## CURRICULUM VITAE

## Dr Rachel Sheffield

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**Qualifications**

2004 **Doctor of Philosophy** Edith Cowan University

*Facilitating teacher professional learning: Analysing the impact of an Australian professional learning model.* Assessment of science teachers’ experiences, beliefs and classroom practice during the implantation of a model to change teachers practice using a case study approach.

1996 **Master of Education** Edith Cowan University

1990 **Graduate Diploma of Education** Edith Cowan University

1989 **Bachelor of Science (Microbiology)** The University of Western Australia

**Employment**

2015–Present **Senior Lecturer (Science Education)** School of Education, Faculty of Humanities

Curtin University

2012–2015 **Lecturer (Science Education)** Lecturer, School of Education, Faculty of Humanities

Curtin University

2005–2011 **Lecturer (Science Education)** Sessional Lecturer, Faculty of Arts and Education

Edith Cowan University

2006–2008 **Research Fellow** Australian Research Council (ARC) Grant DP0451818

Science and Mathematics Education Centre (SMEC), Curtin University

*Teaching and learning science, mathematics and technology in integrated middle school contexts*. Principal investigators: Professor John Wallace, Professor Leonie Rennie, Professor John Malone and Professor Grady Venville

2005–2007 **Lecturer (Science Education)** Sessional Lecturer

Murdoch University and Edith Cowan University

1996–1998 **Secondary Teacher (Science and Mathematics)**

Presbyterian Ladies College, Perth

1993–1995 **Secondary Teacher (Science and Mathematics)**

John Wollaston Anglican Community School, Perth

Year Coordinator (1994), First Aid Officer (1994–1995)

1991–1992 **Secondary Teacher (Science)**

Western Australian Department of Education

Craigie Senior High School, Ocean Reef Senior High School

**Teaching Awards and Fellowships**

2017–Present **Curtin Academy Fellow**

Curtin University

2017 **Senior Fellow of the Higher Education Academy**

Higher Education Academy, United Kingdom

2016 **International Society for Technology in Education (ISTE®) STEM Award**

Promoting science, technology, engineering and mathematics in tertiary education

2016 **Office of Learning and Teaching National Citation**

Australian awards for university teaching presented for: *approaches to teaching and the support of learning that influence, motivate and inspire students to learn*

2016 **Australian Executive Endeavour Fellow**

Fellowship awarded to*: collect, curate and digitise teaching artefacts in Lao People's Democratic Republic and develop connections between Laotian teachers and Australian teachers focusing on science*

2015 **Curtin University First Year Program Award**

Common First Year Team

2015 **HERDSA Fellow**

Fellowship of the Higher Education Research and Development Society of Australasia(HERDSA)

2014 **Curtin University Excellence and Innovation in Teaching**

Individual Teaching Award

2014 **Curtin University** **Humanities, Teaching and Learning**

Individual Teaching Award

2014 **Curtin University Humanities, First Year Program Award**

Common First Year Team

**Grants**

2017 **Australian Technology Network Grant** ($120,600)

(O’Halloran, Tan, Sheffield, Aubussen, Mallet, Berry, & O’Keefee)

*Encouraging and mapping student engagement through 360 degree video annotation and data analytics*

2017 **Australian National Commission for UNESCO 2016–2017 Grants Round** ($14,000)

(Koul, Sheffield, Blackley, & Balzer)

*Cross-nation capacity building in science, technology, engineering, mathematics (STEM) education*

2017 **Linking Science Educators Program (LSEP) Grant** ($5,000)

(Koul, Sheffield, & Blackley)

*Using a makerspace approach to create a science community of practice (COP) for teachers and pre-service teachers in India*

[National Association for Research in Science Teaching](https://www.narst.org/)

2016–2017 **Australia–Indonesia Institute Grant** ($19,000)

(Sheffield, Koul, & Blackley)

*Awarded to take the makerspace in STEM experience to the Universitas Negeri Jakarta, Indonesia*

2015 **Curtin University Teaching Excellence Development Fund (TEDF)** ($12,832.60)

(Sheffield, Blackley, Maynard, Koul, & Walker)

