

## Nursing Education Research Conference 2018 (NERC18)

### Improving Learning Outcomes With Podcasting

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Nursing Education Faculty need to utilize a variety of evidence based teaching strategies to meet the diverse learning styles of students, as well as address the social, cultural and historical influences that can impact learning outcomes. This mixed method research studied supplemental podcasts as a teaching strategy in an Accelerated Bachelor's of Science in Nursing (ABSN) degree program. Podcasts utilize devices and technologies that provide mobile learning, anytime, anywhere.

*Purpose:* There is a need to determine the impact of the mobile media revolution on instructional design and learning effectiveness (Maag, 2006, p. 483). There is a limited amount of research related to podcasting in nursing education, and this study adds to the body of research on mobile learning. It has been purported that incorporating podcasting follows best practice by providing learning materials to suit individual students' learning styles" (Walmsley et al., 2009, p. 159). Informing the nursing education community of the efficacy of podcasting through dissemination of findings can promote podcasting as a viable, effective tool in support of student centered learning. There are many advantages to educators and students from research on assessment of learning outcomes derived from the integration of instructional design and advanced technology.

*Background:* Students enrolled in ABSN degree programs often experience high levels of stress while in a rigorous, time compressed program (Meyer, Hoover, & Maposa, 2006; Penprase & Koczara, 2009; Utley-Smith et al., 2007). Podcasts utilizes the devices and technologies that surround students, "in an attempt to empower and enrich their learning, wherever and whoever they are" (Stead, 2005, p.3). Podcasts take "the learning to the learners when they have time to learn" (Stoten, 2007, p. 57).

Preparation for the NCLEXRN® is a critical component of a nursing curriculum. Many nursing programs utilize products and services from providers of technology-based educational, curriculum and assessment solutions for program evaluation. These materials are purported to facilitate nursing students in passing the NCLEXRN®. Review of data obtained from this type of testing is a reliable and valid means of measuring learning outcomes, as the materials and exams have been statistically analyzed, and have regional and national recognized benchmarking. Utilizing podcasts as a supplemental resource in review of assessment exam concepts has potential to improve learning outcomes.

Listening, as a primary method in the learning process, predates written forms of communication. As adult learners, ABSN students may benefit from flexibility within educational programs and creative teaching methods. Educational podcasts can be distributed on course management systems, instructor websites, and public video websites such as YouTube, which allows students to interact with content at their convenience.

*Theoretical Framework:* There has been a plethora of literature and reports on the gap between theory, research and practice. There needs to be intentional application of theory to practice guiding teaching and learning strategies. Theory supports addressing social, cultural, and emotional aspects that intertwine with the process of learning. Vygotsky's Cultural Historical Activity Theory anchors podcasting to the underlying socio-cultural milieu of time constraints, stressors of multiple roles, and rigor of nursing curriculum.

*Research Questions:* What is the effect of a supplemental podcast as a learning strategy on ABSN program students' ATI test scores?

H<sub>0</sub>: There is no difference in ABSN students' ATI test scores between students who have listened to supplemental podcast as a learning strategy and those that have not accessed the supplemental podcasts.

H<sub>a</sub>: There is a difference in ABSN students' ATI test scores between students who have listened to a supplemental podcast as a learning strategy and those that have not accessed the supplemental podcast.

How do students in an ABSN program perceive the value of learning through listening to podcasts?

*Method:* Sample of convenience consisting of Accelerated Bachelor's of Science in Nursing (ABSN) degree program students enrolled concurrently in Nursing Research and Maternal-Newborn Nursing courses. (N= 30). Internal IRB approval was received, and informed consent was obtained from students. Participation was voluntary. Prior to a required end of course assessment exam, students were provided a podcast reviewing key points from their review book. Test scores were compared between the students that listened to the podcast and those that did not through statistical analysis, ANOVA. Survey post ATI exam consisting of a 5 point Likert scale on perceptions of podcasting as a learning tool.

