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### Nurse Education Today



journal homepage: www.elsevier.com/locate/nedt

# Is the "flipped" pedagogical model the answer to the challenges of rural nursing education?: A discussion paper?<sup> $\star$ </sup>



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#### ARTICLE INFO

Keywords: Active learning Flipped Rural nursing education

#### ABSTRACT

Rural Australian health services face significant challenges such as aging populations, access and retention of services and health practitioners as well as difficulties with staff training due to geographic isolation. Educational pedagogy, through a 'flipped' or 'flipped' classroom method has become popular in nursing literature whereby discussion surrounding its effectiveness, ability to increase performance, address learning outcomes and resolve the education-clinical practice divide is currently being explored. Several reviews that look specifically at the validity and implementation of the flipped classroom pedagogy into nursing education demonstrate a need for further scientific research. Current literature examines the in-class on campus implementation of the methodology but rarely does it consider the advantages or ways of implementing such a method in a rural off campus nursing learning environment. The use of technology is not the solution unless supported by interaction to develop practical situational skills. The authors consider advantages and disadvantages and identify central problems for the effective implementation of 'flipped' in off-campus rural nursing education.

#### 1. Introduction

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Rural health faces significant social, cultural and socio-political challenges such as aging populations, access and retention of services (Morell et al., 2014) and health professionals (Dunkin et al., 1996) as well as knowledge and training for the diverse situations faced by rural health nurses and other health practitioners (Bourke et al., 2004). It is acknowledged that the defining characteristic of rural health is geographic isolation, often possessing access difficulties (Gum, 2007). Isolation is an issue of distance as well as the size of community, which means nurses must provide a varied range of services and connections requiring a diversity of ability rather than specialization as seen in the urban communities (Gill, 1994).

Education and training have focused on urban centres, through oncampus teaching in tertiary institutions predominantly through lecture, tutorial and practical training in face-to-face models. Offerings of offcampus rural nursing courses utilize on-line teaching methods, as nursing students in rural areas are more likely to be mature aged (nonschool or college age leavers), caring for their own dependents, employed and travel longer distances to attend classes when offered in urban centres (ACER, 2011; Francis and Mills, 2011).

Reviews of nursing education in both Australia and the United States of America (USA) have recommended educational institutions adopt innovate teaching strategies to bridge the education-practice divide that has arisen partly from traditional university teaching methods focused on content and knowledge (Tan et al., 2017). One innovative teaching strategy that has gained popularity is the "Flipped Classroom", conceptualized by Simpson (2006) and currently utilized in health and other disciplines (Belfi et al., 2015; Bristol, 2014; Chen et al., 2014; Gilboy et al., 2015; House et al., 2007; Kong, 2014; Mattis, 2015; McLaughlin et al., 2014; Moffett and Mill, 2014; Rasmussen et al., 2015; Roach, 2014; Simpson and Richards, 2015; Tune et al., 2013). These examinations of the 'flipped' pedagogy implementations, their results in improved cognitive abilities and its positive engagement and outcomes for students has been clearly shown within current research. These studies focus on implementation within on-campus teaching, and do not consider whether flipped teaching could be implemented in offcampus rural situations faced in nursing.

This article examines the Flipped pedagogy and identifies the major problems to implementation that hamper the effectiveness of this method before providing recommendations to enable effective embedment into rural nursing education.

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https://doi.org/10.1016/j.nedt.2018.03.026 Received 6 December 2017; Received in revised form 8 March 2018; Accepted 28 March 2018 0260-6917/ © 2018 Elsevier Ltd. All rights reserved.

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#### 2. Off-campus uses of technology

The technological revolution was originally seen as a solution for remoteness for rural education. The provision of online material enables students to access resources in a timely manner and to engage with class materials at times suitable to their commitments. The "selfpaced" or flexible aspects of online learning environments were seen as great advances in nursing and health education generally (Sheppard and Mackintosh, 1998; Wu et al., 2018). Consequently universities and educational institutions were quick to implement Internet courses and programs within what are referred to as distance education models or off campus delivery (Sowan and Jenkins, 2013; Ward and Sales, 2009). The Internet and recent innovations in technology have supported development of materials and tools online such as SARRAH (Services for Australian Rural and Remote Allied Heath (sarrah.org.au), and provide resources and connections on-line for rural health professionals. Universities in the development of their on-line courses adopted a repository of knowledge that could be accessed by students for their selfpassed learning, which included journal articles, websites and databases, lecture notes, lecture recordings etc. Further advances in technology have enabled discussion groups, real-time transmissions of lectures with real time and responses by students, and virtual methods of interaction.

