

# Piano lab takes a multidisciplinary approach to learning and teaching

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Colourful and bright, the piano studio on the second floor of Perez Building is more than what it seems. At first glance, it would be natural to assume that the students studying in the room are music majors and that the pianos located behind them are where they ply their trade. For the unfamiliar, the setting seems predictable. But, as you begin to explore and ask questions, you quickly come to realize that the space is far more than just a studio, and the students are, in fact, biomechanical engineers, cognitive psychologists, health scientists and software developers.

Eight years after its inception at the University of Ottawa, the Piano Pedagogy Research Laboratory continues to grow as a leading research facility in the music community, both on a national and international scale. The brain child of director Gilles Comeau, this advanced piano laboratory boasts an array of sophisticated technology and resources—from eye-tracking devices, to thermal-imaging cameras, to a complete collection of method books—and has introduced a new approach to piano pedagogy. Its goal is to bring together researchers from a wide variety of disciplines to go beyond teaching and learning music to examine the very nature of piano-playing, and how it is taught and understood.

“The piano lab was quite original and really a new initiative when it was brought forward,” explains Comeau. “From the perspective of piano learning, it involves looking not only at the psychology but also at everything around how we process information, from a motor, cognitive and auditory aspect. We also look at the teaching approach, the strategies and method books available. In the past, piano pedagogy was a discipline where you were trained on how to be a teacher and not necessarily a research field.”

The knowledge the lab brings to the practice of piano, and music in general, is revolutionary. For example, psychologists have thoroughly studied children with dyslexia yet such studies have not been applied to musicians who may also experience the same problems when reading musical notes. Countless studies have looked at sports injuries with very little attention paid to pianists who, for years, have endured arm, back or even eye discomfort. By combining experts from all fields of study to conduct research on piano pedagogy, music teachers and parents can finally draw upon evidence-based solutions to meet the challenges often faced by musicians.

For international student and piano teacher Joanna Phua, the work being done at the Piano Pedagogy Research Laboratory has been eye-opening, especially when it comes to pain and injury. “Nobody ever tells musicians they should stretch; they just take painkillers for the simplest of things,” she says. “I find the research being done here really helps direct you to the root of the problem. You have to be sensitive enough to know all the possibilities.”

Phua’s studies with Comeau’s lab began during the fall of 2012 from a distance. Through audio-video conferencing, she was able to connect from her home in Malaysia and participate in the program to its fullest. “Those who do it by distance never set foot in the lab. It is different from other programs that focus on training piano teachers: we are training them to do research as well as be able to do piano teaching,” adds Comeau. Seeking to get more involved in the program, Phua moved to Ottawa in January to complete her diploma in piano pedagogy.

Today, the uOttawa lab has formed close to 30 partnerships with different disciplines, universities and countries. Since 2005, over 40 students have benefited from the infrastructure of the Piano Pedagogy Research Laboratory, including those graduating with a diploma in piano pedagogy research or a master’s in music with a thesis in piano pedagogy, along with several graduate students in engineering and health sciences.

“In addition to having more and more alumni, I am hoping that the research we do will have a strong impact on the practice of piano teaching,” concludes Comeau.

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Eye-tracking technology is used to investigate eye movement patterns when reading music.

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