

# Scaling Up Numbers and Competency of Graduating Medical and Dental Students in Nigeria: Need to Improve Medical Trainers' Competency in Teaching

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**ABSTRACT**

**Background:** With the increasing medical brain drain in Nigeria, there is a need to train and graduate more doctors to fill in the gaps created to mitigate the effects. To meet this goal, the trainers need to evolve and have the competency to deliver quality training for many more enrollees in medical schools. **Aim:** This study aimed to gather information about the perception of medical teachers' need to obtain certification in medical education and what this will achieve in scaling up the competency and number of graduating medical doctors. **Subjects and Methods:** Medical teachers in Nigeria participated in this mixed (quantitative and qualitative) study. Four hundred medical consultants and teachers were randomly selected and sent a semi-structured pre-validated questionnaire; also, a panel discussion was conducted with six medical teachers with other special assignments in universities and postgraduate colleges. Quantitative data were analyzed using Statistical Package for the Social Sciences (SPSS) 24, differences in proportions were calculated using the Chi-square test, and *P* values <0.05 were considered significant. **Results:** Two hundred and thirty-eight (59.5%) participants completed the form, 63 (26.5%) had practiced for <5 years, and 114 (47.9%) had >10 years of practice experience. A majority of 168 (70.6%) were physician lecturers in federal or state universities, and 15.5% had obtained certifications of any kind in medical education. Over 80% perceived that medical education training should not be a prerequisite to teach, but a similar percentage believed that faculty medical education training can help scale up the training competency and the number of graduating medical doctors. **Conclusion:** To scale up the number and competency of graduating medical doctors, medical teachers need to acquire core teaching competency. The respondents and discussants believe that when these core teaching competencies have been fully developed, it will be easier to increase the number of medical students' enrollees, teach them their curriculum through innovations, and graduate them with improved competencies.

**KEYWORDS:** Medical education, Nigeria, teaching competency

## INTRODUCTION

In recent years, in Nigeria, several problems have prevented the smooth running of academic calendars and the transition from undergraduate to internship in many public medical schools.<sup>[1-4]</sup> The Medical and Dental Council of Nigeria (MDCN) and National

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Universities' Commission (NUC) recommended six years for undergraduate medical education,<sup>[5]</sup> yet some students have spent upward of 7–9 years in institutions of learning, often due to trade disputes between teachers, allied staff of training institution, and their employers. The frustrations that medical students bear have driven some toward depressive states and other mood disorders.<sup>[6–10]</sup> While this problem is yet to be solved, another challenge, which is the movement of early career doctors out of Nigeria, has crept in. Having been trained for over six years and being competent in many skills, the chances of emigrating to a more lucrative and conducive working environment are high and attractive. The push and pull factors for these early career doctors favor their emigration today more than ever.<sup>[7,9,11–13]</sup>

In a country with over 200 million inhabitants, many of whom are in the vulnerable population demographic and having fewer than needed medical doctors can keep the population more vulnerable.<sup>[3,14,15]</sup> The trained medical doctors who are also trainers have started emigrating out of the country, for the same reasons as the younger ones.<sup>[16,17]</sup> These combinations definitely put Nigeria in dire straits, making it impossible to attain sustainable development goals, or reverse the already abysmal health indices, especially concerning maternal and infant mortality rates.

The needs to scale up medical education and graduate medical doctors into perspective are the number of enrollees in medical schools today. This number is decreasing every year, relative to the need, as many students regret their career choices.<sup>[18–20]</sup> Many students now pursue careers in information and communication technology, economics, engineering, and art. The number of doctors and/or health professionals remaining in the profession has also reduced as many would rather seek less tedious jobs that are “hazard-free” with lower pay than continue in a profession that is not so well appreciated in this part of the world.<sup>[19–21]</sup> The requirements for entry are also the most stringent in all universities with high unified matriculation scores and secondary school grades, which are becoming more difficult to achieve these days.

Solving the problem of a low number of medical doctors remaining in the country after graduation may require increasing the number of medical doctors who will graduate every year from medical schools.<sup>[22–25]</sup> Competency in cognitive and psychomotor skills will have to match the numbers that are produced because mass production often compromises quality if not checked in the development stage. While many medical and clinical trainers have competent skills in medical

and surgical practice, the teaching skills are not as developed. There is little information concerning the training of trainers in medical education principles, and there are no documented formal faculty development programs in Nigerian medical schools. The British General Medical Council (GMC), Accreditation Council for Graduate Medical Education (ACGME), and Royal College's Canadian Medical Education Directives for Specialists (CanMEDS)<sup>[26–28]</sup> advised that doctors engaging in teaching must acquire some core competencies to perform their tasks effectively. They recommend certification courses from postgraduate diplomas to masters and doctorates. In Nigeria, the postgraduate colleges have been conducting regular training in medical education, understanding the need for this competency but the scale to which this is being done, and the effect is largely unknown. To this end, we aim to gather information about the perception of medical teachers on the need to develop teaching competencies and what this will achieve in scaling up the competency of graduating medical doctors in Nigeria.

