The Role of PhD Teachers in Medical Education

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“Most ideas about teaching are not new, but not everyone knows the old ideas.”
Euclid, circa 300BC

Many understand the value of doctorates in the field of education, whether it be science, engineering or medicine. The field of research and its development depend upon the doctors who devise, guide and conduct research projects and also teach. Therefore, it is worthwhile to understand the status of doctorates in education, particularly in medical education. With this view in mind, an attempt has been made to outline the role of PhD teachers in medical education.

What does the degree Doctor of Philosophy (PhD) mean?

The term doctorate, derived from the Latin word docere meaning “to teach”, is shortened from the full Latin title licentia docendi meaning “teaching license”.

A doctorate is an academic or professional degree that, in most countries, represents the highest level of formal study or research in a given field. In some countries it also refers to a class of degrees that qualifies the holder to practice in a specific profession (such as law or medicine). The best-known example of the former is the PhD (Doctor of Philosophy), while examples of the latter include the U.S. degree Doctor of Medicine, a doctoral degree for physicians.

The Doctor of Philosophy, abbreviated PhD, or alternatively D Phil, from the Latin meaning “teacher of philosophy”, is an advanced academic degree awarded by universities.

Historically, it was thought that PhD teachers or scientists had been trained to become university professors. The United States is reported to be the greatest producer of PhDs, generating about twice as many as the next leading country, Germany. Countries with small populations, such as Canada and Switzerland, produce relatively few PhDs. However, many other countries that have huge populations, such as India and China, also produce relatively small numbers.

Types of PhD:

PhD students or doctorates usually fall in one of several categories. Research doctorates conduct academic research in a stipulated period of time and submit a thesis with a substantial body of original research undertaken by the candidate. This may take the form of a single thesis or dissertation or possibly a portfolio of shorter project reports and is usually assessed by a small committee of examiners appointed by the university and often an oral examination of some kind. In some countries (such as the US) there may also be a formally taught component, which typically consists of graduate-level courses in the subject in question as well as training in research methodology.

The minimum time required to complete a research doctorate varies by country and may be as short as three years (excluding undergraduate study), although it is not uncommon for a candidate to take up to ten years to complete his/her degree.

In Spain, Doctor Degrees are regulated by Royal Decree (R.D. 778/1998) (Real Decreto in Spanish). They are granted by the university on behalf of the King, and the diploma has the force of a public document. The Minis-
try of Science keeps a National Registry of Theses called TESEO. According to the National Institute of Statistics (INE), less than 5% of M.Sc. degree holders are admitted to PhD programs, and less than 10% of 1st year PhD students are finally granted a Doctor title. All doctoral programs are research in nature. A minimum of five years of study are required, divided into two stages:

1) A 3-year long period of studies, which concludes with a public dissertation presented to a panel of three professors. If the project receives approval from the university, he/she will receive a “Diploma de Estudios Avanzados” (partially qualified doctor).

2) A 2-year (or longer) period of research. Extensions may be requested for up to ten years. The student must write his thesis presenting a new discovery or original contribution to science. If approved by his “thesis director”, the study will be presented to a panel of five distinguished scholars. If approved, he will receive the doctorate. A Doctor Degree is required to apply to a teaching position at a university.

The combined MD-PhD program in the USA and, more recently, in Australia aims to produce clinician–scientists committed to pursuing research that reflects their experience of clinical practice.3

In Libya the faculty are required to have a PhD awarded by a professional university in the subjects they teach. For example, a PhD awarded by a medical university is required for teaching medical students and other respective universities or faculties for other subjects.

Role of a PhD in medical education:

Medical education is the science behind the teaching and learning in medicine. It has developed from problem identifier domain to that of solution provider. Abraham Flexner of the Carnegie Foundation placed emphasis on the scientific basis of medical practice. Therefore, formal analytic training, integral to the natural sciences, was thought to be inculcated in the intellectual training of physicians.4

Clinical phase education, it was thought, would encourage physicians to consider pursuing research to provide better care for their patient.

Transformation from patient care to molecular research

Currently, there is a real transformation of thinking about teaching, which is considered subordinate to research. This transformation is due to the development of the “publish or perish” attitude. Previously, the integration of investigation with teaching and patient care made the field of medicine dynamic. However, the shift from patient care to molecular events has diminished the standard of clinical teaching in favour of laboratory research.5 This shift is a result of economic need wherein to generate revenue, the physician is forced to provide care for paying patients. Therefore, clinical teachers have less time available for teaching. The importance of responsible clinical teaching is vital for medical students to become accomplished, responsible and service minded. To accomplish this goal, medical education needs to balance knowledge, skills and values during the students’ period of learning. Instead, theoretical, scientific knowledge of formal learning has superseded clinical, patient-oriented education. Now, the knowledge of medical research is grounded more in basic medical sciences.6 Therefore, there is currently a cry for more clinical teachers to teach students in a clinically oriented, patient-centred fashion.

Therefore, to give importance to teaching and to provide time for clinicians to be more patient-centred, PhD teachers are trained to teach basic medical sciences.

These PhD scientists and teachers are considered to be the torchbearers of not only teaching these subjects but also developing basic biological science research programs in medical schools. In this context, the PhDs of the medical faculty with knowledge of clinical subjects are considered scientist cum teachers.7,8

A medical educator is usually a medical scientist and clinician with a special interest and expertise in medical education. A medical educator may be someone who is:

a) Specially skilled in teaching
b) A person trained in the educational theory and practice in the context of medicine
c) An administrator in medical institution

Therefore, the role of PhD teachers in the faculty of medical schools is clear-cut. They teach and develop research programs in medical institutes. In a changing social context of medicine, basic science research and its teaching need to develop because they form the foundation stone of basic and applied research in the field of medicine.

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