

**Exploring the use of
a community of
practice to improve
blended and flipped
approaches to
teaching and learning
in health sciences**

**Dr Georgia Clarkson and Dr Leigha Dark
Australian Catholic University**

HERDSA June 2017, Sydney Australia



Key Messages

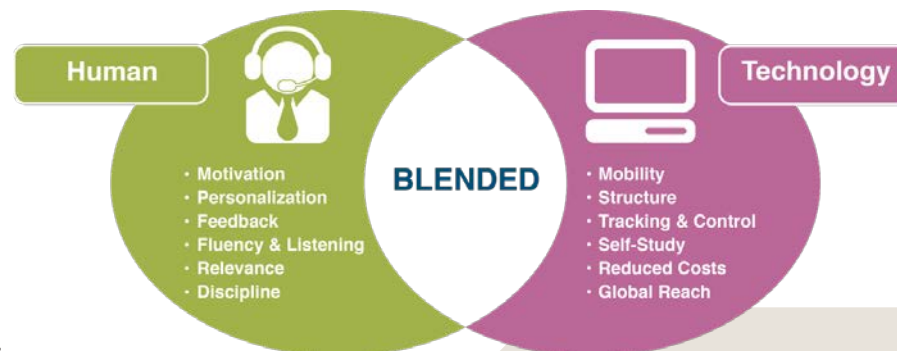
- *Challenge* - Implementing blended learning sector wide
- *Health context* - Clinicians have minimal teaching experience, technologies an additional challenge
- *Pilot project* - Overcome challenges using CoP
- *Evaluation* – Goal Attainment Scaling and focus group
- *Outcomes* – Evidence of improved understanding and practice
- *Conclusion* - CoP can assist to overcome some barriers to implementing blended learning in health sciences

Blended Learning

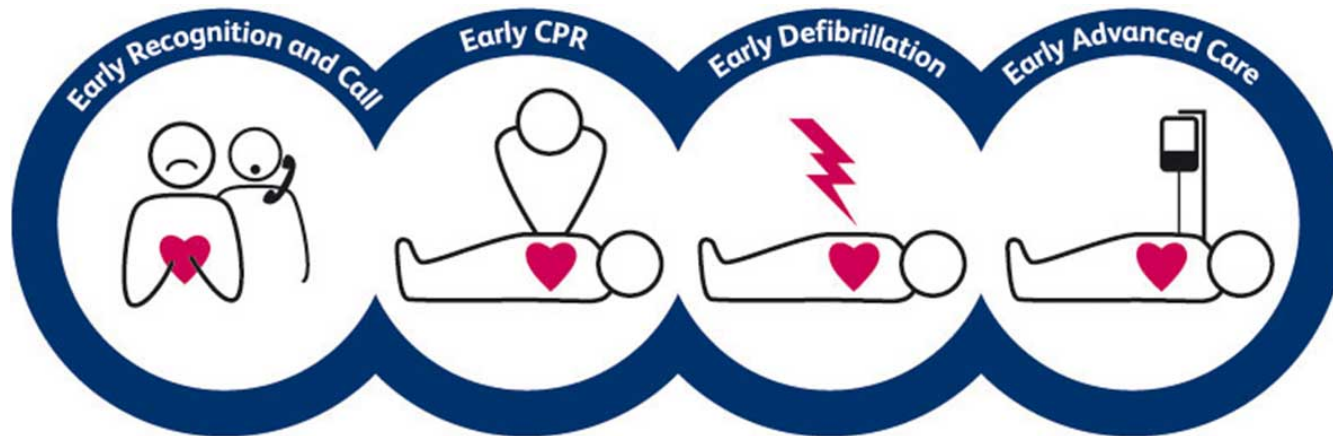
“Ultimately, the exact definition of blended learning, beyond some combination of online and face-to-face, may not matter.”

International Association for K-12 Online Learning (2008)

- Incorporates both online components and traditional social models
- Multi-directional interaction
- Enables self-paced activities which cater for different styles and abilities
- Integrates student-centred learning, classroom-based teaching and learning with mobile and web-based technology
- ***Continuous effort over several years is required to make significant inroads in the area of blended learning*** (Moskal et al., 2013).



Accessibility



- Academics 'lay' in area
- Simplicity and accessibility
- Time limitations and broad brushstrokes

Two steps to save a life:



Call Right Away!