*Creating communities in STEM makerspace*

2015 **Curtin University Teaching Excellence Development Fund (TEDF)** ($19,962)

(Bennett, Blackley, & Sheffield)

*Developing pre-service teacher identity*

2014 **Curtin University Teaching Excellence Development Fund (TEDF)** ($9,400)

(Dobozy, Sheffield, & Walker)

*TPACK implementation for collegial peer review in common first unit of unit learning design*

2013 **Curtin University eScholar Program** ($10,000)

(Sheffield & McIlvenny)

*Transforming learning with technology, pedagogy and sustainability*

**Awards for Research**

**2005 Postgraduate Award**

**Western Australian Institute for Educational Research (WAIER)**

**Professional Service and Leadership**

***Internal (Curtin University) Professional Service and Leadership***

2018 ‘Inspiration before Perspiration’ - Showcasing innovative scholarship of learning and teaching (iSoLT) An academic conversation facilitated by the Curtin Academy

2017–2018 **Summative Peer Review**

2014–2018 **Peer Teaching**

Review and reflection of teaching with a focus on technology

2014–2018 **Open Door Teaching**

Collaborating with colleagues to showcase teaching pedagogy

2014–2018 **Workshop Presenter**

Curtin Learning and Teaching, Festival of Learning

2017 **Athena SWAN Program (addressing gender equity)**

Curtin University

2015 **Workshop Presenter**

Teaching Staff Retreat, Faculty of Health Science

*Creation of a teaching philosophy and digital portfolio presentation* (Sheffield & Flavell)

2015 **Workshop Presenter**

Faculty of Health Science

*Demonstration of the creation of a digital portfolio* (Sheffield & Flavell)

Modelling key skills and supporting creation of personal digital portfolio

2014 **Teaching and Learning Presenter**

Miri, Sarawak, Malaysia

*Technological tools in the classroom space* (Sheffield)

2014 **Teaching and Learning Presenter**

Bentley Campus, Open Your Mind Series

*Teaching large classes in collaborative learning spaces, self-directed learning in groups*

*in the classroom* (Sheffield)

2014 **Teaching and Learning Committee Advisory Role**

School of Education

Issues relating to teaching and learning

2014 **Presenter**

SELT Day

*Providing support for new assessment technology to promote effective assessment*

(Howell & Sheffield)

***External Professional Service and Leadership***

2015–2018 **Co-convenor of Significant Interest Groups (SIGs) in STEM**

Higher Education Research and Development Society of Australasia (HERDSA)

2015–2018 **Formation of Significant Interest Groups (SIGs) in STEM**

Australian Association for Research in Education (AARE)

2007–2018 **Board Member (Primary Science Committee)**

Science Teachers’ Association of Western Australia (STAWA)

2014–2018 **Editorial Advisory Committee, *Teaching Science* Journal**

Australian Science Teachers’ Association (ASTA)

2014–2018 **Reviewer**

International Journal of Innovation in Science and Mathematics Education (IJISME)

2017 **International Webinar**

International Society of Technology Education (ISTE)

Science, Technology, Engineering and Mathematics (STEM) Professional Learning Network

2017 **Invited Keynote Speaker**

The Digital Curriculum Conference, The University Western Australia

*Let’s DREAM: Delivering a sustainable approach to building a digital technologies story through a long term, action research approach to professional learning* (Sheffield & Moro)

2017 **Reviewer**

[Educational Media International](https://protect-au.mimecast.com/s/38L3B9h34NAxFa?domain=tandf.co.uk)

2017 **Reviewer**

Journal of Research on Technology in Education (JRTE)

2017 **Mentor, Alumni Professional Development Program (APDP)**

Supported the Alumni Engagement Strategy of the Australian Department of Foreign Affairs and Trade (DFAT) and Australia Awards in Indonesia (AAI); Mentee: Dr Yuli Rahmawatiunj

2017 **Panel Member, Delphi Panel, Technology in Teacher Education Competencies (TETCs)**

**Development Project**

Research supported by SITE, ISTE, CAEP, NTLC, and promoted by the Department of Education Office of Educational Technology (USA); participated in six rounds of feedback. Research team: Teresa S. Foulger, Kevin Graziano, Denise Schmidt-Crawford, and David Slykhuis

