Let’s talk about competency-based education

2021 Researcher-Academic Town Meeting

Presentation by:
Prof. Sue McAllister
Professor Sue McAllister
The University of Sydney and Flinders University

• Financial Relationships
  • COMPASS© research has been funded by Speech Pathology Australia, Australian Research Council, Australian Learning and Teaching Council, Health Workforce Australia (IP and copyright held by SPA)
  • Honoraria for the presentation today

• Non-Financial
  • Honorary academic with The University of Sydney and Flinders University
  • Advise Speech Pathology Australia re COMPASS© and participate in consultations re competency standards
http://www.kaurnaplacenames.com/
using_the_maps.php
• History
• Definitions and competency framework
• Implementation
• Lessons learned
Why CBE?

Desired outcome: Graduates who are fit for practice

If we focus on inputs – how do we know we have achieved the outcome?

Drivers
• Values and social context
• Fit for purpose education models
Fit for purpose?

Adapted from Fig 1, pg. 442; Albanese et al 2010

- Linguistics
- Anatomy & Physiology
- Psychology
- And so on

Progression through course:
- Placement 1
- Placement 2
- Placement 3
- etc

Miracle

Competent Graduate

Schuwirth & Durning, 2018
Fit for purpose?

Le Maistre & Pare (2004) pg. 47 “When they come in, they have no sense of how the theory fits in with the practice . . . they see . . . a real separation between their theory and their practice.”

Hager (2004)

Williams (2021) “Programs are trying to squeeze growing content into an educational model that is already bursting at the seams.”

University learning
- Pass assessment of theory e.g. how language is acquired
- Collaboration is cheating
- Focus is the student

Workplace practice
- Theory is a tool to solve problems e.g. facilitate language development
- Collaboration is essential
- Focus is the patient/client/community

Critical skills for work readiness: Independence; Attitude; Teamwork; and Learning.
Knowledge or skills specific to workplace not emphasised
Implicit expectations re graduates managing transfer
Australian Commonwealth Government CBE reform initiated 1980’s (Harris, 1995).

• National training reform agenda
• National Office for Overseas Skills Recognition
  ➢ Resources to develop competency frameworks (Hager et al 1994; Heywood et al 1992)
History: competency frameworks

Competency-based Occupational Standards for Speech Pathologists

Entry Level

Revised 2011
• Collaborative development
• Long term cycles of engagement
  • 1994
  • 2001
  • 2011
• Competency based accreditation
• Focus on outputs not inputs

Now moving to Professional Standards…
• Performance based assessment tool
• Occupational + Professional competencies
• Australia, New Zealand, Hong Kong, Singapore, Malaysia
• Secure online database
• Educationally sound
• Maps progression to entry level

See bibliography for research background
Nature of SLP competency

• Developmental
• Competent exercise of professional judgement to inform action across all tasks and contexts of the profession
• Wholistic integration of occupational and professional competencies
• Inferred from performance of professional tasks
• Competency arises from combinations of knowledges, skills and attributes
• Competencies facilitate transfer across domains and contexts of practice
Transfer

Schema – organise, store and retrieve information from long term memory (Fraser et al, 2015; van Merrienboer & Sweller, 2005; van Merrienboer & Kirschner, 2018)

- Processes
- Patterns

Surface vs Deep structures (Barnett & Ceci 2002)

Clinical Swallowing Evaluation examples from McAllister et al 2020.
Development of Expertise

Competency and curriculum framework

Scope of Practice e.g. language, speech, voice

Context of practice e.g. education, private practice, acute hospital

Service delivery models e.g. intensive, consultative, individual/community

Entry to program

Post Graduation

During program

Development of Expertise

Curriculum

Performance of Professional Tasks: Granularity varies with level of expertise

Assessment of child language
Aphasia intervention
Case Management
Interdisciplinary practice
Administers the CELF
Bedside evaluation of swallowing
Training and development of support staff
Plans language intervention
etc
etc

Pattern + Process Schema

Occupational + Professional Competencies

Assessment
Analysis & Interpretation
Planning evidence based SLP practices
Implementation of SLP practice
Planning, providing & managing services
Professional & supervisory practice
Lifelong learning & reflective practice
Reasoning
Communication
Learning
Professionalism

Inferred from

Reasoning
Communication
Learning
Professionalism
Relevant competencies
a) Professional: communication, lifelong learning, reasoning (COMPASS©)
b) Occupational: assessment; analysis and interpretation; planning evidence-based speech pathology practice; Intervention; Planning; Providing and managing speech pathology services (CBOS, 2011) e.g.