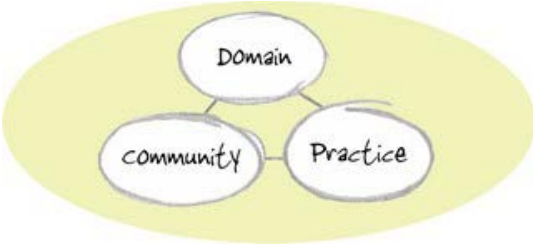


**Push Hard & Fast in
the Center of the Chest!**

Community of Practice (CoP)

Lave & Wenger's (1991) and Wenger's (1998) sociocultural perspective

Key characteristics:

- Domain, community, practice
- 
- Way of arranging a network to develop and share information and practices across 'silos' within organisations (McDermott, 1999)
 - Can foster innovation by increasing the sharing of information across structural units (Probst & Borzillo, 2008; Tsai & Ghoshal, 1998)
 - Legitimate peripheral participation
 - Improved practice within group on peripheries
- ✓ Vehicle to facilitate change

Pilot Project (2015) - Project Roles

Project academic lead

- Collate reference materials to support implementation
- Facilitation of FHS blended learning community of practice
- Support teaching teams with unit development
- Evaluate effectiveness
- Contribute to scholarship and publication

Educational designer

- Advise and support on pedagogical and technical design strategies

Unit academic leads (15)

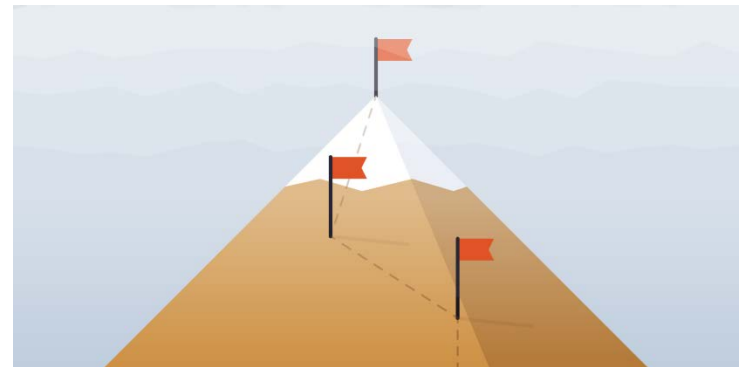
- Lead content development within units
- Contribute to research design
- Faculty of Health Sciences - 6 schools, 13 disciplines

Project Goals

Overarching goal –

To explore the suitability of a **community of practice** (CoP) model for implementation of sound and **sustainable** approaches to flipped and blended learning

- **Community** across health faculty
- **Incremental** improvements
- **Exemplars** of good practice
- **Sustainable** initiatives



Action

3 stages

1. Initial CoP meeting
2. Ongoing support and communication
3. Showcase & evaluation



Initial Meeting

- Discussed barriers
- Introduced concepts
- Explored individual baselines
- Set targets
- Identified support required
- Discussed project evaluation
- Agreed to communication strategies
 - Project LMS site
 - Regular synchronous meetings



Ongoing Challenges

- Organisational barriers including time and technology (Houghton, Ruutz, Green & Hibbins, 2014)
- Temporal/ spatial/ structural barriers
- Diversity within health disciplines
 - Culture and practice
 - Epistemological differences
- Asynchronous techniques poorly subscribed
- One to one and 'organic' means of communication effective



Evaluation

Academic CoP

- Goal Attainment Scaling (GAS) (Kiresuk & Sherman, 1968)
- Focus group
 - Thematic Analysis (Braun & Clarke, 2006)



Goal Attainment Scaling (GAS)

Kiresuk & Sherman, 1968

- GAS is an individualised, criterion referenced measure of change
- Methodology used commonly in mental health and allied health to measure change in outcomes (Turner-Stokes, 2009)
- Recognises individual differences and allows for individual goal setting and criteria
- Aggregation of individual and group GAS scores is possible (Becker, Stuifbergen, Rogers, & Timmerman, 2000; Schlosser, 2004)

Example of a Goal Attainment Scale

GOAL 1:

By December 18th 2015 I will have reviewed the unit SPHY101, including the Flipped Classroom component, and identified a minimum of 3 pedagogical enhancements to be implemented in Semester 1, 2016.