2017 **Invited Speaker**

West Australia Network of Dissemination (WAND), Western Australian Teaching Awards Workshop

*Developing your teaching award nomination with a focus on evidence and impact*

2017 **Co-convenor of the International Science, Mathematics, Technology, Education (SMTE) Conference**

Co-convened with the Universiti Malaysia, Sabah

2016 **HERDSA Fellowship Assessor**

Higher Education Research and Development Society of Australasia (HERDSA)

2016 **Chairperson**

International Conference on Advanced Learning Technologies (ICALT) 17th Maker Projects Research Strand

2015 **Nominated for Australian of the Year**

South Perth

2015 **Invited Keynote Speaker**

Future Science conference of the Science Teachers’ Association of Western Australia (STAWA)

*What could E in STEM be?*

2015 **Co-convenor of the International Science, Mathematics, Technology, Education (SMTE)**

**Conference**

Co-convened with the Universitas Negeri, Jakarta

2015 **Conference Panel Member**

Australian Conference on Science and Mathematics Education (ACSME)

2015 **Conference Reviewer**

Conference of the International Academic Forum (IAFOR)

2015 **Guest Editor, Special STEM Edition**

International Journal of Innovation in Science and Mathematics Education (IJISME)

2007–2010 **Board Member**

Science Teachers’ Association Western Australian (STAWA)

2005–2010 **Editor, *SCIOS* Journal**

Science Teachers’ Association of Western Australia (STAWA)

2007–2010 **Editorial Board, *SCIOS* Journal**

Science Teachers’ Association of Western Australian (STAWA)

2007 **Convenor**

Australian Association of Research in Education (AARE) Conference

2007 **Convenor**

Australasian Science Educational Research Association (ASERA) Conference

***Community Service, Leadership and Volunteering***

2018 **Teacher Reference Group**

UNESCO WA

**2018 Board Member**

**Campbell Primary School, Canning Vale, Perth**

2003–Present **Member**

Mill Point Rotary Club

2013 **Secretary**

Mill Point Rotary Club

2009–2011 **International Director**

Mill Point Rotary Club

2010–2011 **Board Member**

Rotary Australia World Community Service (RAWCS) Western Region

**2009–2016 Chairperson**

**Global Hand Charity Inc.**

2011–2012 **Board Member**

Lab without Walls Inc.

2010 **Federal Government Award for International Volunteer Service**

2008 **Project Participant Volunteer**

Interplast™

**Publications**

***Books/Book Chapters***

Sheffield, R. & Koul, R. (2018). Digital Mentoring: Using a Professional Learning Network to Provide Support for early career Science mentors. In S. Salehjee (Ed.), *A practical guide to mentoring beginning science teachers*. UK: Routledge.

Sheffield, R., Kurisunkal, J., Kohl, R., & Blackley, S. (2018). Learning to teach and teaching to learn STEM through a Makerspace Approach. In R. Kohl, G. Verma, & V. Nargund-Joshi (Eds.), *Science Education in India: Philosophical, historical, and contemporary conversations* New York: Springer.

O’Halloran, K. L., Tan, S., Wiebrands, M., Sheffield, R., Wignell, P., & Turner, P. (2018).The Multimodal

Classroom in the Digital Age: The Use of 360 degree Videos for Online Teaching and Learning. In H.

de Silva Joyce & S. Feez (Eds.), *The Multimodal Classroom*. London & New York: Routledge.

Sheffield, R. & Quinton, G. (2015). *Teaching Science Concepts in Primary Schools*. Perth, Australia: Lancaster Media.

Sheffield, R. & Quinton, G. (2015). Technology and Inquiry in a Science Context: Case studies of Scaffolded On-line Inquiry in Primary and Secondary classrooms. In J. Howell, N. Ostashewski, & M. Cleveland-Innes (Eds.), *Handbook of Research on Optimizing K–12 Education through Online and Blended Learning*. Canada: IGI Global.