CBOS definition of evidence-based practice
“When a clinician engages in evidence-based practice, they approach their clinical practice from the perspective of a researcher. They critically analyse their practice and formulate focused and structured questions or hypotheses about the likely outcomes of their planned management.” (pg. 4)

CBOS domains of SLP practice
“Speech pathologists provide services across all of the following domains: advocacy, clinical services, consultation, education, prevention and research for communication and swallowing disorders across the lifespan.” (pg. 6)
Example: Mapping questions

• How will learning about research enable graduates to better serve their clients and community?
  • Engage in high quality EBP
  • Contribute to research
• What do I think students need to be able to DO
  • Think critically
  • Ask high quality questions about their practice
  • Find and evaluate relevant research
  • Use the results appropriately to inform practice
• How will I know they can do it – assessed professional tasks
• What knowledge, skills and attributes will enable them to undertake these tasks successfully?
• What is the developmental sequence and how can I build this across the program?

Professional tasks = Assessment tasks

1. Construct a PICO and search, critically evaluate the evidence for a website promising a ‘cure’ and make a recommendation for a parent
   • linked to PBL cases and simulated clinical task

2. Critical review of the evidence presented in research articles, providing recommendations for practice and research, identifying methodology to further develop evidence
   • Linked to PBL cases, successful reviews published on external website to inform clinicians

3. Produce a Critically Appraised Topic and make recommendations for education, research and practice
   • Partnered with SLP to address real clinical question, CAT statements made available and publicly presented to peers and profession
What learning do I need to facilitate?

- **Knowledges**: What do the students need to know?
  - Propositional e.g. What is qualitative research?
  - Practical e.g. How to formulate a PICO.
  - Personal knowledge e.g. What do they already know about research methods?

- **Skills**: What do the students need to be able to do?
  - Practical e.g. Conduct a database search
  - Cognitive e.g. Identify and manage cognitive biases
  - Emotional/social e.g. Negotiate CAP topic with SLP

- **Personal qualities**: What might influence their performance?
  - Cognitive style e.g. flexibility
  - Interpersonal style e.g. persistence
  - Integrity e.g. willing to admit error
Did I succeed?

“It’s been a fantastic project [CAT] …we find that we are now reading articles with much more knowledge and ability to look critically at the quality of the research and findings, so thank you so much for giving us such a useful assignment.”
Development of expertise

Developed and tested via COMPASS© research
Continuum of competency
• 3 levels: Novice, Intermediate, Entry-Level
• Developed with reference to
  • SOLO Taxonomy (Biggs & Collis, 1982)
  • Stages in skill acquisition (Benner, 1984; Dreyfus & Dreyfus, 1996)
  • Degree of support required (Anderson, 1998; Brasseur, 1989)

Describe the development of student’s ability to
1. Manage complexity
2. Transform knowledge into practice
3. Work independently
Practicum example
Development of Expertise

Competency and curriculum framework

Service delivery models e.g. intensive, consultative, individual/community

- Attributes
- Knowledges
- Skills

Context of practice e.g. education, private practice, acute hospital

Pattern + Process Schema

Performance of Professional Tasks:
- Granularity varies with level of expertise

- Assessment of child language
- Aphasai intervention
- Case Management
- Interdisciplinary practice
- Administers the CELF
- Bedside evaluation of swallowing
- Training and development of support staff
- Plans language intervention
- etc
- etc

Process Schema

Occupational + Professional Competencies

- Assessment
- Analysis & Interpretation
- Planning evidence based SLP practices
- Implementation of SLP practice
- Planning, providing & managing services
- Professional & supervisory practice
- Lifelong learning & reflective practice
- Reasoning
- Communication
- Learning
- Professionalism

Graduate Outcomes

Scope of Practice e.g. language, speech, voice
Key elements for successful CBE

• Well articulated competency based framework
• Whole of program approach
• Strong educational design informed by theory
  • Spiral curriculum and development of expertise
  • Horizontal and vertical integration
  • Schema building and transfer
  • Constructively aligned
  • Quality assessment
Outcomes

National consensus and collaboration
Team Acknowledgements

COMPASS® Projects
Prof Sue McAllister, The University of Sydney & Flinders University of SA
Prof Michelle Lincoln, The University of Sydney
Prof Alison Ferguson, The University of Newcastle
Prof Lindy McAllister, The University of Sydney (prev. Charles Sturt University)

Benchmarking COMPASS® Database and COMPASS® Renewal Project
Prof Sue McAllister, The University of Sydney & Flinders University of SA
Prof Michelle Lincoln, The University of Sydney
Prof Alison Ferguson, The University of Newcastle
Assoc. Prof Bronwyn Davidson, The University of Melbourne
Dr Anne Hill, The University of Queensland
Dr Rachel Davenport, LaTrobe University
Ms Louise Brown, Senior Lecturer, James Cook University
Ms Helen Tedesco & Ms Samantha Kruger, Project Managers, The University of Sydney
Ms Alison McAllister, Project Manager, Flinders University


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SPAA. (2011). *Competency-Based Occupational Standards for Speech Pathologists (Entry Level).*


COMPASS® resources: [https://tinyurl.com/SPA-COMPASS-resources](https://tinyurl.com/SPA-COMPASS-resources)

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