

Lap Ki Chan
Wojciech Pawlina
Editors

Teaching Anatomy

A Practical Guide

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*“To my parents, Laura, and my teachers and students,
from whom I have learned much”*

Lap Ki Chan

*“To my anatomy teachers who guided me to the threshold of my
optimism: Kazimierz Pawlina, MD my father and first anatomy
teacher; Franciszek Jugowski MD, PhD from the Jagiellonian
University, Lynn H. Larkin, PhD from the University of
Florida; Stephen W. Carmichael, PhD from Mayo Clinic;
and to my past, present and future students.”*

Wojciech Pawlina

Preface

The title of this book, “Teaching Anatomy: A Practical Guide,” deserves some explanation. The word *teaching* has unfortunately become an unpopular word in educational writing. It is often associated with passive learning with the teacher playing the role of the “sage on the stage.” Knowledge is seen as packages transferrable from the teacher to the students, whose role is only to be receivers of the packages. But to us, teaching involves all activities that a teacher does to help students learn. It involves being both a “sage on the stage” and a “guide on the side.”

With the current trend toward a system-based approach to medical education, a book that focuses on the teaching of *anatomy* may seem old fashioned. After all, over the past few decades, anatomy has become increasingly integrated into the wider curriculum and is less of an isolated subject. However, this shift in the curriculum and educational philosophy has not destroyed anatomy’s long history as a distinct discipline. Anatomy, especially gross anatomy, still plays a unique role in many healthcare programs: it has frequently become the only practical course that students will experience in the early part of the medical curriculum. Students oftentimes learn gross anatomy from possibly one of the most mystical teaching aids: their first “patients,” the cadavers. Cadaveric dissection provides a unique opportunity for students to be introduced to issues of life, death, and suffering and to learn the “soft” skills of medicine. Through working together in the dissection laboratory, students learn skills like reflection, teamwork, communication, professionalism, and ethics, which are all important to their future healthcare careers.

This book aims to be a *practical guide* and not an exhaustive reference on educational theories as applied to anatomy teaching and learning. We understand that anatomy teachers work in diverse educational environments, including professional healthcare and undergraduate programs, teaching students with different kinds and levels of preparation. They may need to work within the confines of a set syllabus or designing their own course. They may have preferences for high or low tech materials and have few resources or many. Their backgrounds may be clinical or academic. They often need to convey a large body of knowledge to students in a short time and integrate it into the wider healthcare curriculum. They may need to take part in highly specialized pedagogies, such as problem-based learning, team-based learning, and e-learning. Moreover, since curriculum structures vary among schools, integrating anatomy into the curriculum must be flexibly done.

To help teachers to tackle these challenges, we edited this guide book, which gives practical advice to both novice and experienced anatomy teachers in the diverse educational situations that they commonly encounter. We are the first to admit that we do not know it all, so each chapter is written by an expert on its topic. The aim is to help teachers to give the best learning experiences to their students. We also understand that anatomy teachers, like most other teachers in tertiary institutions, need to divide their time between teaching, research, administrative duties and sometimes even clinical work. We have invited the expert authors of the chapters to write concisely and in simple language. Text boxes are provided to bring out the key points, to stimulate reflection on the reader's own situation, or to provide additional practical tips. Educational theories, though not the focus of this book, are selectively included in order to explain the theoretical foundation underlying practical suggestions, so that teachers can appropriately modify the strategies described in the book to fit their own educational environments.

As anatomy teachers, we often hope our students will gaze in awe at the inner universe of the human body, as we once did and, hopefully, still do. The induction of our students to this inner universe is a privilege for us. It deserves to be done well. We sincerely hope that this book can help you to help your students to learn. Learning should be fun. And so should teaching, especially anatomy.

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Editor Biographies



Lap Ki Chan is an Associate Professor in the Institute of Medical and Health Sciences Education (IMHSE) and the Department of Anatomy at the Li Ka Shing Faculty of Medicine at The University of Hong Kong, where he is also the Deputy Director of IMHSE and the Assistant Dean (Pedagogy). After receiving his medical education at The University of Hong Kong, he completed his doctoral studies at the Department of Biological Anthropology and Anatomy at Duke University, on the comparative anatomy of the shoulder in primates. He then returned to Hong Kong where he completed his training in orthopedic surgery. Since 2007, he has been working exclusively in medical education. His research interests include innovative pedagogies in anatomy education, problem-based learning, and language issues in medical education. He is also involved in faculty development. He is the codirector of the Staff and Professional Development Program at his own school. He is also a Visiting Professor at Zhongshan School of Medicine and an educator for the Asia Pacific region for the *AO Foundation (Arbeitsgemeinschaft für Osteosynthesefragen)*, primarily offering services in faculty development. His teaching excellence has been recognized by such awards as the *Thomas Henry Huxley Instructorship* from Duke University, and most recently, an *Outstanding Teaching Award* from The University of Hong Kong. He serves as an associate editor for *Anatomical Sciences Education*.



Dr. Wojciech Pawlina is a Professor of Anatomy and Medical Education at Mayo Clinic College of Medicine in Rochester, Minnesota, USA. He earned his medical degree from the Jagiellonian University Faculty of Medicine, formerly Copernicus Medical School in Krakow, Poland, where he was appointed as instructor in the Department of Descriptive and Topographical Anatomy and completed his residency in Obstetrics and Gynecology. Since 1986 he worked as a Postdoctoral Associate at the

University of Florida College of Medicine before joining the faculty of the Department of Anatomy and Cell Biology as an Assistant Professor. In 1999 he relocated to Mayo Clinic in Rochester, Minnesota and currently serves as the Chair of the Department of Anatomy and Director of the Procedural Skills Laboratory. He has extensive experience in teaching gross anatomy, histology, and embryology to undergraduate, medical and dental students, as well as residents and fellows. From 2007 till 2013 he was appointed as an Assistant Dean for Curriculum Development and Innovation at Mayo Medical School. He received numerous teaching awards from both the University of Florida and Mayo Clinic and recently he was named 2014 Distinguish Mayo Educator. His research interest in medical education is directed toward strategies of implementing innovative teaching methodologies, teaching professionalism, leadership, and teamwork in early medical curriculum. He serves on several editorial boards of scientific journals and is also Co-Editor-in-Chief of the *Anatomical Sciences Education*, a journal of the American Association of Anatomists.

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