Sheffield, R. (2012). *Focus on Teacher Support: Considering Access for the Disabled at Gosport Community School*. In L. Rennie, G. Venville, & J. Wallace (Eds.), *Integrating Science, Technology, Engineering and Mathematics. Issues, Reflections and Ways Forward*. New York: Routledge.

Sheffield, R. (2012). *Focus on Leadership: Constructing a Model House at Mossburn*. In L. Rennie, G. Venville, & J. Wallace (Eds.), *Integrating Science, Technology, Engineering and Mathematics. Issues, Reflections and Ways Forward*. New York: Routledge.

***Edited Journals***

*International Journal of Innovation in Science and Mathematics Education (IJISME)*, 23, No 3 (2015). Editors: Susan Blackley & Rachel Sheffield. http://openjournals.library.usyd.edu.au/index.php/CAL/issue/view/791

*International Journal of Innovation in Science and Mathematics Education (IJISME)*, Special Issue: STEM Revisited (in press). Guest Editors: Rachel Sheffield, Rekha Koul, Alexandra Yeung, & Susan Blackley.

*International Journal of Science and Mathematics Education (IJSME),* Special Issue Maker-centered Science and Mathematics Education: Learning, Teaching and Environment Design (in press). Guest Editors: Tzu-Hua Wang, Jari Lavonen, Alison Clark-Wilson, Rachel Sheffield, & Kenneth Lim.

***Reports***

Sheffield, R., Blackley, S., & Koul, R. (2017)*.* *Implementation and evaluation of a state-wide immersive professional learning model to support teachers to integrate digital technologies into teaching and learning.* Perth, WA: School of Education, Curtin University.

Sheffield, R., Smith, J., Quinton, G., & Treagust, D. (2017). *A New Way Forward for Teaching Science. Report on the Future of Teaching Science Journal.* Perth, WA: School of Education, Curtin University.

***Peer Reviewed Journal Articles***

Sheffield, R., Blackley, S., & Moro, P. (2018). A professional learning model supporting teachers to integrate digital technologies. *Issues in Educational Research* *28*(2).

Sheffield, R., Koul, R., Kurisunkal, J., & Arya, R. (2019). Using the Makerspace Approach to Develop STEM Knowledge and 21st Century Competencies in Indian Classrooms. *IJSME International Journal Science Mathematics Education.*

Blackley, S., Rahmawati, Y., Fitriani, E., Sheffield, R., & Koul, R. (2018). Using a *Makerspace* approach to engage Indonesian primary students with STEM. *Issues in Educational Research*, *28*(1), 18–42. http://www.iier.org.au/iier28/blackley.pdf

Blackley, S., Bennett, D., & Sheffield, R. (Submitted November 2017). Pre-service teachers’ articulation of their future selves. *Issues in Educational Research (IIER).*

Blackley, S., Sheffield, R., Maynard, N., Koul, R., & Attar Singh, R. (Submitted August 2017). Makerspace in STEM (MIS): A community of practice. *Teaching in Higher Education.*

Sheffield, R., Moro, P. (2017). Outsourcing of Transformational Change; Implementing the Digital Technology Curriculum. *Professional Educator* Australia College of Educators (ACE).

Sheffield, R., Blackley, S., & Moro, P. (2018). A professional learning model supporting teachers to integrate digital technologies. *Issues in Educational Research (IIER)*.

Sheffield, R., Koul, R., Blackley, S., & Maynard, N. (2017). Makerspace in STEM for girls: A physical space to develop 21st century skills. *Educational Media International Journal (EMI).*

Blackley, S., Bennett, D., & Sheffield, R. (2017). Purpose-built, web-based professional portfolios: Reflective, developmental and showcase. *Australian Journal of Teacher Education*.

Blackley, S., Sheffield, R., Maynard, N., Walker, R., & Koul, R. (2017). Makerspace and Reflective Practice: Advancing Pre-service Teachers in STEM Education. *Australian Journal of Teacher Education.*

Blackley, S. & Sheffield, R. (2016). ENVIRONMENT: RE-NEGOTIATING THE E IN STEM EDUCATION. *Eco-thinking, 1*(1). http://www.eco-thinking.org/index.php/journal/article/view/16.

