

Professional Learning Seminar by MM SIG

Date: 28 May 2021

Time: 10-11am

Venue: Interactive Webinar via Zoom



Prof Len Unsworth

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Please click [here](#) to register for the event by 25 May 2021.

This event is organized by the Multimodality Special Interest Group (MM SIG) and supported by Research Programmes Management Unit. Please direct all enquiries to mmsig@nie.edu.sg

High School Science Infographics: Multimodal Meaning Complexes in Composite Image-Language Ensembles

Abstract

The complexity of science discourse has long been recognized as challenging for many students. Systemic functional linguistic accounts of technicality and meaning aggregation, differentiating scientific and everyday discourse, have explicated the linguistic complexity confronting students. The complexity of images and image-language ensembles in science discourse have not been similarly delineated. Two aspects of multimodal meaning-making have not been sufficiently theorized to support pedagogies of visualization interpretation and creation in science: (1) the role of the verbiage within scientific visualizations has been largely ignored; (2) image analysis has emphasised single-structure images e.g., narrative or classificational or analytical, whereas multiple structures in a single image is a frequent and significant resource in science. This paper outlines a framework describing the co-deployment of image and verbiage to construct multi-structure image-language ensembles in high school science textbooks. Using this framework two investigations are described: (1) variation among textbook infographics in image-language co-articulation representing meaning complexes of phenomena such as mitosis; (2) the relationship between co-articulation of image-language resources and achievement level in infographics constructed by senior high school students. Implications are drawn for extending transdisciplinary research in educational semiotics and science education and for pedagogies of multimodal disciplinary literacy development in high school science.

Biography

Prof Len Unsworth is Professor in English and Literacies Education in the Institute for Learning Sciences and Teacher Education, at the Australian Catholic University in Sydney, Australia. Len's current research interests include systemic functional semiotic perspectives on multimodal and digital literacies in English and in curriculum area teaching and learning in primary and secondary schools. He is currently the lead researcher on two Australian Research Council funded projects on *Multiliteracies for Addressing Disadvantage in Senior High School Science* and *Coding Animated Narratives as Contemporary Authorship in Schools*. Len has published extensively in leading journals in literacy and education as well book chapters and a number of books, most recently: *Learning from Animations in Science Education: Innovating in Semiotic and Educational Research* (Springer 2020).



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