## METHODS

We conducted an online survey of consultants or Fellows of the West Africa College of Physicians, West Africa College of Surgeons, and the National Post Graduate Medical College of Nigeria only, under the auspices of the Medical and Dental Consultants' Association of Nigeria (MDCAN). The selected respondents were sent an online link in Google Forms. The questionnaire was developed by the authors and was based on their experience in teaching, managing faculty educational systems, and running faculty development programs. The questionnaire was pretested on consultants who were part of a Master of Science in medical education degree at the University of Port Harcourt, Centre for Medical Research and Training. These consultants were not part of the final selection for the survey, and their report was used to validate the questionnaire. The questionnaire retrieved demographic information, whether respondents had certification in medical education, their perception of need for medical education certification, or acquiring skills in pedagogical and andragogical teaching competency. The Likert scale from 1 to 5 was used to retrieve information about their perceptions. The questionnaire was built using Google Forms, and the retrieved data were exported into Statistical Package for the Social Sciences (SPSS) for analyses. Tests of statistical significance included Chi-square, the one-sided *t*-test, and one-sided analysis of variance (ANOVA), as appropriate, and *P* values <0.05 were considered significant.

Based on the results of the online survey, randomly selected panelists were invited to a panel discussion during a medical education summit and their views and opinions were documented in a qualitative survey. The panel discussion lasted for 1 hour 30 minutes, with six panelists from the representatives of the various associations including the president of MDCAN, the president of the National Post Graduate College of Medicine, a former Provost of a College of Medicine, a medical educator from the United Kingdom, and two randomly selected questionnaire respondents. The interview was semi-structured with a flexible topic guide, which covered issues relating to the respondents' views and opinions on training qualities, self-perception of teaching competency, and the need for certification in medical education as a prerequisite for teaching.

The panel discussions were audio–video-recorded, and this was transcribed verbatim. The data were analyzed using the thematic framework content analysis method. The themes generated were categorized as follows: 1. training and certification for medical education competence and 2. training competencies and ways to increase the number and competence of graduating medical doctors. The transcription of the panel discussion was reviewed by Yarhere Irero and Adeboye Mohammed (YI and AM) to help categorize the data and extract important quotes used.

## RESULTS

### Characteristics of the respondents to the survey

Of the 400 doctors invited to participate in the survey, 238 (58%) completed the questionnaire, 131 (55%) were physicians, 93 (39.1%) were surgeons, and

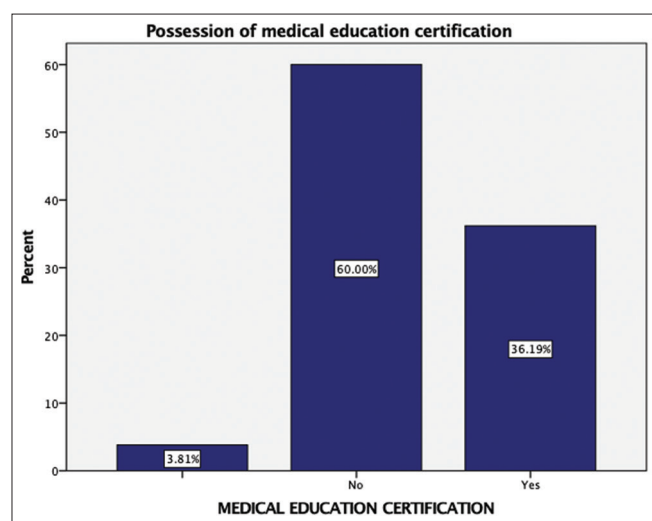
14 (5.9%) were dentists. Sixty-three (26.5%) had practiced for <5 years, 60 (25.2%) for 5–10 years, and 114 (47.9%) for >10 years of practice experience. The majority of respondents (168 (70.6%)) were physician lecturers in federal/state universities, and 28 (11.8%) had obtained certifications of any kind from foreign institutions.