Blackley, S. & Sheffield, R. (2015). Digital andragogy: A richer blend of initial teacher education in the 21st century. *Issues in Educational Research, 25*(4).

Sheffield, R. & Blackley, S. (2015). Appraising the E in STEM: Creative alternatives to “engineering”. International Journal of Innovation in Science and Mathematics Education (IJISME), Special Issue STEM 23(3)*.*

Sheffield, R., Debozy, E., Gibson, D., Mullaney, J., & Campbell, C. (2015). Teacher education students using TPACK in science: A case study. Educational Media International Special Issue, Special Edition 53(3), 227–238.

Sheffield, R. & McIlvenny, L. (2014). *Using Technology to Teach Scientific Inquiry In a Teacher Education Programme: Why Do Whales Beach Themselves*? *International Journal of Innovation in Science and Mathematics Education*, *22*(6), 48–60.

Murcia, K., Sheffield, R., & Hackling, M. (2010). Talking about Science in Interactive Whiteboard Classrooms. *Australasian Journal of Educational Technology, Special Edition 4,* 417–431.

Wallace, J., Sheffield, R., Venville, G., & Rennie, L. (2007). Looking back, looking forward: Re-search for integration in the middle years of schooling. *Australian Educational Researcher, Special Edition,* 29–49.

Venville, G., Sheffield, R., Rennie, L., & Wallace, J. (2007) The Writing on the Wall: The Effect of Classroom Context on the Implementation of, and Learning within Integrated, Community-based Science Projects. *Journal of Research in Science Teaching*.

**Conference Presentations**

***Keynote***

Sheffield, R. & Moro, P. (2017). *Lets DREAM: Delivering a sustainable approach to building a Digital Technologies story through a long term, action research approach to professional learning.* Paper presented at the The Digital Curriculum Conference, The University Western Australia, Perth, Western Australia, 28 October 2017.

Sheffield R., Blackley, S., Koul, R., Rahmawati, Y., & Fitriani, E. (2017). *Engaging Students in a Makerspace Approach: Analysing Australian and Indonesian Primary Students’ Engagement and the Application of STEM Knowledge.* Eighth International Conference on Science, Mathematics and Technology Education (9th SMTE), Kota Kinabulu, Sabah, Malaysia, 7–11 November 2017.

Sheffield, R., Blackley, S., & Moro, P. (2017). *Leading the DREAM: Creating and Sustaining STEM in the Classroom.* Eighth International Conference on Science, Mathematics and Technology Education (9th SMTE), Kota Kinabulu, Sabah, Malaysia, 7–11 November 2017.

Sheffield, R., Blackley, S., Bennett, D., (2017). *Who are we? Identity of STEM educators*. Paper presented at the Australia Conference Science and Mathematics Education, Monash University, Melbourne, Victoria, 5–7 October 2017.

Sheffield, R., Blackburn, B., McBeath, F., Moro, P., & Blackley, S. (2017). *Let’s DREAM: The Future of STEM*. 2017 STEM Education Conference. MAWA STAWA, Curtin University, Perth, Western Australia, 7–8 October 2017.

Moro, P. & Sheffield, R. (2017). [*Let’s DREAM: The Future of STEM through a distributed professional network*](http://futurefocusedlearning.penrhos.wa.edu.au/sessions/index.html#morosheffield)*.* Future Focused Learning Inspiring students in STEM and beyond, Penrhos College, Perth, Western Australia,18 August 2017.

Sheffield, R., Moro, P., & Blackley, S. (2017). *Art of DREAMING*. Department of Education STEM Expo, Perth, Western Australia, 14 August 2017.

Sheffield, R., Moro, P., & Blackley, S. (2017). *A Professional Learning Model supporting Teachers to integrate Digital Technologies.* International Society of Technology Education, San Antonio, Texas, USA, 25–28 June 2017.

Blackley, S., Bennett, D., & Sheffield, R. (2017). *Developing workforce capacity in pre-service teachers: Examining present and possible future selves.* Higher Education Research and Development Society of Australasia, Sydney, New South Wales, 1–3 July 2017.

