Building Skills Online:

Exploring the effectiveness of web conferencing for continuing education

Electric Dreams: 30th ASCILITE Conference

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SYDNEY MEDICAL SCHOOL

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Educational context

- All health professionals need to undertake continuing education to maintain currency and/or develop new skills following graduation
- Why is this important in the context of pain management?
 - Effective management of pain is a major concern (medically, economically, politically) it is the 3rd highest cost of all chronic conditions in Australia
 - Many health professionals managing patients with persistent pain mainly focus on pain relief NOT strategies for living with pain
 - Barriers to conducting a comprehensive, biopsychosocial assessment of patients with persistent pain are:
 - Lack of confidence in applying this approach due to limited exposure and specific training
 - Constraints (eg workforce culture, lack of managerial support) that inhibit transfer of training to the workplace



Online skills development

- Why use webinars for skills training?
 - Busy professionals / time poor
 - Web-conferencing format enables:
 - access after hours anywhere, anytime
 - access to expertise without the cost of travel, accommodation etc.
 - opportunity for real time interaction/feedback (teacher and participants)
 - networking with other like-minded professions working in the field
- What are the design considerations for online skills training?
 - provision of learning supports and scaffolds
 - progression of content and opportunities for participant feedback/review of skills
 - opportunities to practice skills in workplace setting





Aim:

To examine the design, implementation and outcomes of four (4) separate webinar programs in 2013

Questions:

- 1. What are the benefits and challenges of using of web-conferencing software for skills development training?
- 2. How did the structure and content of the program enable knowledge development and skills transfer?
- 3. What modifications are needed to enhance the program and its outcomes?
- 4. How might this training methodology be utilised in other training contexts?

Methodology:

A modified version of Kirkpatrick's Evaluation Model to frame the process of data collection



Evaluation framework: levels of analysis

Level 4b: Results – Change among participants/students

Level4a: Results - Change in system/organisational practice

Level 3: Behaviour change

Level 2b : Learning - modification of knowledge/skills

Level 2a: Learning - modification of attitudes/perceptions

Level 1: Reaction/Participation

Improvement in student learning/performance as a direct result of the educational intervention

Wider changes in the organizational/delivery of care, attributable to an educational program

Documents the transfer of learning to the workplace or willingness of learners to apply new knowledge and skills

Knowledge = acquisition of concepts/procedures/principles Skills = acquisition of thinking/problem-solving/psychomotor/social skills

Outcomes here relate to changes in the reciprocal attitudes or perceptions between participant groups toward intervention/simulation.

Learner's views on learning experience, its organization, presentation, content, teaching methods & aspects of the instructional organization, materials, quality

Steinert et al, Medical Teacher 2006



Data collection strategies

> Data collection to review process, impact and outcome of webinar training

Data	Focus of analysis
 Quantitative data Participant demographics Enrolment numbers/participation patterns Pre and post test (questionnaire) Program evaluation (questionnaire) 	 Data gathered reviews: Level 1: Reaction/Participation (process) Level 2a: Modification of attitudes (impact) Level 2b: Modification of knowledge (Impact)
 Qualitative data Teacher impressions (interviews) Participant impressions (focus groups) Skills transfer (individual interview 3 months post training) 	 Data gathered reviews: Level 1: Participation (process) Level 2a: Modification of attitudes (impact) Level 2b: Modification of knowledge (impact) Level 3: Behaviour change (outcome) Level 4b: Improvement in practice (outcome)



Structure: webinar program

Session 1:
Patient assessment
& case formulation

Session 2: Explaining case formulation

Session 3: Identifying SMART Goals

Session 4: Implementation of Treatment Plan

Session 5: Management & Maintenance

Each webinar PROGRAM comprised 5 sessions (1.5 hrs duration) over 10 weeks



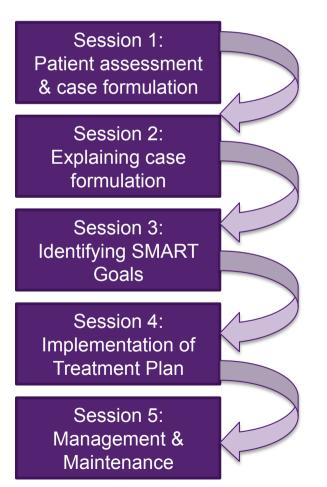
Note: each webinar SESSION is divided into 3 main parts

- 1. Participant reflection/feedback on skills practice (45mins)
- 2. New session content each week (40mins)
- Homework (reading/skills practice) for next session (5mins)



Structure: webinar program

Participants practice skills in between sessions and report back to group about the experience



Preparation & presentation of homework:

