

Bazinga: Bug-In-Ear Benefits to Teacher Education

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Big Bang Theory of Education



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- Single more important influence on learning in the classroom is the TEACHER!
 - Skills
 - Dispositions
 - Performances
 - Example
 - Knowledge
 - Motivational ability
 - Character

Occupation Recalibration



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- Urgent need for transformative teacher education training and preparation
 - Increased demand for universities to provide online programming options for students
 - Importance of peer coaching and immediate, helpful feedback

The Big Bang Hypotheses



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- Joyce and Showers (1980) stated that the most effective training design model includes “practice under simulated conditions, and practice in the classroom, combined with feedback.
 - In another study of 17 teachers who participated in a newly implemented peer coaching program (Slater & Simmons, 2001), peer-coached participants “expressed a newfound awareness of their own personal strengths and acceptance to new ideas and strategies through collaboration.

What the Research Says...



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- Shulman’s (1987) six pedagogical reasoning and action processes, indicating that peer coaching “can be extremely productive in achieving field experience goals” (Bowman & McCormick, 2000, p. 261.)
 - Rock et al. (2009) found the utilization of Bug-in-Ear technology allowed coaching to take place in real-time while the teacher interacted with and instructed students. Rock et al. reported 73% of teachers found the virtual peer coaching to be helpful and the program resulted in a significant improvement in instructional practices.
 - This pedagogical foundation that guided the selection of virtual peer coaching as the innovation to deliver on-demand corrective feedback to non-traditional pre-service teacher candidates utilizing BIE technology.

Purpose of Our Study



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- To assess the effects of virtual peer coaching on the instructional behaviors of pre-service teacher candidates.
 - In this study, virtual peer coaching is defined as the collaboration between a coach (the investigators) and university internship students.

Virtual Peer Coaching



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In this study, Virtual Peer Coaching constitutes:

- On-demand corrective feedback using BIE technology and Skype
- Two BIE observed lessons during final internship (before obtaining licensure)
- Pre- and post- observation conferencing
- Increased interaction and collaboration

....in a nutshell



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This study sought to compare face-to-face internship observations with delayed feedback (business as usual) with virtual internship observations peer coaching using on-demand corrective feedback via BIE technology.

Virtual Hardware & Software



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- Skype
 - Pamela Call Video Recording
 - Computer or iPad
 - Bluetooth Wireless USB Adapter (Computer)
 - Bluetooth Headset (BIE)
 - Webcam
 - External Hard Drive
 - Costs: Varies (approx. \$80 per student and equipment is reusable; iPad not included)

Considerations



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- Immediate or delayed feedback?
 - Skype or face to face?
 - Timing and effectiveness of Coaching?
 - Positive or constructive Feedback?
 - Types of prompts (Bloom's Taxonomy; Gardner's MI; Student and teacher engagement; transitions, wait time; clarification)

Methodology



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- **Field Study**
 - **Participants (1st Cohort)**
 - 16 Master of Arts graduate student interns during their last semester of the program
 - 8 observed face to face, traditional
 - 8 observed with Skype and BIE technology
 - Selected based on geography, willingness to participate, content/grade level (Convenience Sample)

Treatment vs. Comparison Group



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- **Treatment group:** semester-long internship, 2 formal BIE observations (1st and 3rd) and 1 video observation (2nd observation); on demand corrective feedback used.
- **Comparison group:** semester-long internship, requiring 2 face-to-face observations (1st and 3rd) and 1 video observation (2nd observation); delayed feedback provided

Instrumentation



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- Charlotte Danielson's Enhancing Professional Practice: A Framework for Teaching (2007) was used to investigate pre-service teachers' instructional behaviors.
 - Focus groups comprised of 8 experimental participants was used to investigate the qualitative effects of participating in virtual peer coaching.

*Data collection in progress; yet to be analyzed

Planning for BIE



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What planning is required for implementation?

