Improving practice through systematic support of guest lecturers adopting a student-centred approach to teaching

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http://bit.ly/2a9uokv

Context

- Child and Adolescent Health block
- Year 3/4 of Sydney Medical Program
- The Children's Hospital at Westmead
- Urban and rural hospitals
- 70 – 80 students
- 8 weeks x 4 times/year
- Until July 2015:
  - Guest lectures: weeks 1 & 5
  - Tutorials: weeks 1-6
  - Clinical placements: 5 x 1week
  - Exam: week 8

Study background

- Decreasing lecture attendance
- Lecturer concern
- Negative feedback about one week clinical placements
- Positive feedback about online self-directed learning

Tanjila Ahmed http://bit.ly/2sHvFvL

Scott KM, Morris A & Marais BJ. Exploring the use of digital learning resources in medical training. *Medical Journal of Australia*. 2016: 204, 11: 411-412.

Scott K., Morris A., & Marais BJ. Medical student use of digital learning resources. *The Clinical Teacher*. 2017: Online first.

Systematic approach to curricular change

1. Establish a **compelling case**
2. Communicate a **bold vision**
3. **Design** the **curriculum**, obtain **approvals** and generate broad-based **action** and short-term **wins**
4. **Develop specific courses** and consolidate gains
5. **Implement** and **evaluate** the new curricula, and **anchor** it in the institution.

Loeser HMDM, O'Sullivan PE, Irby DMP. Leadership Lessons from Curricular Change at the University of California, San Francisco, School of Medicine. *Academic Medicine*. 2007;82(4):324-30.

Literature: Change in teacher belief and practice

Medical teachers "**need assistance to develop their skills as teachers**. Most are selected for their research or clinical performance rather than skills in teaching. Few have engaged with modern educational theory and practice." (Sefton, 2004)

"Teachers cannot very effectively transcend their own situation; by **working with someone else**, more sophisticated beliefs can be developed." (Beijaard & de Vries, 1997)

Sefton AJ. New approaches to medical education: an international perspective. *Medical Principles and Practice*. 2004;13(5):239-248, p. 245.

Beijaard D, De Vries Y. Building expertise: A process perspective on the development or change of teachers' beliefs. *European Journal of Teacher Education*. 1997;20(3):243-255.

Theoretical framework: Social Development Theory

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"The **zone of proximal development** defines those functions that have not yet matured but are in the process of maturation." (Vygotsky LS, 1978)

Vygotsky LS. *Mind in society: the development of higher psychological processes*. Cambridge: Harvard University Press, 1978, p. 86.

Theoretical framework: Social Development Theory

"The **zone of proximal development** defines those functions that have not yet matured but are in the process of maturation." (Vygotsky LS, 1978)

"**Collaboration** with another person… in the **zone of proximal development… leads to development** in culturally appropriate ways." (Tudge J, 1990)

Vygotsky LS. *Mind in society: the development of higher psychological processes*. Cambridge: Harvard University Press, 1978, p. 86.

Tudge J. Vygotsky, the zone of proximal development and peer collaboration: implications for classroom practice. In LC Moll Ed, *Vygotsky and Education: instructional implications and applications of sociohistorical psychology*. Cambridge: CUP, 1990, p. 157.

Flipped classroom

"The… inversion of what was traditionally classwork and homework… **lectures** are viewed **outside of class**, permitting in-class **time** to be spent on **active-learning practices** to which students can **apply** previously acquired lecture content."

http://bit.ly/2a9uokv

Munson, A & Pierce, R. Instructional design and assessment: Flipping content to improve student examination performance in a pharmacogenomics course. *American Journal of Pharmaceutical Education*. 2015; 79 (7) Article 103, p. 1.