Conduct a case formulation (workplace)

Preparation & presentation of homework:

Explaining case formulation (workplace)

Preparation & presentation of homework:

Developing SMART goals (workplace)

Preparation & presentation of homework:

Self management skills & activity plan (workplace)



Implementation in 2013

Webinar	Participants	Dates/Times	Disciplines Represented
Series 1	10	Session 1: 7 th May (7.30-9.00pm) Session 2: 21 st May (7.30-9.00pm) Session 3: 4 th Jun (7.30-9.00pm) Session 4: 18 th Jun (7.30-9.00pm) Session 5: 9 th Jul (7.30-9.00pm)	Medicine (5) Psychology (9) Physiotherapy (7)
Series 2	10	Session 1: 15 th May (7.00-8.30pm) Session 2: 29 th May (7.00-8.30pm) Session 3: 12 th Jun (7.00-8.30pm) Session 4: 26 th Jun (7.00-8.30pm) Session 5: 10 th Jul (7.00-8.30pm)	Nursing (7) Pharmacy (1) Occupational therapy (3) Osteopathy (2) Other (3)
Series 3	9	Session 1: 6 th Aug (7.00-8.30pm) Session 2: 20 th Aug (7.00-8.30pm) Session 3: 3 rd Sep (7.00-8.30pm) Session 4: 17 th Sep (7.00-8.30pm) Session 5: 1 st Oct (7.00-8.30pm)	
Series 4	8	Session 1: 15 th Aug (5.00-6.30pm) Session 2: 29 th Aug (5.00-6.30pm) Session 3: 12 th Sep (5.00-6.30pm) Session 4: 26 th Sep (5.00-6.30pm) Session 5: 10 Oct (5.00-6.30pm)	



Interim results: level 1 – participation

Completion rate:

- 4 programs conducted
- 35 participants (out of 37) completed requirements

Participants:

- Experience in pain management ranged from limited (1yr) to extensive (33 yrs)
- Multidisciplinary mix in each webinar program
- Homework submitted each week in majority of cases
- Small numbers enabled interaction

> Technical Issues:

- Facilitator/participant skills in using the technology (particularly series 1 & 2)
- Bandwidth issues at times (somewhat dependent on user hardware/software) improved with restricted microphone access (series 3 & 4)



Interim results: level 1 – reaction

Question	SD	D	N	A	S A
Q1. I found the webinar skills series a valuable learning experience		1		11	6
Q2. I received enough info/support to access and use the technology		1		9	8
Q3. The individual conferences sessions were facilitated well				11	4
Q4. The workbook, Manage Your Pain text and other learning materials supported my learning			1	8	9
Q5. I liked the structure of the webinar series (e.g time of day, length of session/ series, duration between sessions, homework activities			1	11	6
Q6. The homework activities helped me to reinforce the topics and skills we covered in the sessions		1	1	10	6
Q7. The amount of work we were expected to do between sessions was reasonable				12	6
Q8. I would recommend the webinar series to other health professionals				11	7
Q9. I have put the principles and techniques I learned in the webinar series into practice		1		12	5
Q10. Overall, I was satisfied with the quality of the webinar skills series		1		12	5



Interim results: level 2 & 3 - learning & behaviour

Confidence in using the skills

- 'I kind of dabbled with [the skills] by myself...with books...just self taught...I was wanting some authority...to make sure I really know this and how this is supposed to be...and you hear it from another dimension...so it gave me a lot of confidence'

- Learning from, with and about other professions
 - 'I found it very beneficial to hear examples, particularly when people were reporting on their homework...how they used the [skills from the] previous session in their workplace...because you tend to work in your own way...and then you try to use and implement the thoughts and methods of the session... then to hear how people did it and that sort of impacted on next time ... how I would do it'



Interim results: level 3 & 4b - behaviour & results

- Application in the workplace
 - 'I was able to incorporate my learning into work practice, then have the opportunity to discuss with the facilitator and fellow students'
- Transfer of to other contexts (e.g. teaching about other chronic conditions, teaching health professionals)
 - 'some ideas that came into mind...following the webinar...I was approached to do some education within my own industry and rather that the clinical [X] stuff...I actually managed to get approved something that was called 'Difficult Conversations'...I recall very much pulling on the skills that I learnt [from the webinar]'





> Program modifications 2014

- Additional session to be added (1 month following last session ie session 5) to provide students an opportunity to synthesise learning via a formal case presentation to other participants
- Formally reflect the workload and program requirements for CPD accreditation
- Review and update materials

Capacity building

- Train additional facilitators
- Incorporate video vignettes demonstrating skills
- Continue research to gain further insights into this medium for skills development