Even with these advances the Commonwealth of Australia 2002 (Hazelton, 2002), (which identified a need to develop and continue to evolve flexible and responsive education and training using innovative educational processes, to bridge an education-practice divide) found that student's knowledge and ability to implement this knowledge in the workplace was lacking (Tan et al., 2017). Universities appeared to believe that on-line teaching would reduce costs of teaching and increase returns for the university (Warelow et al., 2011) but Marginson's survey of the success of global online courses in Asia-Pacific higher education, on the basis of income received by educational institutions. found that the repository model for provision of online had been unsuccessful as replacing the teacher with technology (Marginson, 2004). A review of on line-learning programs for nurses by Wu et al. (2018) concluded that on-line learning offered flexibility and accessibility to students and they believed it provided a mechanism for educators to face challenges of work load, time and system support, but their research does not examine the costs of these courses the provision of technological support or the competing demands on staff for research provided by universities.

Technology itself is not the educational solution, but the use of technology has a supportive role that in a blended approach of learning can perform a function that enables flexibility and self-paced learning (Belfi et al., 2015; Moraros et al., 2015). The authors of this article argue the Flipped method of teaching resolves the criticisms identified in the online learning literature that most on line learning is conducted through the provision of electronic repositories of knowledge without interaction with an educator or instructor are not as effective as the 'Flipped' method. In health education an example of the advance on repository online learning is "The Virtual Clinical Practicum" (Grady, 2011).

#### 3. What is "Flipped"?

Flipped, short for "Flipping the Classroom" (Lage et al., 2000) or "inverted classroom" (Talbert, 2012), has its origins in the 1997 works of Mazur (Bergmann, 2012; Crouch and Mazur, 2001; King, 1993). "Flipping" can be characterised under various pedagogical approaches based on substantial discourse including action learning (Burns, 2012; Critz and Knight, 2013); transformative learning (Brookfield, 1987; Mezirow, 2003), blended learning (Engel, 2014; Jokinen and Mikkonen, 2013) and problem based learning (Bonnes et al., 2017; Castelo-Branco et al., 2016).

Regardless of the true classification within educational paradigms,

the Flipped method has been recognized as a means for the development of higher cognitive functions namely: problem solving, which has been a central concern in the education-practice divide identified within rural nursing education. Ensuring that students and rural health professionals understand substantive information and have the confidence without supervision is critical, but also recognition of culture and teamwork are important (Bourke et al., 2004). These higher-level cognitive education goals require engaged students and educators who can interact with students to produce activities that enhance cognitive learning of skills and appropriate learning assessment.

Abeysekera and Dawson (2015) accepted that differences existed in educational paradigms and pedagogies and thus proposed a broad definition of Flipped as a set of pedagogical approaches that had three essential features:

- (1) Move most information-transmission teaching out of the class
- (2) Use class time for learning activities that are active and social
- (3) Require students to complete pre and or post-class activities to fully benefit from in class activities.

This definition is technologically neutral, meaning that movement of information transmission functions out of the class (instructor contact time) are not technology dependent, and can cover all forms of preclass information transmission. In the words of Bergmann and Sams (2012), there is one significant question to ask when flipping: "What is the best use of face-to-face time with students?" Classes are one of the important cornerstones of the flipping pedagogy because they play an important role in achieving an effective student-centric learning experience, which is important in order to develop a student's higher cognitive skills. The conceptual heart of flipping is to improve student learning through focusing on the transmission of skills in class, a task where it was believed students needed greater guidance, rather than information transferal, where it was argued that students don't need as much guidance (Edwards and Smith, 2005).

Both Bergmann and Sams (2012), and Abeysekera and Dawson (2015), definitions focus on the encouragement of students to engage in the pre-class learning, and the in-class activities. Abeysekera and Dawson (2015), place this definition within self-determination theory. This placement leads to their examination of intrinsic and extrinsic motivations and cognitive load to provide an educational under pinning of the Flipped methodology. They posited that self-determination meant the Flipped classroom supported increased extrinsic and intrinsic motivations through the senses of competency, relatedness and autonomy provided to the learner. Further tailoring the expertise of the class, and the enabling of self-pacing of learning would provide better management of student's cognitive load. Self-determination theory itself supports the skill of knowledge application and independence required of graduates to overcome the education-practice divide recognized in nursing education reviews (Commonwealth of Australia, 2002; United States Institute of Medicine Report, 2010), that highlight industry and government demands of universities to provide students with demonstrable graduate outcomes in analysis and application of knowledge (Australian Qualifications Framework, 2013). The improvement of higher cognitive, problem solving and critical thinking skills has also been identified as fostering leadership and team work skills within rural nursing (Bourke et al., 2004; McLaughlin et al., 2014; Pierce and Fox, 2012).

Abeysekera and Dawson (2015) recognise research into Flipped and its effectiveness is in its infancy and is not an evidence-based approach as it is under evaluated, theorized and researched within educational constructs. Their research within education has been confirmed by Nijie-Carrr et al. (2017) and Tan et al. (2017) analysis of nursing education research publications relating to Flipped. They conclude more rigorous scientific evidence based research to support educator's adoption of this teaching method is required as their assessment of most reported studies lacked consistency in methodology, measurement Download English Version:

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