*Findings:* An analysis of variance statistically significant at  $p \leq .05$  level,  $F(1, 29) = 8.462$ ,  $p = 0.007$ . Reject the null hypothesis and accept the alternative hypothesis.

Cohen's  $d$  calculated for effect size in this study is  $d = 1.09$ . Statistical literature reports many educational researchers identify effect sizes  $\geq 0.20$  to  $0.25$  as important related to academic achievement (Duriak, 2009; Valentine & Cooper, 2003). Survey demonstrated that 78% felt the podcasts increased their understanding of the course concepts.

*Discussion:* There are many pedagogical benefits to the use of podcasting as a teaching strategy. Some students prefer learning through listening; it can be motivating for students who do not like reading. Students can review difficult concepts, prepare for exams, and engage in reflective learning (Smith & McDonald, 2013). Research has shown that retention and the ability to apply concepts are "supported by intentional podcast segmentation" (Abate, 2013). Students can meet their individual learning needs with unlimited opportunities to review the podcasted materials (McSwiggan & Campbell, 2017). A single instructor with minimal institutional support can easily implement the use of these new technologies. Instructors may benefit from recording repetitive explanations, descriptions, illustrations and connection of concepts. The spoken word can influence a learner's cognition, adding clarity, meaning, and motivation by conveying a sense of the person creating those words.

*Conclusion:* Including podcasting as a teaching strategy is supported by evidence, experience and supports students' sociocultural milieu. Students have reported enjoying listening to the podcasts, some reporting listening "over and over," requesting more podcasts added to their courses (Dudas, 2012, p. 476). Faculty's use of podcasts has a growing base of evidence and experience, and values students' needs. As more faculty are presented with the benefits of these tools for student learning, there can be greater incorporation into professional practice (Mostyn, Jenkinson, McCormick, Meade & Lynn, 2013).

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**Title:**

Improving Learning Outcomes With Podcasting

**Keywords:**

Learning Outcomes, Podcasts and Teaching with technology

**References:**

- Abate, K. (2013). The effect of podcast lectures on nursing students' knowledge retention and application. *Nursing Education Perspectives*, 34(3), 182-185.
- Dudas, K. (2012). Podcast and unfolding case study to promote active learning. *Journal of Nursing Education*, 51(8), 476. doi: 10.3928/01484834-20120719-02.
- Duriak, J. (2009). How to select, calculate, and interpret effect sizes. *Journal of Pediatric Psychology*, 34(9), 917-928.
- Maag, M. (2006). iPod, uPod? An emerging mobile learning tool in nursing education and students' satisfaction. Proceedings of the 23rd annual Ascilite conference: Who's learning? Whose technology?
- McSwiggan, L. & Campbell, M. (2017). Can podcasts for assessment guidance and feedback promote self-efficacy among undergraduate nursing students? A qualitative study. *Nurse Education Today*, 49, 115-121.
- Meyer, G., Hoover, K.G., & Maposa, S. (2006). A profile of accelerated BSN graduates. *Journal of Nursing Education*, 45, 324-327.
- Mostyn, A., Jenkinson, C., McCormick, D., Meade, O., & Lymn, J. (2013). An exploration of student experiences of using biology podcasts in nursing training. *BMC Medical Education*, 13(12). Retrieved from <http://www.biomedcentral.com/1472-6920/13/12>
- Penprase, B. & Koczara, S. (2009). Understanding the experiences of accelerated second-degree nursing students and graduates: A review of the literature. *The Journal of Continuing Education in Nursing*, 40(2), 74-78.
- Smith, C. & McDonald, K. (2013). The flipped classroom for professional development: Part II. Making podcasts and videos. *Journal of Continuing Education in Nursing*, 44(11), 486-487. doi:10.3928/00220124-20131025-93
- Stead, G. (2005). Moving mobile into the mainstream. MLearn 2005: 4th World Conference on mLearning. Retrieved from <http://www.mlearn.org.za/CD/papers/Stead.pdf>
- Stoten, S. (2007). Using podcasts for nursing education. *The Journal of Continuing Education in Nursing*, 38(2), 56-57.
- Utleigh-Smith, Q., Phillips, B., & Turner, K. (2007). Avoiding socialization pitfalls in accelerated second-degree nursing education: The returning-to-school syndrome model. *Journal of Nursing Education*, 46(9), 423-426.
- Valentine, J. C. & Cooper, H. (2003). *Effect size substantive interpretation guidelines: Issues in the interpretation of effect sizes*. Washington, DC: What Works Clearinghouse.
- Walmsley, A.D., Lambe, C.S., Perry, D.G., & Hill, K.B. (2009). Podcasts – an adjunct to the teaching of dentistry. *British Dental Journal*, 206(3), 157-160.

