

# USING WIRELESS TECHNOLOGY TO PROVIDE IMMEDIATE FEEDBACK TO TEACHERS

## Bug-in-Ear and SKYPE for “Real-time” Coaching

*Wireless devices for immediate feedback*



Research shows that immediate, corrective feedback is a necessary and effective component of pre-service teacher preparation and in-service teacher professional development (Farrell & Chandler, 2008; Giebelhaus, 1994; Scheeler, Bruno, Grubb, & Seavey, 2009). With the advancement of technology, there is opportunity for changes in teacher education programs and in professional development for teachers that permit immediate, corrective feedback through wireless technology (Knowlton, Israel, & Griswold, 2007) and bug-in-the-ear (BIE) (Rock, et al., 2009). BIE is practical and efficient ways to provide feedback to pre-service and in-service teachers in order to improve teaching and learning.

### FINDINGS AT A GLANCE

#### Results

Immediate feedback had a significantly positive effect on instructional practice, regardless of the amount of teaching experience.

Over all, the participants who used wireless technology to give or receive feedback reacted positively.

Students responded positively to the teachers' improved instructional practice.

Interactive videoconferencing was a useful for instruction and observation.

#### Limitations

Even with improvement in technology over the last fifteen years, glitches can still create problems.

Small subject sizes and the abundance of qualitative research present the need for more quantitative studies with more participants.

Extending the research to examine the impact of immediate feedback to teachers via wireless technology on student improvement would be a valuable next step.

## Summary

The bulk of the qualitative research for bug-in-ear (BIE) coaching focuses on the participants' reaction to wireless technology for receiving immediate feedback. The quantitative research measures the impact of immediate feedback via bug-in-ear (BIE) wireless technology on specific instructional methods delivered by pre-service special education or general education teachers. All the research studies admit some technological difficulties,

however the literature supports positive reactions despite the problems. One important limitation is obtaining permission to use Interactive Video Conferencing or SKYPE in classrooms. More quantitative research is needed that involves more participants delivering a variety of instructional methods. Finally, future research should include the impact of immediate feedback for teachers on student performance.



# IMPLICATIONS FOR SIM



## WHAT YOU CAN COACH USING BIE

CUE - DO - REVIEW

Eliciting Student Response

Delivering positive feedback

Pacing a lesson

## HOW TO BEGIN (CUE)

Conference with the teacher

Set goals

Establish verbal cues

Check the technology

Rehearse

## HOW TO COACH (DO)

Arrive early and check the technology

Observe carefully

Deliver cues accurately & in a timely manner

Keep within the parameters

## HOW TO FINISH (REVIEW)

Conference with the teacher

Re-examine the goals - were they met?

What went well? What needs to change?

How did BIE work in this situation?

Next steps

## GENERALIZATIONS

### Conclusions & Future Uses

- ❖ not disruptive to teacher receiving feedback
- ❖ can be implemented with minimal training
- ❖ permits immediate feedback
- ❖ has positive impact on specific teaching practices (learning units, classroom management, praise, opportunities to respond)
- ❖ can be used on-site or from remote locations
- ❖ promotes coach-teacher relationship
- ❖ can be used for student teachers, novice teachers and peer coaches
- ❖ can be used to prepare SIM professional developers

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## Bibliography

- Dal Bello, A., Knowlton, E., & Chaffin, J. (2007). Interactive videoconferencing as a medium for special education: Knowledge acquisition in preservice teacher education. *Intervention in School and Clinic, 43*(1), 9.
- Farrell, A., & Chandler, D. (2008). Cooperating teachers impressions of the whisper-in-my-ear (WIME) and traditional communication feedback methods for physical education pre-Service teachers. *Journal of Education and Human Development, 2*(1), 1-9.
- Fry, J., & Hin, M. (2006). Peer coaching with interactive wireless technology between student teachers: Satisfaction with role and communication. *Interactive Learning Environments, 14*(3), 12.
- Gibelhaus, C. (1994). The mechanical third ear device: A student teaching supervision alternative. *Journal of Teacher Education-Washington DC-, 45*, 365-365.
- Goodman, J., Brady, M., Duffy, M., Scott, J., & Pollard, N. (2008). The effects of "bug-in-ear" supervision on special education teachers' delivery of learn units. *Focus on Autism and Other Developmental Disabilities, 23*(4), 207.
- Johnson, T., Maring, G., Doty, J., & Fickle, M. (2006). Cybermentoring: Evolving high-end video conferencing practices to support preservice teacher training. *Journal of Interactive Online Learning, 5*(1), 59-74.
- Kahan, D. (2002). The effects of a bug-in-the-ear device on intralesson communication between a student teacher and a cooperating teacher. *Journal of Teaching in Physical Education, 22*(1), 86-104.
- Knowlton, E., Israel, M., & Griswold, D. (2007). Effects of interactive video conferencing on teacher education students' knowledge of special education. *Technology and Teacher Education Annual, 18*(6), 3619.
- Rock, M., Gregg, M., Thead, B., Acker, S., Gable, R., & Zigmond, N. (2009). Can you hear me now?: Evaluation of an online wireless technology to provide real-time feedback to special education teachers-In-training. *Teacher Education and Special Education, 32*(1), 64.
- Scheeler, M., Bruno, K., Grubb, E., & Seavey, T. (2009). Generalizing teaching techniques from university to K-12 classrooms: Teaching preservice teachers to use what they learn. *Journal of Behavioral Education, 18*(3), 189-210.
- Scheeler, M., & Lee, D. (2002). Using technology to deliver immediate corrective feedback to preservice teachers. *Journal of Behavioral Education, 11*(4), 231-241.
- Scheeler, M., McAfee, J., Ruhl, K., & Lee, D. (2006). Effects of corrective feedback delivered via wireless technology on preservice teacher performance and student behavior. *Teacher Education and Special Education, 29*(1), 12.