Blackley, S., Bennett, D., & Sheffield, R. (2017). *Using a Makerspace Approach: An Opportunity for Developing Undergraduate Students’ Reflective Practice and Professional Identity.* Higher Education Research and Development Society of Australasia, Sydney, New South Wales, 1–3 July 2017.

Koul, R., Sheffield, R., Blackley, S, & Maynard, N. (2017). *Makerspace in STEM for girls: A physical space to develop 21st century skills.* National Association Research in Science Teaching, San Antonio, Texas, USA, 22–25 April 2017.

Maynard, N., Sheffield, R., Bennett, D., Blackley, S. & Koul, R. (2017). *STEM Makerspace—an opportunity for developing students’ reflective practice and professional identity*. Paper presented at the Annual Teaching and Learning Forum, Curtin University, Perth, Western Australia.

Blackley, S., Sheffield, R., Koul, R., & Maynard, N. (2016). *Engaging girls in STEM: Primary school students, pre-service teachers and engineering students working together using Makerspaces*. Research in Education (AARE) Conference, Melbourne Cricket Ground, Melbourne, Victoria, 28 November–2 December 2016 (conference proceedings).

Bennett, D., Blackley, S., & Sheffield, R. (2016). *Assembling identity: Digital portfolios, photographs, drawings and textual narratives in pre-service teacher development*. Presented at BIBAC 2016 International Conference: 'Building Interdisciplinary Bridges Across Cultures’, Cambridge University, Cambridge, England.

Sheffield, R., Blackley, S., Koul, R., Maynard, N., Fairhurst, N., Rowe, D., Murachami, M., De Souza, S. & Forman, R. (2016). *Self-authorship to Create and Shape the Identity of Women in STEM.* Paper presented at the Australia Conference Science & Mathematics Education, University of Queensland, Brisbane, Queensland, 1–3 October 2017.

Blackley, S,, Sheffield, R., Koul, R., Maynard, N., Fairhurst, N., Rowe, D., Murachami, M., De Souza, S. & Forman, R. (2016). *Using Makerspaces to foster authentic stem engagement*. Paper presented at the Australia Conference Science and Mathematics Education, University of Queensland, Brisbane, Queensland, 1–3 October 2016.

Blackley, S., Sheffield, R., Koul, R., Maynard, N. (2016). *Understanding the essence(s) of port-folio-based learning:**Evidence-based digital portfolios to enhance employability and support developing professional identity.* Paper presented at the AAEEBL Association for Authentic, Experiential and Evidence-Based Learning, Edinburgh, Scotland.

Sheffield, R., & Blackley, S. (2016). *Makerspace in STEM (MIS) for girls: An Exploratory Study*. Proceedings of the International Society for Technology in Education (ISTE) Conference and Expo, Denver, Colorado, USA (conference proceedings).

Sheffield, R., Blackley, S., & Bennett, D. (2016). *Enhancing work readiness and developing professional identity through personalised, standards-based digital portfolios*. In M. Davis & A. Goody (Eds.), Research and Development in Higher Education: The Shape of Higher Education, 39 (pp 300–306). Fremantle, Western Australia, 4–7 July 2016 (conference proceedings).

Sheffield, R., Blackley, S., Koul, R., Maynard, N. (2016). *The Makerspace: linking Science, Mathematics, Engineering and Technology to improve pre-service teachers’ work readiness and create communities of practice.* Paper presented at the Annual Teaching and Learning Forum, Curtin University, Perth, Western Australia.

Sheffield, R., Blackley, S., Koul, R., & Maynard, N. (2016). *STEM in Makerspace: The Final Frontier.* Paper presented at the Primary Science Conference, East Perth, Western Australia.

Bennett, D., Blackley, S., & Sheffield, R. (2015). *Rethinking employability: Enhancing learning and work readiness through individual, customised and lifelong digital portfolios*. Australian Association for Research in Education (AARE) Conference, University of Notre Dame Australia, Fremantle, Western Australia, 29 November–3 December 2015.

Blackley, S. & Sheffield, R. (2015). *Appraising the E in STEM: Creative alternatives to 'engineering'.* Eighth International Conference on Science, Mathematics and Technology Education (8th SMTE), Jakarta, Java, Indonesia, 21–24 November 2015.

