and practices, evaluations, new Information and Communication Technologies (ICTs) (internet, video projector, courses on line). The LMD weaknesses were defined as any problem generated by the LMD system. Results: Of 113 resident teachers of the medical school of Lomé, seventy-six have completed the questionnaire (67.2%). The majority of teachers (74) thought that the introduction of LMD reform will make Lomé medical school fit into international standards. The availability of the video projectors was noted by 90.8% of the teachers and 82.9% of them used it for teaching. There was no online course. The main strengths of LMD were: a better evaluation system (33.3%), the organization of training in units with credit (28.6%), the usage of new ICTs (23.8%). Many weaknesses of LMD reform were noted by teachers: the plethoric number of students (36.2%), the absence of an intermediate diploma and pathways between studies (29.3%). The Insufficiency of human resources and material was also mentioned. Conclusion: This study highlights that LMD reform needs adaptation to local realities and improvement to ensure that students will get good training in conformity with international standards.

Introduction

The License, Master, and Doctorate (LMD) reform which structured high studies in three cycles was instituted since the Bologna declaration ~~on~~ in 1999 **[1]**. This system is being adopted by almost all the universities in worldwide **[2]**. To be conformed with international standards, Africa universities joined the system distinctly **[3]**. In Togo, the LMD system was instituted in university of Lomé in 2009 **[4]**. The application of this reform in the medical schools is a challenge, especially because the Bologna Declaration didn't point out any specificity.

Previously, the general practitioner training in medical school of Lomé was organized in 3 cycles without any intermediate diploma. In order to foster pathways between medical and paramedical training, the LMD reform was introduced to gather both formations in license and orient the students in each study according to their merit only at the end of the license cycle. Then, the LMD reorganized the medical studies into 16 successive semesters: 6 for the license cycle, 4 for master cycle and the last 6 for doctorate. Courses are divided in teaching units with credits assigned. Practical skills in laboratory, hospital and pharmacy are also assigned with credit at the beginning of the third semester. The purpose of this study was to evaluate the strengths and weaknesses of the LMD reform since its introduction in medical school of Lomé.

Methods

It was an opinion survey conducted in 4 months (August-November 2018) in University of Lomé among the medical school's teachers about strengths and weaknesses of LMD reform since its application. We included the two categories of teachers: the resident professors and associates (assistant professor). Non-resident teachers were not included. A questionnaire form was addressed to them by hand or mail to fill out. An explanation note about survey was attached to the questionnaire. Participation in the survey was voluntary and anonymous. The strengths were defined as all facilities brought by LMD reform in organization of courses and practices, evaluations, new Information and Communication Technologies (ICTs) (internet, video projector, courses on line). The LMD weaknesses were defined as any problem generated by the LMD system. Every participant gave also free opinion on how to solve weaknesses that had been identified. The data analysis was carried out using epi-info software 7.

Results

Over 113 resident teachers of the medical school of Lomé, Seventy-six had completed the questionnaire (67.2%). Their average age was 41 years old. We noted a male predominance (92.1%); and 43.4% were incumbents teachers. Teachers were most predominant in medical and surgery department at 35.4% and 34.2% respectively; In other department like fundamental sciences, pediatrics and gynecology, they were respectively at 19.7%, 7.9%, 1.3%. Most of the teachers intervened in the master cycle (76.3%) followed by the doctorate (56.6%) and the license (47.4%).

Most teachers (74) thought that the introduction of LMD reform will make Lomé medical school ~~on~~ to fit into international standards. More than half (64.5%) of the teachers had not received training before ~~on~~ the implementation of the LMD reform. However, 43 teachers (56.6%) had been trained in ICTs **(Table I)** of who 30 were autodidacts. The availability of the video projectors was noted by 90.8% of the teachers and used for teaching by 82.9%. The availability of network in classroom was 90.8%. The handouts were issued in 89.5%. There were no online courses **(Table I)**. Only 15.8% teachers mentored student's presentation after personal research on one subject. The workshop or practical works were organized by 38.2% of the teachers.

Six main strengths of LMD were cited by 63 teachers (82.9%). According to the teachers, the system of evaluation in which the medical students were mixed with students from other faculties limited cheating (33.3%). The training's organization in units with credit which correspond to the international standards was also cited. The usage of new ICTs (23.8%) encouraged by LMD was additional best innovation **(Table II)**.

Many weaknesses of LMD reform were noted by teachers (58) like the plethoric number of students (36.2%). Some of them thought that it was an unsuitable reform and inappropriate to medical school (20.7%) **(Table III)**. The remaining problems not ~~re~~solved by LMD system were: the absence of intermediate diploma and pathways between cycles (29.3%), The Insufficiency of human resources

(teachers, secretaries, accountants) and material (classrooms, libraries, computers, internet connection, equipped hospitals) was also mentioned **(Table III)**. One teacher reported that the LMD reform privileges theoretical teaching than practical.

Discussion

The main difficulty of our study was the fact that just 67.2% of the teachers filled out the questionnaire. This rate is lower than what is found in an Algerian study, where the response rate was 100% **[5]**. This difference can be explained by the fact that our survey method was by email. It is well known that the response rate of online surveys without financial motivations is generally between 6% and 15% lower than traditional methods (manually) **[6,7].** In addition, it is not excluded that teachers had being reserved to judge this new LMD. The majority (64.5%) of medical school's teachers had not received training on LMD reform since its introduction. This could limit its understanding in application. The absence of training before the introduction of the LMD reform in African universities was pointed out by HUGON **[8]**. In Algeria **[5]** several university partners (teachers, students, and administrative staff) complained that the LMD reform was hasty, specifically the problem of teacher's training. However, 56.6% of Lomé's teachers had being trained in new ICTs. In Mali, Fomba *et al*. in 2011 found that only 22% of teachers had sufficient skills about computer and its usage **[9].** Methods used for teaching were handout (89.5%) and power-points (82.9%). Only 60.5% of teachers gave printed version of their courses to students. In a previous study including all the University's faculties of Lomé, the medical school was the rare faculty where new technologies were most used for teaching **[4].** Our results are similar to what was found by Bachir **[10]**. To accommodate to the LMD system, mainly by using new technologies. In medical school as in other faculties of Lomé's University, no course was done online **[4]**.

