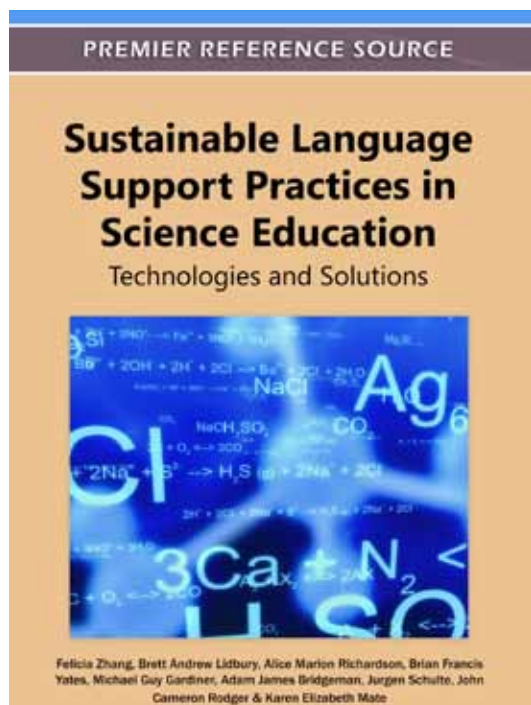


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Sustainable Language Support Practices in Science Education: Technologies and Solutions



Felicia Zhang (University of Canberra, Australia), Brett Andrew Lidbury (Australian National University, Australia), Alice Marion Richardson (University of Canberra, Australia), Brian Francis Yates (University of Tasmania, Australia), Michael Guy Gardiner (University of Tasmania, Australia), Adam James Bridgeman (University of Sydney, Australia), Jurgen Schulte (University of Technology, Sydney, Australia), John Cameron Rodger (University of Newcastle, Australia) and Karen Elizabeth Mate (University of Newcastle, Australia)

The effective communication of science through language, including reading, writing, listening, speaking, and visual representation, is an essential part of scientific learning, understanding, and practice. Language is the medium by which scientific reasoning occurs, whether be it formal language or symbolic representations of scientific phenomena.

Sustainable Language Support Practices in Science Education: Technologies and Solutions presents cases on the results of a study done in Australia on first-year university students and the impact of new techniques of language acquisition on science education. The project covered biology, chemistry, and physics. Nearly 3,400 students were involved in the project, drawn from the University of Canberra, the University of Technology-Sydney, the University of Sydney, the University of Tasmania, and the University of Newcastle in Australia. This book serves as the latest research available on meta-cognitive assessment and language needs for a diverse student body; it is a vital resource for academics and practitioners designing and implementing science education around the world today.

Topics Covered:

- Academic Predictors
- Computer-Enhanced Language Acquisition
- Concepts Inventory
- Experience Based Learning
- Instructional Design
- Language Focused and Career Oriented Interventions
- Open and Distance Learning
- Scientific Method Instruction
- Symbolic Language
- Tertiary Education

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Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Felicia Zhang possesses a Master of Arts degree in Applied Linguistics from the University of Melbourne, Australia; Holder of a Teaching English as a Foreign Language Certificate (TEFLA) issued by the Royal Society of Arts, United Kingdom; and a Doctorate in Education from the University of Canberra. She is currently a senior lecturer in Applied Linguistics and Chinese at the University of Canberra, Australia. Her research interests include the use of active learning techniques in foreign language teaching, the use of technology in language teaching and acquisition, e-learning, integrating computer technology in curriculum design in education. She has just completed an Australian Learning and Teaching Council grant on science education which also won her and her team at the University of Canberra, Australia, a University of Canberra Teaching Award for Programs that Enhanced Learning. She published the *Handbook of research on computer-enhanced Language Acquisition and Learning* in 2008. She is also the 2003 winner of Australian Awards for University Teaching.



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