- Purchasing required technology/materials
- Testing technology (Ipads seem to work best)
- Training and directions for students
- Inter-rater reliability
- Coaching prompts (sample)
- TESS Danielson (instrumentation considerations; 22 versus 77)
- Coordination of 8/16 interns

Benefits to Internship Experience

1. Students utilize technology in a new and creative way – it works.
2. BIE Peer coaching facilitates collaboration and enhances connections
3. Power of experience and modeling for classroom effectiveness & student engagement – long lasting impact on teaching
4. Skype conferences promote reflection and positive rapport
5. Reduced travel budget - \$\$4
6. Time reduced (no travel)
7. Post-conferences appear to be more meaningful



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Drawbacks



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- Utilize the mute button!
 - Can't see all the students (kids)
 - Felt intrusive (almost rude) when giving feedback (out of comfort zone)
 - If lesson is going badly, it is difficult to give on demand feedback
 - Can't smell the rainbows and happiness
 - Prompts take practice and planning
 - Technology limitations within school district (broadband blocked, dropped calls, internet difficult)

Implications for K-12 Settings



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- Power to demonstrate strategies for immediate feedback that have the potential to change and improve the actual teaching of lessons and classroom management.
 - Administrators can utilize the innovation for conducting observations, coaching, and for assessment purposes.
 - Useful tool to assist teachers who have been placed on a professional improvement plan, or require assistance with classroom management and behavioral issues.
 - On-demand corrective feedback can potentially increase levels of student engagement and promote teacher fairness among students

Next Steps



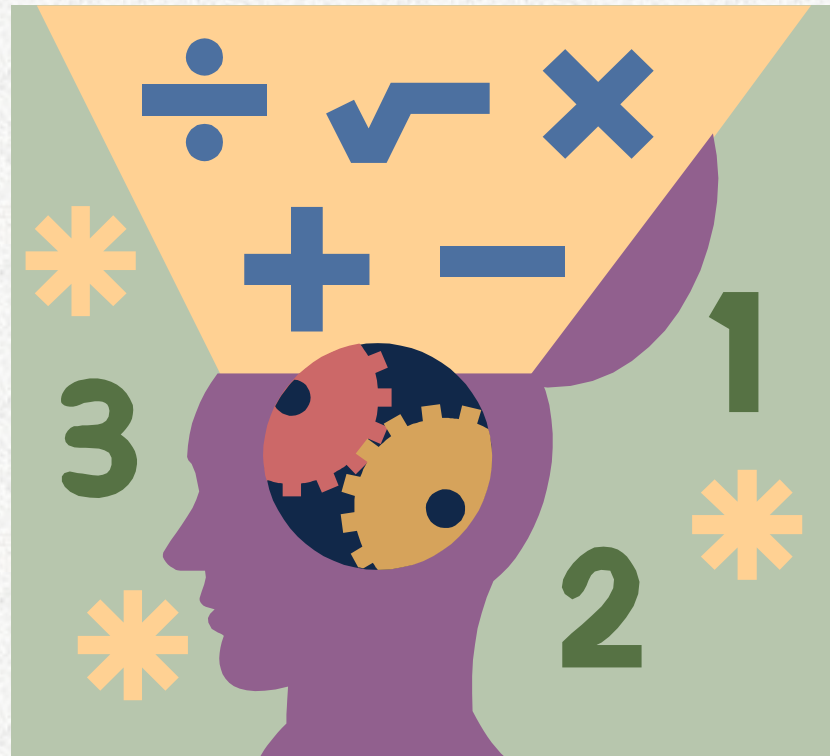
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- Cohort 2 in the spring
 - Data analysis to be conducted in spring
 - Data will allow us to answer the following research questions:
 - ❑ To what extent does virtual peer coaching affect the knowledge and skills of teacher candidates? (as measured by Charlotte Danielson's *Enhancing Professional Practice: A Framework for Teaching*; 2007)
 - ❑ What are the perceptions regarding a virtual peer coaching intervention designed to support pre-service teacher candidates? (as measured through perceptual data collected via focus groups)

Questions?



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Thank YOU!



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