### Need for medical education certification to teach medical students

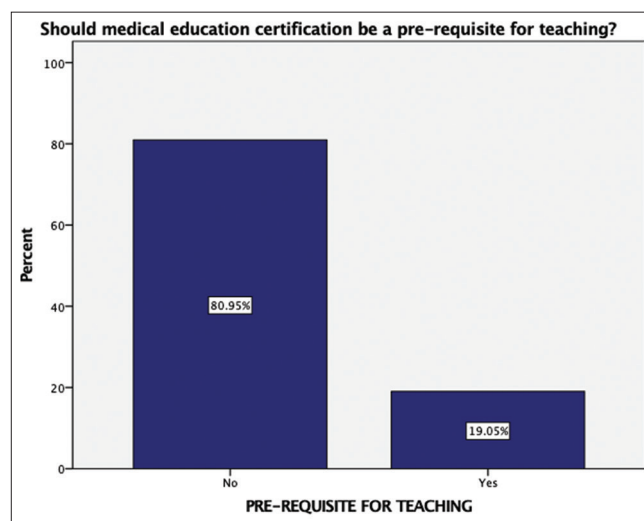
Thirty-seven respondents (15.5%) had obtained certification Post graduate diploma (PGD, MSc, or PhD) in medical education, and 32 of them were employed in the university, [Figure 1]. Of the total respondents, 51 (21.4%) believed that medical education certification should be a prerequisite for teaching medical students, [Figure 2]. Twenty-four of the 43 respondents who had practice years >10 had certification in medical education, and they constituted 55.8% of those with medical certification. Over 80% believed it was important to develop faculty in competence, but a similar percentage did not think it should be a prerequisite to get certified to teach [Figure 3]. Of the 169 medical educators, 32 (13.4%) had certification in medical education, which was significantly fewer than those without medical education certification, [Table 1].

**Table 1: Medical educators and possession of medical education certificates**

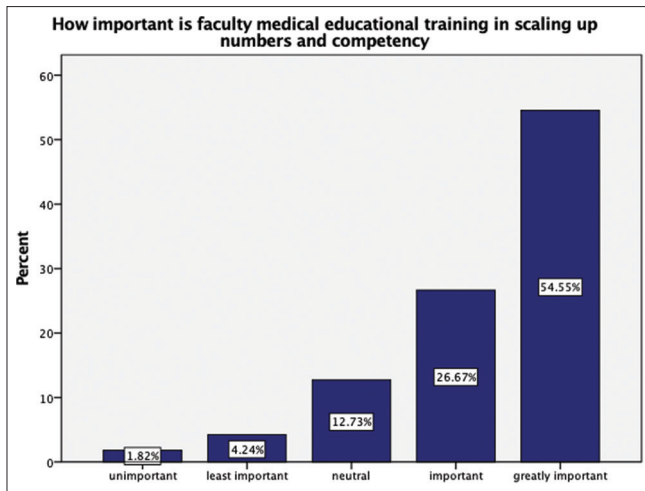
Are you a medical educator?	With certification		Total n (%)
	No (n (%))	Yes (n (%))	
Medical educator	Yes (n (%)) 137 (57.6%)	32 (13.4%)	169 (71.0%)
	No (n (%)) 64 (26.9%)	5 (2.1%)	69 (29.0%)
Total	201 (84.5%)	37 (15.5%)	238 (100.0%)



**Figure 1:** Percentage of respondents with certification in medical education



**Figure 2:** Percentage of respondents who believe medical education certification should be a prerequisite for teaching



**Figure 3:** Respondents' perception of the importance to which faculty development can help in scaling up numbers and competency in graduating doctors.

### Panel discussion

During the panel discussion, the following questions were asked and answered.

Will your members (MDCAN) be willing to be certified in medical education? Should this become a requisite for teaching undergraduate students? This is to improve teaching skills while increasing numbers and competencies.

Panelist 1: *"Thank you very much. I think all members of MDCAN would be willing to be certified. Sometimes you don't wait for willingness. Usually, standards are set, and someone coming in must meet the standards. So, if we as administrators, Committee of Provosts of Medical colleges, agree that the minimum to standard to teach medical student apart from a fellowship, there's no debating that."*

Panelist 5: *"I am worried about having that policy of certification. Will the universities make other lecturers get certified to teach? I mean will the engineering lecturer be made to get certification? Let's not shoot ourselves in foot and make it more difficult to get medical lecturers, who already are paid way lesser than their hospital counterparts that are not lecturers."*

Directed question to Panelist 2 was as follows: "Did you meet resistance from your colleagues when new policies were made to enhance training in your college?"