Current Baseline: SPHY101 has just run for the first time, including a new Flipped Component, and it is understood that various pedagogical enhancements are required before implementation occurs again in Semester 1, 2016

Goal Attainment Scale:

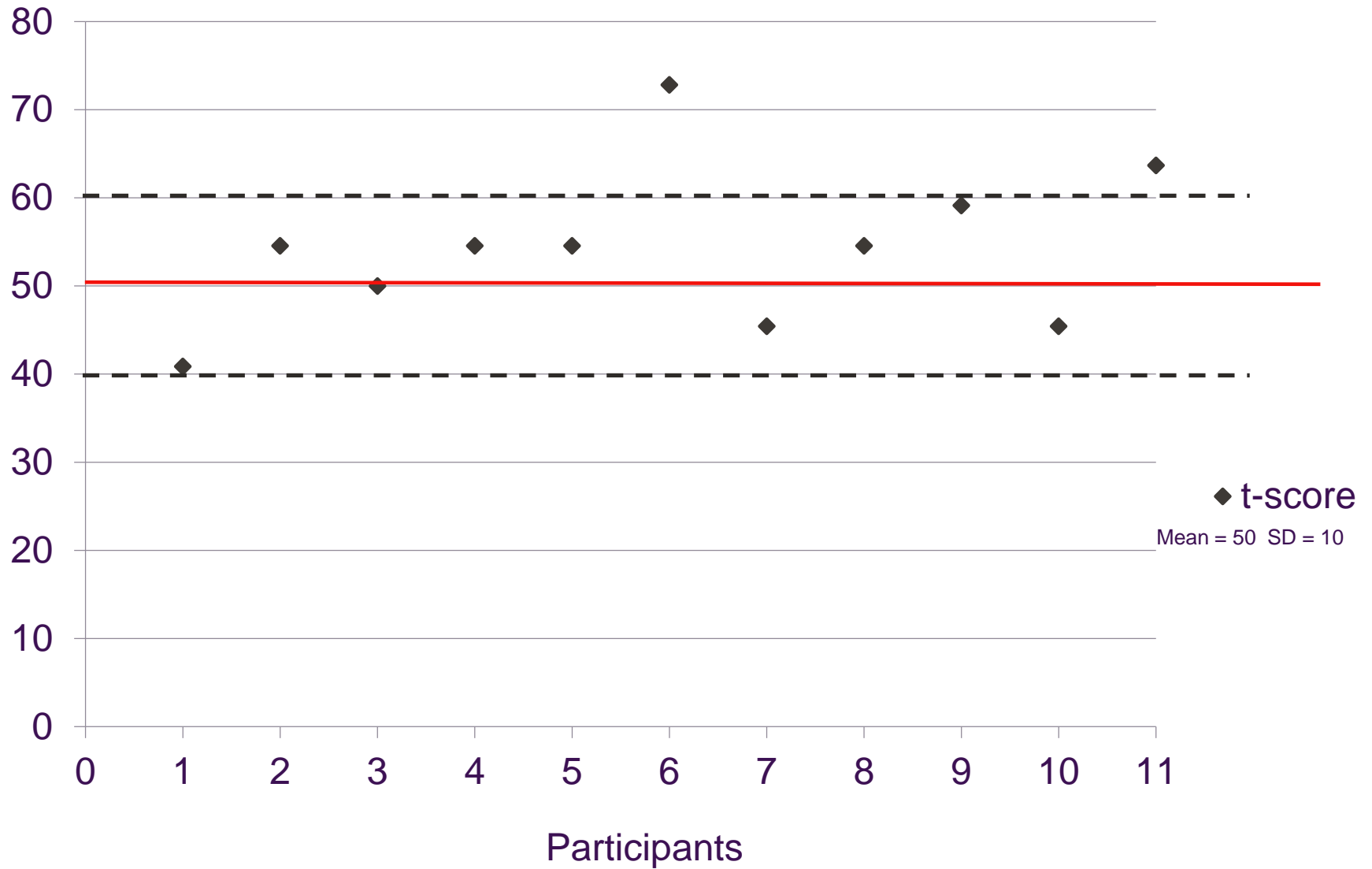
Level of Attainment	Description of Performance
+2 (Much greater than expected)	Four (4) pedagogical enhancements have been identified and progress has commenced towards integrating nominated changes into the unit design
+1 (Greater than expected)	Four (4) pedagogical enhancements have been identified and these are realistic to implement in SPHY101 in Semester 1, 2016
0 (Expected Level)	Three (3) pedagogical enhancements have been identified and these are realistic to implement in SPHY101 in Semester 1, 2016
-1 (Less than expected)	Two (2) pedagogical enhancements have been identified and these are realistic to implement in SPHY101 in Semester 1, 2016
-2 (Much less than expected)	One (1) pedagogical enhancement has been identified and these are realistic to implement in SPHY101 in Semester 1, 2016

- Each CoP member identified 3 individual goals
- Current baseline of achievement was nominated for each goal
- Scales were created for each individual goal with '0' set as the expected level of achievement