The flipped paediatric classroom

Preparatory digital learning resources:

- Pre-lecture ppt slides with audio voice-over

  ~ 3 x 15 minutes

  Practice quizzes

  ~ 5 /pre-lecture

  Required reading
- Optional online self-directed learning activities

The flipped paediatric classroom

Face-to-face teaching:

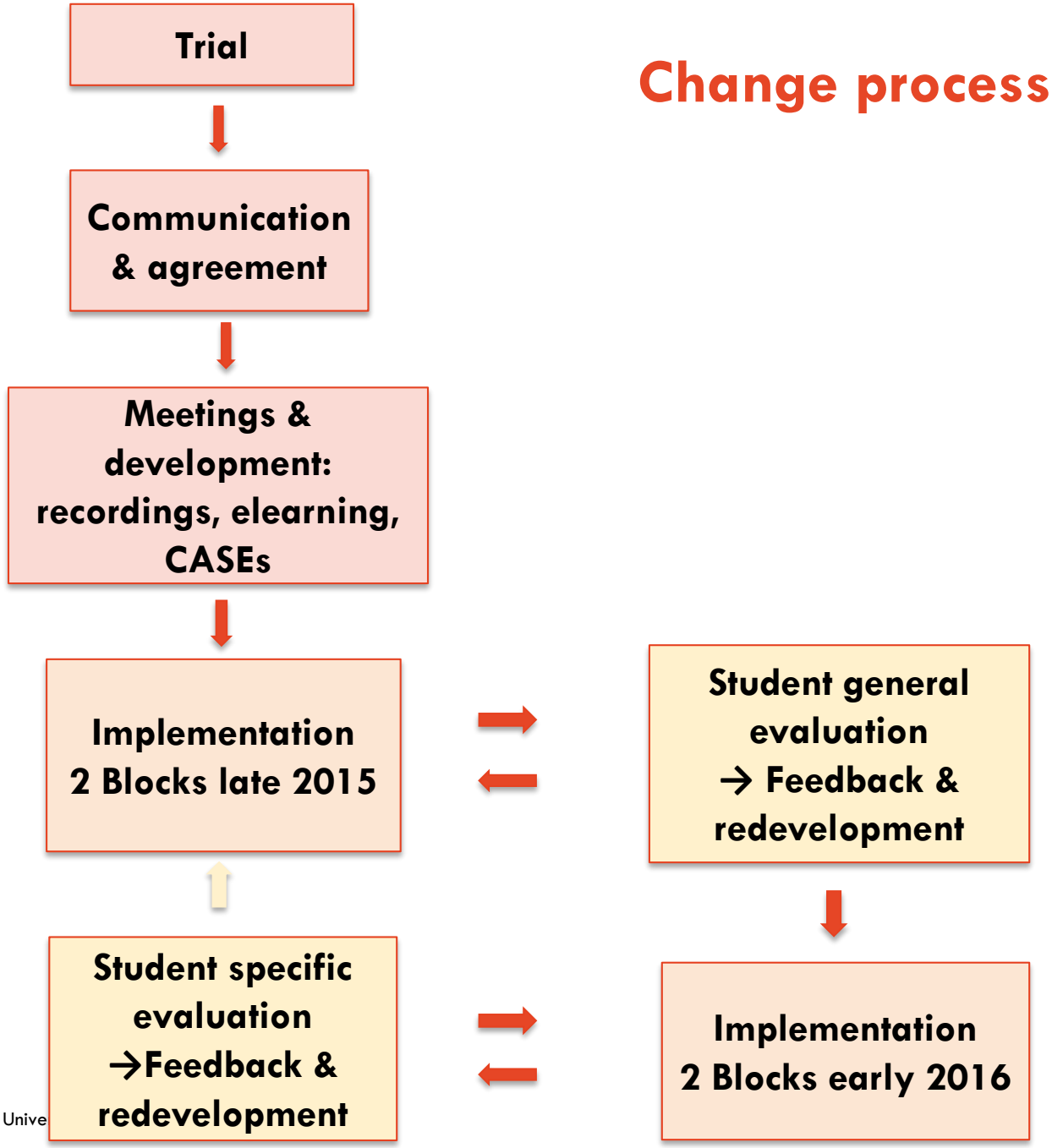
Clinical Application Sessions with Experts (CASEs)

- Student-centered, interactive
- Apply preparatory/prior knowledge to patient cases
- Develop clinical reasoning: patient presentation → treatment
- Unfolding patient cases

Research aim

To use *Social Development Theory* as a lens through which to explore medical teachers' experiences and attitudes while moving from a lecture-based to an active learning format through a collaborative approach.