According to the teachers, one of the strong points of the LMD reform in medical school was the better evaluation's system. The evaluation in the LMD reform requires 3 examinations: one test in the middle of the semester, one in the end of the semester and one for the resit (the one who failed the previous evaluations). The fact that all students of the university are putting together during the evaluation can limit cheating. Most of teachers (28.6%) recognized also that the LMD reform upgrade the university of Lomé to be on international standards. This can facilitate the approval of diplomas delivered in this university internationally **[11-13]**. The organization of education in the teaching units has been the core of the LMD reform in several African universities **[9, 10, 14,15**]. The ICTs have revolutionized many aspects of educational lives, including teaching and learning and become inevitable in higher education **[16-18]**. But it is a big challenge for most developing countries due to many socio-economic and technological circumstances **[19]**.

The absence of an intermediate diploma (29.3%) and pathways between different study branches of medical and paramedical training were the main weakness of LMD reform since its introduction. Indeed, in accordance with the principles of the LMD system, the first purpose of the introduction of this reform in the medical schools in Togo was to combine the license of all branches of health studies. The orientation in Master of each study branch should be done by merit: the best students in research master for medical

school and others in professional master for paramedical training according to merit. When this principle was first applied, all the students who validated the license had made complaints to continue their medical doctor and refused to be referred to paramedical schools. This forced to reintroduce the numerus clausus in the first year to avoid the high number of medical students

Finally, there is no intermediate diploma and pathways of students up to today as hoped. This organization has been very successful in France with more than 6 common studies in license and orientation according to the merit **[20].**

The other aspects for improving LMD reform were: increase human and material resources, the availability of online courses, organization of more practical lessons and workshops, mentoring student's presentation and homework. This situation is similar to those found in other African universities.

Despite these difficulties, the LMD system is not a choice for our universities, but a necessity to upgrade the training **[21].**

Limitation

The main limitation of our study is related to the unwillingness of some teachers to give their opinion on the LMD reform.

Conclusion

The introduction of LMD reform in Togo universities was done to upgrade high schools training as in worldwide. This study highlights the LMD system needs adaptation to local realities and improvement to ensure that students will get good training in concordance with international standards.

List Of Abbreviations

LMD: License, Master, and Doctorate

ICTs: Information and Communication Technologies

Declarations

Ethics approval and consent to participate

This study was approved by the medical school of University of Lomé. We obtained also the agreement of participants after the explanation. The survey was anonymous and confidential.

Consent to publish

The medical school of University of Lomé authorized the publication of this manuscript.

Availability of data and materials

Available

Competing interest

The authors declare no conflicts of interest with regard to this article.

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Authors' contribution

JNT, EK, BS: participated in data collection, wrote the manuscript, revised and finalized the manuscript. All the authors had read and approved the final manuscript to be submitted for publication.

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Tables

Table I: LMD application in Medical school of Lomé

	Yes n(%)	No n(%)
About LMD		
Confirmity of international standards	74(97.4)	2(2.6)
LMD implementation’s training	27 (35.5)	49(64.5)
Training on ICTs	43(56.6)	33(43.4)
Videoprojector availability	69(90.8)	7(9.2)
Network availability	69(90.8)	7(9.2)
Online coures	0	76(100)
Classroom availaibility	65(85.5)	11(14.5)
Methods of teaching		
Course’s Explanation	76(100)	0
Handout Supports	68(89.5)	8(10.5)
Power-point Projection	63(82.9)	13(17.1)
Numeric Version of courses	46(60.5)	30(39.5)
Illustration by iconography	43(56.6)	33(43.4)
Student presentation	12(15.8)	64(84.2)
Cours dictation	2(2.6)	74(97.4)
Practical works (workshop)	29(38.2)	47(61.8)

Table II: the main strengths of LMD reform cited by 63 teachers.

	n	%
Best revaluation system, little fraud	21	33.3
Study organize in teaching units with credit	18	28.6
harmonizing program among universities	18	28.6
Teaching by ICTs	15	23.8
repartition of the year in semester	12	19
Personal Research and involvement of students	7	11.1

Table III: Weaknesses and pending problems of LMD noted by 58 teachers (76.3%)

	n	%
Weaknesses of LMD reform		
Increase of students number	21	36.2
Unsuitable reform	12	20.7
Insufficiency of teachers’s training	8	13.8
Absenteeism in courses	8	13.8
Absenteeism in internship	7	12.1
Decrease students level	7	12.1
Insufficiency of ICTs (network, ...)	6	10.3
Difficulty of application the reform	4	6.9
Poor practical training (stage)	3	5.2
No Courses online	2	3.4
Increase of teacher’s workload	2	3.4
Multiplication of exams	2	3.4
Share classrooms with other faculties	2	3.4
Unsolved problems		
Absence of intermediate diploma	17	29.3
Absence of pathways between studies	17	29.3
Insufficiency of resources (human and material)	14	24.1
Poorly equipped hospitals	2	3.4