Blackley, S. & Sheffield, R. (2015). *Digital Andragogy: A new approach to higher education in a digital context.* Australian Association for Research in Education (AARE) Conference, University of Notre Dame Australia, Fremantle, Western Australia, 29 November–3 December 2015.

Blackley, S. & Sheffield, R. (2015). *Re-Imagining the 'E' in STEM Education.* Australian Association for Research in Education (AARE) Conference, University of Notre Dame Australia, Fremantle, Western Australia, 29 November*–*3 December 2015.

Blackley, S. & Sheffield, R. (2015 ). *Digital Andragogy: A 21st Century approach to tertiary education*. Australasian Society for Computers in Learning in Tertiary Education (ASCILITE), Curtin University, Perth, Western Australia, 29 November–2 December 2015.

Debozy, E., Walker, R., & Sheffield, R. (2015 ). *Teacher educators' understanding and use of TPACK: Consensus or conflict?* Australian Association for Research in Education (AARE) Conference, University of Notre Dame Australia, Fremantle, Western Australia, 29 November–3 December 2015.

Sheffield, R. & Blackley, S. (2015 ). *E for Enquiy in STEM Education*. Eighth International Conference on Science, Mathematics and Technology Education (8th SMTE), Jakarta, Java, Indonesia, 21–24 November 2015.

Sheffield, R., Dobozy, E., Gibson, D., Mullaney, J., & Campbell, C. (2014). *Teaching with TPACK: A case study of pre-service science education.* Paper presented at the 64th ICEM/AgriaMedia Conference 2014, Eger, Hungary.

Quinton, G. & Sheffield, R. (2014). *Learning by Linking Science Inquiry and ICT Capabilities in a Middle School Classroom*. Paper presented at the CONASTA Conference of the Australian Science Teachers Association (ASTA), Adelaide University, Adelaide, South Australia.

Sheffield, R., Quinton, G., & McIlvenny, L. (2014). *Save the Sharks; investigating real life inquiry problems to improve primary pre-service teachers’ confidence in science and the inquiry process in an on-line space.* Paper presented at the Australasian Science Education Research Association (ASERA), Monash University, Melbourne, Victoria.

Sheffield, R. & McIlvenny, L. (2014). *Exploring the Boundaries of Science Inquiry, Sustainability and ICT.* Paper presented at the Teaching and Learning Forum, The University of Western Australia, Perth, Western Australia.

Sheffield, R., McIlvenny, L., & Quinton, G. (2014). *Making Friends with a Voki*. Paper presented at the Primary Science Conference, The Vines Resort, Perth, Western Australia.

Sheffield, R. & McIlvenny, L. (2013). *Why do Whales Beach themselves? Science Inquiry using Technology*. Paper presented at the ICASE 2013 World Conference on Science and Technology Education, Kuching, Borneo.

Sheffield, R. & Murcia, K. (2010). *Travelling with teachers: Action learning about Interactive Whiteboards and Discourse in Primary Science*. Paper presented at the CONASTA Conference of Australian Science Teachers Association (ASTA), Sydney, New South Wales.

Murcia, K. & Sheffield, R. (2010). *Interrogating the impact of interactive whiteboard technology on science discourse.* Paper presented at the annual conference of the Australasian Science Education Research Association (ASERA), Port Stephen, Victoria.

Murcia, K., Sheffield, R., & Hackling, M. (2009). *A framework for interrogating the impact of interactive whiteboard technology on classroom discourse.* Paper presented at the 18th Annual Teaching and Learning Forum, Curtin University, Perth, Western Australia.

Murcia, K. & Sheffield, R. (2009). *Interactive whiteboard strategies for scaffolding discourse in the primary science classroom.* Paper presented at the annual conference of the Australasian Science Education Research Association (ASERA), Geelong, Victoria, 2–5 July 2009.

Murcia, K. & Sheffield, R. (2009). *Interactive whiteboard strategies for scaffolding discourse in the primary science classroom.* Paper presented at the CONASTA Conference of Australian Science Teachers Association (ASTA), Launceston, Tasmania, 6–8 July 2009.