Change process



Research methodology

- Qualitative approach
- Foundations of Grounded Theory
- Research questions:
  - How does the curriculum change affect teachers' beliefs and practices?
  - To what extent is collaboration an enabler of change?
  - Which tools for learning and teaching enable change?
  - How does the context influence beliefs and practice?
  - What are the challenges?

Research methods

Sample - 25 lecturers:

- Multidisciplinary backgrounds
- Guest lecturers and clinical academics
- Had prepared pre-learning materials and face-to-face teaching
- Had taught the face-to-face session twice

Data collection

Semi structured interviews:

- December 2015 – March 2016
- Conducted by an academic not directly involved with the teachers regarding the curricula change
- 20-30 minutes
- Audio recorded → transcribed
- Saturation of data

Data analysis

Grounded Theory / thematic analysis:

- 3 researchers
- Line-by-line coding
- Constant comparison process
- Key words, phrases, concepts and categories

→ Themes/sub-themes

- Classification of data, with consensus

Results: Themes and sub-themes (9 participants)

- Teacher beliefs and practice:
  - Change in teacher beliefs
  - Confirmation of teacher beliefs
  - Change in teacher practice
  - Confirmation of teacher practice
- Collaboration an enabler of teacher development
- Tools enabling learning and development
- Learning through interacting with students
- Impact of professional context
- Continuing development
- Challenges

- Change in beliefs and practice
- Collaboration an enabler
- Tools enabling development
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- Challenges

*"It's been really a **great learning curve** for ourselves just seeing a change in how much that I think the students are taking from this."*

(Participant 7)

- Change in beliefs and practice
- Collaboration an enabler
- Tools enabling development
- Learning through interacting with students
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- Continuing development
- Challenges

*"I **changed it from the first to the second** actually… In my original lecture I had a case, so I used the case to springboard off and asked them questions about how the case developed… [The Clinical School] wanted it to be **more interactive**… It was... a 'Jerry Springer' style, going into the audience with a microphone. So I did that - it actually really worked well doing it that way."*

(Participant 1)

- Change in beliefs and practice
- Collaboration an enabler
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*"It was **collaboratively rewritten**… myself, X and Y put together the cases. Then the process we undertook is X gave the first lecture with me being present. Then I've given the second lecture with him being present, really trying to **figure out ourselves** actually how do you essentially present cases that can broadly represent the particularities of your discipline."*

(Participant 4)

- Change in beliefs and practice
- Collaboration an enabler
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*"The idea that there's a **suite of learning materials that we develop as a group** is a much more, I think, powerful process that benefits us. We clarify what we think is important about our discipline for students to understand."*

(Participant 4)

- Change in beliefs and practice
- Collaboration an enabler
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*"It **helps us get feedback** on what we're teaching them to see whether it's making sense; whereas before we're just giving them a lecture and then you're walking out of the room: 'See you later; I don't know whether you've learnt anything'."*

(Participant 7)

- Change in beliefs and practice
- Collaboration an enabler
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*"They seem to actually then be interested and understanding what we're going through because they've had that base knowledge and now we can put it into more of a practical component by going through a **real case** and seeing how all the knowledge fits into an actual **real situation**."*

(Participant 7)

- Change in beliefs and practice
- Collaboration an enabler
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- Challenges

*"There's still room for us to go back and **look at what's there again** in light of our… face-to-face session, and say, 'Are these things aligning well?'"*

(Participant 4)

- Change in beliefs and practice
- Collaboration an enabler
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- Challenges

*"They do have to have that prepared learning so **that's all on them** but if they aren't prepared, then they are going to fall greatly behind I feel in a session because… we do explain and go over some things, but if you don't have that background knowledge, we can't go over all of that again."*

(Participant 8)

Systematic approach to curriculum development

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Change in teacher belief
Confirmation of teacher belief