Individual's GAS Scores

- 11 participants rated progress
- 33 individual goals measured

Participant	Goal 1	Goal 2	Goal 3	Summed Score	Average Scale Score	T-score
1	0	-1	-1	-2	-0.67	40.87
2	0	0	1	+1	0.33	54.56
3	0	+1	-1	0	0	50.00
4	+1	0	0	+1	0.33	54.56
5	0	+1	0	+1	0.33	54.56
6	+2	+2	1	+5	1.67	72.82
7	+1	-1	-1	-1	-0.33	45.44
8	0	0	+1	+1	0.33	54.56
9	+2	+2	+1	+5	1.67	59.13
10	0	-1	0	-1	-0.33	45.44
11	+2	-1	+2	+3	1.00	63.69



Outcomes – Goal Attainment Scaling

- CoP and GAS positively influenced the achievement of goals
- 8/ 11 participants achieved an average scale score of 0 or above (i.e. expected level of achievement or higher)
- CoP participation led to clear setting of goals and assisted participants to achieve them
- Self-development of goals means more likely they are to be achieved (Turner-Stokes, 2009)

NB: CoP participants both created and rated their own goals; issue of objectivity

Outcomes – Focus Group

Community purpose and value

- Range of views on goals of CoP
- Majority thought CoP improved understanding and confidence
- Fostering relationships
- Sense of community took the life of the project to develop

Organisational barriers

- Face-to-face meetings were of greatest value
- Network of smaller campus-based teams

Motivation to participate

- Significant variance in motivation and therefore engagement

Evidence and evaluation

- Lack of evidence to support the effectiveness of flipped and blended learning approaches an issue
- Progress difficult to measure

Conclusions



- Change slow in complex organisation
- Organic nature makes change difficult to measure
- Development of CoP dependant on listening to needs
- CoP had positive impact
- Advances towards better practice in flipped and blended pedagogy
- Activity on the peripheries in several disciplines
- Considerable work to be done foundation established
- Additional time and resources required to build upon foundation

Acknowledgements

Funding - ACU Faculty of Health Sciences

Professor Karen Willis, ADLT, FHS

Dr Susan Darzins, School of Allied Health

Dr Kathy Kirk, School of Allied Health

Dr Michael Baker, School of Exercise Science

Dr Elizabeth Bradshaw, School of Exercise Science

Dr Lisa Clinnick, School of Nursing, Midwifery & Paramedicine

Ms Peta Lee Gale, School of Nursing, Midwifery & Paramedicine

Dr Jane Morrow, School of Nursing, Midwifery & Paramedicine

Assoc Prof Jane Butler, School of Physiotherapy

Dr Mary Lynch, School of Physiotherapy

Dr Helen Aucote, School of Psychology

Dr Xochitl delaPiedadGarcia, School of Psychology

Dr Paul Tawadros, School of Science

Dr Isabelle Lys, School of Science

Ms Laurine Hurley, School of Science

Ms Maria Bora, Educational Designer, FHS

References

- Abeysekera, L., & Dawson, P. (2014). Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research. *Higher Education Research & Development, 34*(1), 1-14.
- Becker, H., Stuijbergen, A., Rogers, S., & Timmerman, G. (2000). Goal Attainment Scaling to Measure Individual Change in Intervention Studies. *Nursing Research, 49*(3), 176-180.
- Houghton, L., Ruutz, A., Green, W., & Hibbins, R. (2014). I just do not have time for new ideas: resistance, resonance and micro-mobilisation in a teaching community of practice. *Higher Education Research & Development, 34*(3), 527-540.
- Kiresuk, T. J., & Sherman, R. E. (1968). Goal attainment scaling: A general method for evaluating comprehensive community mental health programs. *Community Mental Health Journal, 4*, 443-453.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York, NY: Cambridge University Press.
- McDermott, R. (1999). Learning across teams: How to build communities of practice in team organizations. *Knowledge Management Review, 8*, 32-36.
- Moskal, P., Dzuiuban, C., & Hartman, J. (2013). Bended learning: A dangerous idea? *Internet and Higher Education, 18*, 15-23.
- Probst, G., & Borzillo, S. (2008). Why communities of practice succeed and why they fail. *European Management Journal, 26*, 335-347.
- Schlosser, R. (2004). Goal attainment scaling as a clinical measurement technique in communication disorders: a critical review. *Journal of Communication Disorders, 37*, 217-239.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intra-firm networks. *Academy of Management Journal, 41*, 464-476.
- Turner-Stokes, L. (2009). Goal attainment scaling (GAS) in rehabilitation: a practical guide. *Clinical rehabilitation*(23), 362-370.
- Wenger, E. (1998). *Communities of practice. Learning, meaning and identity*. New York, NY: Cambridge University Press.

Questions