Sheffield, R. & Murcia, K. (2009).*What impact does Interactive Whiteboard technology have on teachers’ practice and the nature of the discourse in the primary science classroom?* Paper presented at the International Science Education Conference, Singapore, 24–26 November 2009.

Venville, G., Sheffield, R., & Rennie, L. (2008). *Implementation of an Integrated, Community-based Science Project: Balancing Civic Responsibility and Subject Specialization*. Paper presented at the annual meeting of the American Education Research Association (AERA), New York, USA, 24–28 March 2008.

Sheffield, R., Venville, G., & Rennie, L. (2007). *Learning Communities or Science Classrooms? A comparative case study of science learning*. Paper prepared for the Annual Meeting of the National Association for Research in Science Teaching, New Orleans, USA, April 2007.

Sheffield, R., Venville, G., & Rennie, L. (2007). *Exploring the attributes that enable and inhibit the implementation of an integrated curriculum in a middle school science classroom* [synopsis]. In G. Venville & V. Dawson (Eds.), Proceedings of CONASTA 56 and ICASE 2007 World Conference on Science and Technology Education (pp. 385–390). Perth: Science Teachers’ Association of Western Australia (conference proceedings).

Sheffield, R., Morris, M., & Pearson, J. (2007). *Pre Service Teachers Concerns and Understanding as Related to their Ability to Perform Rich Tasks* [synopsis]. In G. Venville & V. Dawson (Eds.), Proceedings of CONASTA 56 and ICASE 2007 World Conference on Science and Technology Education. Perth: Science Teachers’ Association of Western Australia (ASTA) (conference proceedings).

Rennie, L., Sheffield, R., Venville, G., Evans, R., & Koul, R. (April, 2007). *Learning about Ecological Diversity in Urban Wetlands: A Scientific Literacy Perspective*. Paper prepared for the Annual Meeting of the National Association for Research in Science Teaching, New Orleans, USA, April 2007.

Rennie, L., Sheffield, R., & Venville, G. (2007). *The Impact of an Integrated Curriculum on Student Attitudes about Science and Learning of Electricity Concepts*. Paper presented at the Australian Association of Research in Education Conference, Fremantle, Western Australia, 25–29 November 2007.

Venville, G., Sheffield, R., Rennie, L. & Wallace, J. (2006). *The Effect of School Context on Curriculum Integration in Community-based Projects.* Paper presented at the annual meeting of the American Education Research Association (AERA), San Francisco, USA, 7–11 April 2006.

Rennie, L., Sheffield, R., Koul, R., & Evans, R. (2006). *Evaluating Professional Development Offered by Informal Science Institutions: Issues and Implications.* Paper prepared for the Annual Meeting of the National Association for Research in Science Teaching, San Francisco, USA, April 2006.

Venville, G., Cole, J., Edmunds, J., & Sheffield, R. (2006). *The Impact of Curriculum Integration on Motivation, Meaning and Management in the Middle Years*. Paper prepared for the Annual Middle Years Conference, Perth, Western Australia, May 2006.

Sheffield, R., Rennie, L., & Venville, G. (2006). *Attitudes and perceptions about science in community projects: A comparison of results from three schools.* Paper presented at the annual conference of the Australasian Science Education Research Association, Canberra, Australia, 5–8 July 2006.

Rennie, L., Mayne, F., Evans, R., & Sheffield, R. (2006). *Do-It-Yourself Science Kits: Do They Really Make a Difference to Science Teaching and Learning*. Paper prepared for the Annual Meeting of the Australian Association of Research in Education, Canberra, Australia, July 2006.

Rennie, L., Sheffield, R., Venville, G., & Wallace, J. (2005). *Ripples and Tsunamis to Curriculum Integration: A Comparative Case Study*. Paper presented at the annual meeting of the Australian Association of Research in Education, Parramatta, New South Wales.

Sheffield, R., Rennie, L., Venville, G., & Wallace, J. (2005). *Re-Search for Integration: Integration in secondary classrooms in Western Australia*.Paper presented at the annual meeting of the Australian Science Educators in Research Association, Hamilton, New Zealand.

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