Change in teacher practice
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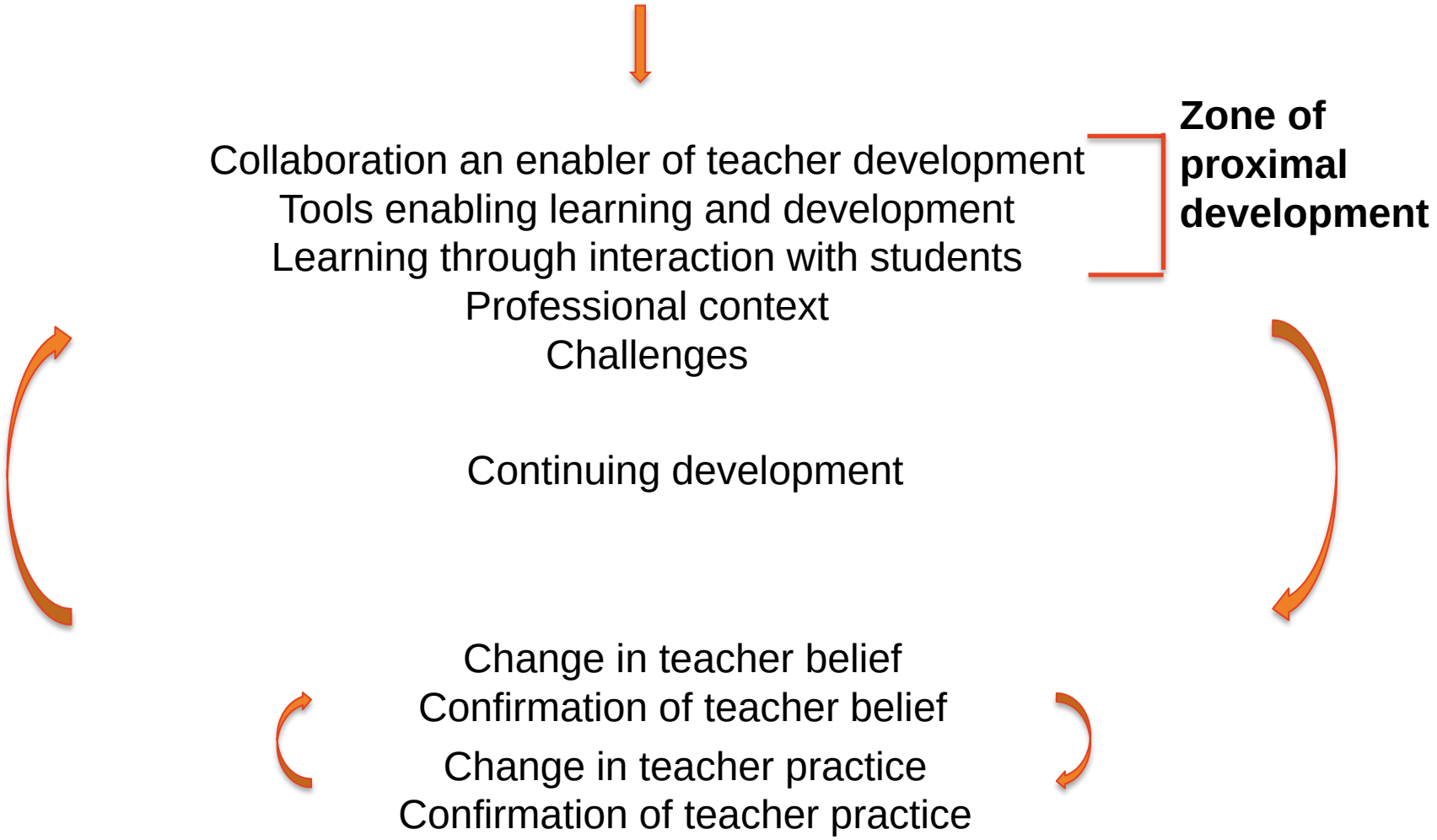

Conclusion

- Systematic approach to curriculum development can lead to change in guest lecturers' teaching beliefs and practices
- Benefit of:
  - teacher collaboration with peers and academic support
  - ongoing interaction with/feedback from students and academic support
  - 'tools' in development: language and teaching materials
- Usefulness of Social Development Theory as a theoretical framework

Acknowledgements

- Nine research participants
- Discipline of Child and Adolescent Health

Thank you

Questions?

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