## **Wolff-Michael Roth**



Wolff-Michael Roth is the Lansdowne Professor in Applied Cognitive Science (University of Victoria, British Columbia). This enormously active researcher has contributed to numerous fields of research, including learning science in learning communities, authentic teaching, cultural-historical aspects of activity theory, social studies of science, gesture studies, qualitative research methods, embodied cognition and situated cognition. Roth has written and edited almost 50 books and almost 500 scientific articles. He received an honorary doctorate from the University of Ioannina (Greece) in 2011 and has recently been a research fellow at the French Institute of Education at École Nationale Supérieure (Lyon, France). He was recognized by the American Educational Association (AERA), Division K (Teaching and Teacher Education) with the Significant Contribution to Educational Measurement and Research Methodology Prize for the edited book (with K. Ercikan) Generalizing from Educational Research: Beyond Qualitative and Quantitative Polarization (Routledge, 2009) and received the Distinguished Contributions Award from the American National Association for Research in Science Teaching for continued contributions to, leadership in, and substantial impact on science education through research in 2009. Three years earlier he received the Canadian Education Association Whitworth Award for Education Research. He is a fellow of numerous scientific organisations, including notably the American Educational Research Association and the American Association for Advancement of Science. His

latest publications include *Meaning and Mental Representation: A Pragmatic Approach* (Sense Publishers 2013) and *What More In/for Science Education: An Ethnomethodological Perspective* (Sense Publishers 2013). He has also recently co-authored with Maria Inês Mafra Goulart and Katerina Plakitsi *Science Education During Early Childhood: A Cultural-Historical Perspective* (Springer 2013) and with Michiel van Eijck *Imagination of Science in Science Education: From Epics to Novelizing Discourse* (Springer 2013)<sup>225</sup>.

## **Selected Publications:**

Roth, W.-M. 2000. From gesture to scientific language. *Journal of Pragmatics*. 32: 1683-1714.

Roth, W.-M. 2003. *Toward an anthropology of graphing: Semiotic and activity-theoretic perspectives*. Dordrecht, The Netherlands: Kluwer Academic Publishers.

Roth, W.-M. 2004. Activity theory in education: An introduction. *Mind, Culture, and Activity*, 11: 1-8.

Roth, W.-M. 2006a. A dialectical materialist reading of the sign. Semiotica, 160: 141-171.

Roth, W.-M. 2006. *Learning science: A singular plural perspective*. Rotterdam, The Netherlands: Sense Publishers.

Roth, W.-M. 2007. Emotion at work: A contribution to third-generation cultural historical activity theory. *Mind, Culture and Activity*, 14: 40-63.

Roth, W.-M. 2008. The nature of scientific conceptions: A discursive psychological perspective. *Educational Research Review*, 3: 30-50.

Roth, W.-M. 2012a. Cultural-historical activity theory: Vygotsky's forgotten and suppressed legacy and its implication for mathematics education. *Mathematics Education Research Journal*, 24: 87-104.

Roth, W.-M. 2012b. First person methods: Towards an empirical phenomenology of experience. Rotterdam, The Netherlands: Sense Publishers.

Roth, W.-M. 2012c. Mathematical learning: the unseen and unforeseen. For the Learning of Mathematics, 32(3): 15-21.

Roth, W.-M. 2013a. *Meaning and mental representation: A pragmatic approach*. Rotterdam, The Netherlands: Sense Publishers.

Roth, W.-M. 2013b. Technology and science in classroom and interview talk with Swiss lower secondary school students: a Marxist sociological approach. *Cultural Studies of Science Education*, 8: 433–465.

Roth, W.-M., Bowen, G. M. 1994. Mathematization of experience in a grade 8 open-inquiry environment: An introduction to the representational practices of science. *Journal of Research in Science Teaching*, 31: 293-318.

Roth, W.-M., Bowen, G. M. 1999a. Complexities of graphical representations during lectures: A phenomenological approach. *Learning and Instruction*, 9: 235-255.

-

<sup>&</sup>lt;sup>225</sup> Source: http://education2.uvic.ca/faculty/mroth

Roth, W.-M., Bowen, G. M. 1999b. Digitizing lizards or the topology of vision in ecological fieldwork. *Social Studies of Science*, 29: 719-764.

Roth, W.-M., Bowen, G. M. 2003. When are graphs ten thousand words worth? An expert/expert study. *Cognition and Instruction*, 21: 429-473.

Roth, W.-M., Désautels, J. 2004. Educating for citizenship: Reappraising the role of science education. *Canadian Journal for Science, Mathematics, and Technology Education*, 4: 149-168.

Roth, W.-M., McGinn, M. K. 1998. >unDELETE science education: /lives/work/voices. *Journal of Research in Science Teaching*, 35: 399-421.

Roth, W.-M., Tobin, K. 2002. *At the elbow of another: Learning to teach by coteaching.* New York: Peter Lang.

Roth, W.-M., Tobin, K., Zimmermann, A., Bryant, N., Davis, C. 2002. Lessons on/from the dihybrid cross: An activity theoretical study of learning in coteaching. *Journal of Research in Science Teaching*, 39: 253-282.

Website: http://education2.uvic.ca/faculty/mroth