

My Earth science educator story – Wilson Teixeira

What I did, why I did it and what happened



Wilson Teixeira.

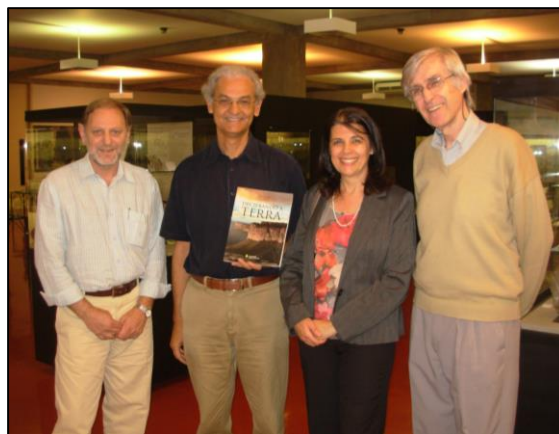
My background

I graduated in Geology (BSc) in 1974 at the Geosciences Institute of the University of São Paulo, Brazil – IGc-USP – a world renowned university. I obtained my Masters and Doctorate in Geology at the same University in 1986. Working as geologist for the Ministry of Mining and Energy of Brazil, I conducted geological and geochronological studies in the Amazon region from 1975 to 1984. Later on I became Assistant Professor at the Department of Geology of IGc-USP. I undertook post-doctoral fellowships in the Earth Science Department (geochronology, isotopic geochemistry) of Oxford University in the UK in 1985, and in the Department of Geosciences at Princeton University in the USA in 1988. I became Full Professor at the IGc-USP in 1996. I have supervised several Masters and PhD students in research groups at USP and other Brazilian universities. I have close collaborations and international relationships with many institutions around the world dealing with geologic and geochronological studies focused on the ancient Earth. I and my group have been responsible for geologic evolution models for the Amazonian and São Francisco cratons, which are widely accepted in literature. Between 1999 and 2003 I was elected Director of the Institute of Geosciences – USP, and later, between 2004 and 2008, I was nominated as Director of Estação Ciência by the USP-President.

My academic work

I have coordinated and organized about twenty scientific meetings in Brazil and abroad. At the Institute of Geosciences I set up the $^{40}\text{Ar}/^{39}\text{Ar}$ laboratory, the first such laboratory in Brazil, with financial support from the State Foundation of Scientific Research (2001). I also obtained other research grants to develop geologic research projects in Brazil. Between 1984 and 1987 I coordinated an international project on the geology of the Amazon region supported by the International Geoscience Programme (IGCP) - a joint operation of UNESCO and the International Union of Geological Sciences (IUGS) to incentivize cooperative research among scientists from diverse countries and institutions. As author or co-author, I have published about 120 papers in journals, as well as produced/organized six books, thirty three book chapters, and more than 200 presentations in international and national conferences. I am one of the most internationally cited Brazilian scientists in Precambrian Geology.

Our textbooks



Launch of the textbook “Decifrando a Terra”, 2nd Edition, 2009. W. Teixeira (holding the new edition) and co-organizers.

I coordinated the editorial project “*Decifrando a Terra*” (“Deciphering the Earth”), providing a pioneering high quality text book in Earth Sciences in South America, written in Portuguese. Under my

leadership, more than 30 scientists worked together on this project. The first edition of this book was published in 2000, and it received the Jabuti Award in 2002 (see below) – the most prestigious in Brazilian literature. The second, fully reviewed edition was published in 2009. More than 85,000 books have been sold between 2000 and 2015, in Brazil, Argentina, Chile, Bolivia and Portugal, providing up to date information on Earth Sciences for about 180,000 readers to date. In addition to this, the State Department of Education of the state of São Paulo, Brazil, has distributed the book to middle school libraries, significantly enhancing the number of readers, particularly school teachers. From 2003 onwards, I coordinated a new book series (four volumes) designed to give better understanding of Nature and the Environment (see details in the Profile below).

School-level education

In 2003, as Director of the Institute of Geosciences, I managed the human resource training and upgrading of the infrastructure to promote the entrepreneurship and productivity of the scientific community.



First edition of Geo-expo (student chapter); exhibition release at the new lobby of the Institute of Geosciences (Directory term Prof. W. Teixeira, 2003).

During this time I coordinated the development of an innovative, new four-year evening course at USP designed to provide a teaching degree in Geosciences and Environmental Education (the first in

Brazil). The graduates with this degree are able to provide a holistic view of nature and how Earth processes affect daily life, and help to fill the large gap in knowledge of Earth Sciences education at all levels of Brazilian society. In addition, I strongly supported the development of educational and cultural activities linked to the Geosciences Museum (e.g. new exhibitions, open summer courses, innovative website), focused on elementary and middle school pupils and teachers. This again improved Brazilian school education in Earth Sciences.



Exhibitions and hands on activities at the Estação Ciência (Directory term Prof. W. Teixeira: 2004-2008).

All these achievements led the USP President to nominate me as Director of Estação Ciência - USP in January 2004, one of the most important science museums in Brazil due to its focus on hands on activities for teaching middle school students. Thus I have been responsible for significant popularization of science education over a very short period of time through the development of new outstanding projects, communication and publicity efforts. This resulted in a

remarkable increase in attendance at the Science Center, from 250,000 visitors in 2004 to 400,000 visitors in 2008. The strategy I implemented included training human resources and upgrading the infrastructure of the Center, supported by public and private financial partnerships. During this time I developed several educational and cultural projects focused on upgrading the exhibitions (temporary and permanent), and developing new exhibitions and exciting science shows. I have also promoted and co-organized meetings and workshops on the “Management of Science Museums” designed for researchers working in Brazilian science centers. Later on, back at the IGc-USP, I was involved in on-line graduate education in Earth Sciences with, among other scientific goals, to promote better understanding of the “puzzles” of the Earth. My introductory graduate course “*Sistema Terra*” (*Earth System*) is one of the most popular on YouTube by a Brazilian audience (<https://www.youtube.com/watch?v=vMvPq5Wps1M>).

Current Positions

- Full Professor of the IGc-USP – since 1996 (Research, Administration, Lecturer).
- Full Member of the Brazilian Academy of Sciences – since 1999.

Positions held (selected):

- Director Estação Ciência – USP (2004-2008)
- Director of the Institute of Geosciences, USP (1999-2003)

- Head Department, IGc-USP (1995-97; 1997-99); Lecturer (1992-96).

Decorations and Prizes

- Distinction (“Comendador”) of the National Order of Scientific Merit – President of the Republic of Brazil – March, 2005.
- Jabuti Award – Brazilian Chamber of Publishers – distinction for the text book “*Decifrando a Terra*” – 2000 (W. Teixeira; Toledo, M.C.M.; Fairchild, T.R.; Taioli, F. (orgs.), São Paulo, Editora Oficina de Textos. 576p (in Portuguese).

Current Commissions

- Member of the Advisory Board in Geosciences of the São Paulo State Foundation for Scientific Research (FAPESP)
- Associate Editor (Precambrian Research; Elsevier)
- Member of the Advisory Board (Scientific American Brazil)

Research interests:

- One of my major concerns has always been in preparing the human resources necessary for Sustainable Development of Earth and Environmental protection via popularization of the Earth Sciences
- Geochronology and Isotopic Geochemistry with focus on Precambrian Geology.

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