Simulated Learning Environments

Current use and future potential in Australian speech pathology programs

Presented by Dr Naomi MacBean

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Bronwyn Davidson, The University of Melbourne
Simulation
Aims

• Document current use of SLEs in SLP education within Australia

• Develop a nationally endorsed approach to the potential integration of SLEs into speech pathology clinical education curricula
Speech Pathology Australia

- National representation of profession & accreditation of university programs
- Requires students to demonstrate competencies in areas of practice
  - Speech, language, voice, fluency, swallowing
  - Developmental and acquired disorders

University Programs

- Bachelors or Masters
- 15 accredited programs in Australia in 2010
- Pedagogical freedom
- Must meet assessment evidence requirements to gain accreditation

Workforce Placement
Simulated Learning Environments

Skills based experience

Imitation of reality

Apply classroom learning in clinical context

Provides safe environment – both student and client

Enable students to assimilate clinical knowledge and skills

Better execution of skills and management in clinical setting
<table>
<thead>
<tr>
<th>University</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>Charles Sturt University</td>
<td>Ms. Libby Clarke</td>
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<tr>
<td>Curtin University</td>
<td>Assoc. Prof. Cori Williams</td>
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<tr>
<td>Edith Cowan University</td>
<td>Prof. Beth Armstrong</td>
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<tr>
<td>Flinders University</td>
<td>Dr. Sue McAllister Assoc. Prof. Paul McCormack</td>
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<td>James Cook University</td>
<td>Ms. Louise Brown</td>
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<td>La Trobe University</td>
<td>Dr. Emma McLaughlin</td>
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<td>Macquarie University</td>
<td>Dr. Elisabeth Harrison Dr. Eva Nemeth</td>
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<tr>
<td>The University of Newcastle</td>
<td>Prof. Alison Ferguson</td>
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<td>The University of Queensland</td>
<td>Prof. Deborah Theodoros Dr. Bronwyn Davidson Ms. Anne Hill Dr. Naomi MacBean</td>
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<tr>
<td>The University of Sydney</td>
<td>Assoc. Prof. Kirrie Ballard Dr. Tricia McCabe Dr. Alison Purcell</td>
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# Speech Pathology Australia

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Mrs. Vickie Dawson</td>
<td>Senior Advisor Professional Standards</td>
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<tr>
<td>Dr. Anne Ozanne</td>
<td>Professional Standards</td>
</tr>
<tr>
<td>Ms. Christine Stone</td>
<td>National President</td>
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<tr>
<td>Ms. Natalie Ellston</td>
<td>Vice PresidentCommunications</td>
</tr>
<tr>
<td>Ms. Gillian Dickman</td>
<td>Vice President Operations</td>
</tr>
<tr>
<td>Ms. Marguerite Ledger</td>
<td>National Professional Standards Portfolio Coordinator</td>
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<tr>
<td>Ms. Gail Mulcair</td>
<td>Chief Executive Officer</td>
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### Consultation

<table>
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<tr>
<th>Stakeholders</th>
<th>Methods</th>
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<tr>
<td>Speech pathology collaborative</td>
<td>Surveys</td>
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<tr>
<td>SPA</td>
<td>Focus groups</td>
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<tr>
<td>Current members of profession</td>
<td>Fora</td>
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<tr>
<td>Students</td>
<td>Teleconferences</td>
</tr>
<tr>
<td>Clinical educators</td>
<td>Modified Delphi technique</td>
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Simulated Learning Environments: Current use and future potential in Australian speech pathology programs.
Evidence

Searches for use of SLEs in education documented in scientific literature / websites / anywhere!

Contact with innovators (SLE) in SLP education

Briefing Paper
Simulated Learning Environments: Current use and future potential in Australian speech pathology programs.

Consultation

Topics

• Current use of SLEs in SLP education in each program

Perception re:

• Aspects of speech pathology curricula that can be delivered via SLEs
• Potential barriers to adoption
• Feasibility and timeframes for implementation
• Contribution of SLEs to expanding clinical training capacity and reducing load on workforce educators.
• Accreditation of SLEs as evidence of competency
Simulated Learning Environments: Current use and future potential in Australian speech pathology programs.

Modes of SLE

- Standardised Patients
- Mannequins
- Virtual Reality
- Haptics
- Virtual Worlds
- Virtual Patients
SLE Advantages

- Clinical variation and standardisation of the curriculum across students and locations
- Exposure to rare & more serious health conditions
- Focused on learning rather than service

- Uniform educational outcomes despite different rates of trainee progress
- Standardise scenarios for assessment or tailor to individual need
Educational Outcomes

SLE vs traditional approach
✓ promotes greater learner attention, engagement and motivation
✓ improved acquisition and retention of knowledge
✓ allows quicker skill acquisition
✓ enhances critical thinking and problem solving skills
✓ learners are reported to be more satisfied, resulting in increased self confidence
Evidence?

Transfer of skills

✓ simulation → simulation (mode different)
✓ simulation → clinical setting

SLEs appear to have great potential for application to speech pathology

BUT research is still limited
Simulated Learning Environments: Current use and future potential in Australian speech pathology programs.

SimuCase

Stacy Williams
Case Western Reserve University, Texas
SpeechPathology.com
Virtual Case Creator

Nigel Wynne
Faculty Health, Birmingham City University
http://vccweb.health.bcu.ac.uk/
Virtual Therapist

Multi-choice question interaction

LSVT Virtual Therapist

Professor Ron Cole
www.bltek.com

Simulated Learning Environments: Current use and future potential in Australian speech pathology programs.
## Current Use of SLEs in Australian SLP Programs

<table>
<thead>
<tr>
<th>Simulations Used</th>
<th>Range Indicators / Areas of Practice</th>
<th>Skills Targeted</th>
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<tbody>
<tr>
<td>• Standardised patients</td>
<td>• Adult and paediatric speech</td>
<td>• Communication skills</td>
</tr>
<tr>
<td>• Part task trainers</td>
<td>• Adult voice</td>
<td>• Professional behaviours</td>
</tr>
<tr>
<td>• Low fidelity mannequins</td>
<td>• Adult and paediatric fluency</td>
<td>• Access and application of information</td>
</tr>
<tr>
<td>• Environmental simulations</td>
<td>• Adult swallowing</td>
<td>• Assessment skills</td>
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<tr>
<td></td>
<td>• Foundation clinical skills</td>
<td>• Clinical reasoning skills</td>
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<td></td>
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<td>• Interview skills</td>
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<td></td>
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<td>• History taking skills</td>
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<tr>
<td></td>
<td></td>
<td>• Treatment planning and implementation</td>
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Could SLEs Reduce Hours on Placement (Clinical Skills)?
Could SLEs Reduce Hours on Placement (Areas of Practice)?

Simulated Learning Environments: Current use and future potential in Australian speech pathology programs.
Curricula Elements

• Clinical skill enhancement prior to placement

• Additional coverage of specialised areas of speech pathology practice

• Replacement of early clinical observation experiences

• Facilitation of inter-professional learning
Resources needed

Staffing
Appropriate teaching space
Appropriate materials

$$$$$
Recommended Approach to SLE integration into Speech Pathology Clinical Education

Outcomes
- Reduced load on workforce CEs
- Increased student capacity
- Enhanced student learning opportunities
- Evidence base for efficacy of SLEs in Speech Pathology
Future Directions

Obtain funding to implement plan!
Research educational outcomes of SLEs
Inter-professional collaborations
  • e.g. OT, PT & SP at UQ
Further Information


n.macbean@uq.edu.au