### **Abstract Summary:**

Nursing Education Faculty can utilize podcasting as an evidence based teaching strategy to meet the diverse learning styles of students, respecting the socio-cultural milieu of time constraints, stressors of multiple roles, and rigor of nursing curriculum. Podcasting is a readily available tool that provides "anytime, anywhere" learning.

## **Content Outline:**

### **1. Introduction**

a. Mixed method research study of supplemental podcasts as a teaching strategy in an Accelerated Bachelor's of Science in Nursing (ABSN) degree program.

b. Need to utilize a variety of evidence based teaching strategies to meet diverse learning styles of students.

c. Podcasts provide mobile learning, anytime, anywhere.

### **2. Purpose**

a. Adds to the body of research on mobile learning.

b. Integrates technology and instructional design.

c. Improve students' learning outcomes.

d. Inform nursing education community on efficacy of podcasting.

### **3. Background**

a. ABSN compressed programs increase stress.

b. Preparation for NCLEXRN® is a critical component of a nursing curriculum.

c. Nursing programs use standardized materials to assess student readiness for NCLEXRN.

d. Podcasts can be used as a supplemental resource for exam preparation.

e. Meets needs of auditory learners.

f. Podcasts easily accessible through Learning Management Systems.

### **4. Theoretical Framework**

a. Need to close gap between theory, research and practice.

b. Intentional application of theory to practice guiding teaching and learning strategies,

c. Vygotsky's Cultural Historical Activity Theory supports addressing social, cultural, and emotional aspects that intertwine with the process of learning.

### **5. Research Questions**

a. What is the effect of a supplemental podcast as a learning strategy on ABSN program students' ATI test scores?

b. How do students in an ABSN program perceive the value of learning through listening to podcasts?

## 6. Method

- a. Sample of convenience; N= 30.
- b. Students provided a podcast reviewing key points from their review book.
- c. Test scores were compared between the students that listened to the podcast (18) and those that did not (12) through statistical analysis.
- d. Survey post ATI exam consisting of a 5 point Likert scale on perceptions of podcasting as a learning tool.

## 7. Findings

- a. Analysis of variance statistically significant at  $p \leq .05$  level,  $F(1, 29) = 8.462$ ,  $p = 0.007$ .
- b. Cohen's  $d$  calculated for effect size in this study is  $d = 1.09$ .
- c. Survey demonstrated that 78% felt the podcasts increased their understanding of the course concepts.

## 8. Discussion

- a. Pedagogical benefits to the use of podcasting as a teaching strategy.
- b. Improved retention and ability to apply concepts.
- c. Meets individual learning needs.
- d. Unlimited opportunities to review podcasted materials.
- e. Easily implemented and benefits instructor.

## 9. Conclusion

- a. Supported by evidence, experience and students' sociocultural milieu.
- b. Students request more podcasts added to their courses.
- c. More faculty should incorporate into professional practice.

First Primary Presenting Author

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**Author Summary:** Dr. McDermott entered the nursing profession in 1975 with a BSN from SUNY, subsequently earning a Masters in Nursing Education from NYU, and a PhD from the University of Kansas. She transitioned to nursing education in 1998 and began implementing podcasting as a learning strategy in 2008. Her dissertation was on podcasting with RN-BSN students' learning of research concepts, and this present study involves ABSN students in preparing for assessment testing with podcasting.