Panelist 3: *"May I come in here. I believe we have all agreed that there is need to scale up the competence and number of graduating medical doctors. Whatever we need to do to achieve this is what we should be promoting and discussing."*

Panelist 2: *"It's not so much as resistance but what needs to be done. Everybody will resist change*

*initially but with time and policy, they accept and adapt."*

Panelist 4: *"Taking cues from the faculty in University of Port Harcourt, we have started running short course, and applying some of the workshop objectives and intended learning outcomes. These helped us standardise our assessment methods in the university so that one lecturer is in synchrony with the other concerning test items and answers expected." "Should this continue, many more lecturers will understand the principles of medical education and achieve competency or proficiency in various aspects of medical education"*

### DISCUSSIONS

Most respondents believed that there was a need for pedagogical and andragogical training competence; however, there was disagreement on the mode of achieving these core medical education competencies. They also believed that though medical teachers need competency in teaching, certification of medical education should not be a prerequisite for teaching in medical schools. As time is precious and the demand for educational excellence is high, allowing teachers to achieve competency in teaching while on the job is a policy that may need changing to improve medical training in Nigeria. Some studies have, however, shown that short-term workshops that train medical educators on educational principles, instructional designs, and modes of curriculum delivery influence their opinions regarding the importance of selected teaching competencies. Only a few respondents had certified training in medical education, which is similar to the study by Olosoji *et al.*<sup>[29]</sup> In that study, self-reporting of teaching ability tended to be in the professorial cadre, leaving those below that cadre with little competence in teaching. Many Nigerian medical teachers were trained informally to teach and enter the teaching pool without obtaining any form of certification with assessments to test their competence. Should this trend continue, it will take at least six years for medical educators to attain some competence in teaching,<sup>[29]</sup> and for a country needing scaling up, the time is not available. Staying in the teaching pool, especially where there is a need to increase the number and improve the competency within a short period, will require teachers to evolve in their teaching skills.<sup>[26]</sup>

The respondents perceived that teachers' development will help scale up competency and the number of graduating doctors to meet the demand for healthcare services while filling the gap created by the brain drain. In the panel discussion, one panelist mentioned that this was already ongoing in their university, using various

workshops and seminars. Similar pieces of training are being undertaken in other universities and postgraduate colleges where medical educators receive short courses that are certified. The view of the respondents is that resources should be mobilized to improve training medical practice and incentivize the workforce that has remained in the country, as was seen in Scotland.<sup>[26]</sup> This is not different from the study by Mengistu *et al.*,<sup>[30]</sup> where the belief was that these measures would strengthen the goal of flooding and retraining the teaching workforce.

Despite respondents' reluctance to degree qualification in medical education, many are of the opinion that faculty sponsorship of short medical education courses will greatly enhance the objective of scaling up competence and the number of graduating doctors. The popular anecdotal belief was that what is being done in training students presently meets global best practices since graduating doctors succeed in the foreign medical certification board examinations in the United Kingdom and the USA<sup>[31-34]</sup> Whether the foundational principles of teaching and medical education are being utilized by medical teachers is left to be seen as not many know the rudiments of teaching or facilitating learning, but there is the belief that a good physician is a good teacher.<sup>[35]</sup> Although the survey did not test the teaching skills of the respondents, many respondents had knowledge of teacher-centeredness training since this is the mode they were taught with. The arguments that students' performance is tied to teachers' qualifications and competence abound, although some researchers believe that certification only helps in a few isolated cases.<sup>[36,37]</sup>

For scaling up numbers and competencies, medical teachers will need to innovate and be willing to learn new tricks that will encourage learners to participate in learning and assess them even if their number is larger than expected. Undoubtedly, in a system where medical service delivery is of great importance as the physician: patient ratio is getting worse, dedicating time to training undergraduate and postgraduate learners will be challenging. In this guise, focusing on some aspects of medical education will increase output on a short-term basis, while planning on a long-term basis. It is the authors' opinion that medical educators should receive core competencies before or soon after being engaged in training undergraduate or postgraduate learners. With improved teaching competency, many more enrollees can enter medical schools and the teachers can train them through innovations to achieve the core medical practice competence.

This study concluded that though there is a need to scale up the number and competency of graduating doctors

in Nigeria, few respondents possess certified degree qualifications to teach and many would prefer short courses. Most of the respondents, however, believed there is a need to develop core teaching competencies and achieve these through staff development programs that can be certified and sponsored in-house. When these core teaching competencies have been fully developed, it will be easier to increase the number of medical students' enrollees, teach them their curriculum through innovations, and graduate them with improved competencies.

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### Conflicts of interest

There are no conflicts of interest.

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