Evaluation of the "Licence, Master, Doctorate" reform at the Health Sciences faculty of the University of Lomé: strengths and weaknesses

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Abstract

Introduction: The License, Master, and Doctorate (LMD) reform which structured high studies in three cycles was instituted since the Bologna declaration on 1999. To be conformed with international standards, the LMD system was instituted in university of Lomé in 2009 to foster flexible 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.

Results: Seventy-six out of on 113 resident teachers of the medical school of Lomé had completed the questionnaires (67.2%). Mostly teachers (74) took that the introduction of LMD reform will make Lomé medical school on international standards. The availability of the video projectors was noted by 90.8% of the teachers and used for teaching in (82.9%). No course dispersed in medical school was online. The main strengths of LMD were: best student’s evaluation (33.3), the organization of training in units with credit (28.6), using new ICTs (23.8%). Many weaknesses of LMD reform were noted by teachers: the plethoric number of students (36.2%), the absence of intermediate diploma and pathways between studies (29.3). The Insufficiency of personnel 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 compliance 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 1999 [1]. This system is being adopted by almost universities 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 that 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 flexible 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 the License ‘end. Then, the LMD reorganized the medical studies in 16 successive semesters: 6 for the license, 4 for master and the last 6 for doctorate respectively. The learnings are divided in teaching units with credits assigned. The practice skills in laboratory, hospital and pharmacy are also assigned with credit on onset with 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 incumbents (professors) and associates (assistant professor). Honorary, non-resident teachers were excluded. 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. Every participant gave also free opinion as to how to solve them. The data analysis was carried out using epi-info software 7.

Results

Seventy-six out of on 113 resident teachers of the medical school of Lomé had completed the questionnaires (67.2%). Their average age was 41 years old. We noted male predominance (92.1%); and 43.4% teachers being incumbents. The medical and surgery departments had the most teachers with 35.4% and 34.2% respectively. Other departments were fundamental science (19.7%); pediatrics (7.9%) and gynecology (1.3%). Most of the teachers intervened in the master cycle (76.3%) followed by the doctorate (56.6%) and the license (47.4%). Mostly teachers (74) took that the introduction of LMD reform will make Lomé
medical school on 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) including 30 by themselves. The availability of the video projectors was noted by 90.8% of the teachers and used for teaching in (82.9%). The availability of network in classroom was 90.8%. The handouts were issued in 89.5%. No course dispensed in medical school was online (Table I). Only 15.8% teachers fostered 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 are mixed with students from other faculties limited cheating (33.3%). The organization of training in units with credit which was permitted to be on international standards was also cited. The using 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). They enhanced the remaining problems not resolved by LMD as the absence of intermediate diploma and pathways between studies (29.3). The Insufficiency of personnel resources (teachers, secretaries, computer scientist) and material (classrooms, libraries, computers, internet connection, best 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 collection of the teachers filled out questionnaire with 67.2% of the response. This rate is lower compared to a similar Algerian study in the French department with 100% return [5]. It be explained by our survey method (mail). It is well known that the response rate of online surveys without financial incentives is generally between 6% and 15% lower than traditional methods as hand by hand [6,7]. In addition, it is not excluded that teachers had being reserved to judge LMD reform which is newest. The majority (64.5%) of medical school’s teachers had not received training on LMD reform since its introduction. This could limit its understanding by them in applying. 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 and collaborators in 2011, found that only 22% of teachers had sufficient skills about computing and its use [9]. The mostly methods of teaching used were handout (89.5%) and power-points (82.9%). Only 60.5% of teachers provided digital version of their courses to students. In a previous study including all the faculties of University of Lomé, the medical school was the rare faculty where new technologies had more being used for teaching [4]. Our results are similar to Bachir’s [10]. This study shows that teachers are making efforts in adapting to the core of LMD system, namely using new technologies. No course provided in medical school as in other faculties of Lomé University was online [4].

According to the teachers, one of the strong points of the LMD reform in medical school was the best system of evaluation. The evaluation in the LMD reform requires
3 examinations: one test in the middle, one in the end of semester and one for the resit. As all students of university are mixed during the evaluation, that’s limiting cheating. Most of teachers (28.6%) recognized also that the LMD reform upgrade the university of Lomé to be on international standards. It will be facilitating the recognition of the diplomas delivered and the transhumance of students worldwide [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 LMD fostering their using then, it is better thing provided (23.8%). The absence of 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 should be done by merit order: the best students in research master for medical school and others in professional master for paramedical training according to a numerus clausus. The first application of this principle led to a successful claim of all the students whose had validated the license. Therefore, all students had continued medical school instead of some being oriented in the paramedical schools. This situation was responsible of plethora number of students and has forced to reintroduce the numerus clausus in the first year. Finally, there is no intermediate diploma and pathways of students up today as hoped. This organization has been very successful in France with more than 6 common studies
in licence and orientation according the merit [20].

The others aspects for improving LMD reform were: increase human and material resources, putting all the courses online, organize more practice and workshops, foster students’s presentation and homeworks This is a general situation in others 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 that LMD reform needs adaptation to local realities and improvement to ensure that students will get good training in compliance 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
Consent to publish
The medical school of University of Lomé authorized the publication of this manuscript.

Availability of data and materials
Available

Competing interest
None

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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

| About LMD                                      | Yes n(%) | No n(%) |
|------------------------------------------------|----------|---------|
| 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 courses                                 | 0        | 76(100) |
| Classroom availability                          | 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.
| Weaknesses of LMD reform                                                                 | n  |
|----------------------------------------------------------------------------------------|----|
| Increase of students number                                                            | 21 |
| Unsuitable reform                                                                      | 12 |
| Insufficiency of teachers’s training                                                    | 8  |
| Absenteeism in courses                                                                 | 8  |
| Absenteeism in internship                                                               | 7  |
| Decrease students level                                                                 | 7  |
| Insufficiency of ICTs (network, ...)                                                     | 6  |
| Difficulty of application the reform                                                    | 4  |
| Poor practical training (stage)                                                         | 3  |
| No Courses online                                                                      | 2  |
| Increase of teacher’s workload                                                          | 2  |
| Multiplication of exams                                                                 | 2  |
| Share classrooms with other faculties                                                   | 2  |

| Unsolved problems                                                                       | n  |
|----------------------------------------------------------------------------------------|----|
| Absence of intermediate diploma                                                        | 17 |
| Absence of pathways between studies                                                    | 17 |
| Insufficiency of resources (human and material)                                         | 14 |
| Poorly equipped hospitals                                                               | 2  |