

## *I've never seen or heard it this way! Increasing Student Engagement Through the Use of Technology-Enhanced Feedback*

Brian E. Harper

*Two novel technologies—digitized oral feedback on written work and the Turning Point classroom active response system—were introduced into my undergraduate educational psychology course. The cognitive and motivational academic benefits of each were compared to more traditional pedagogy over the course of one full semester. Students who received digitized oral feedback expressed higher perceptions of competence, intrinsic motivation, and autonomy than those who received more conventional written feedback. Students who were taught using the Turning Point active response system reported enjoying class more and reading more attentively in preparation for class; they also attended class more regularly, responded more frequently and achieved at a higher level than undergraduates who were not exposed to this technology. Ultimately, the benefits of employing these technological resources were threefold: 1) students in my course were asked to demonstrate knowledge of theories of growth and development and their relevance in the classroom, 2) novelty of the technological vehicle encouraged students who might otherwise be reluctant to engage and, 3) creative utilization of technology was modeled for pre-service teachers.*

**Keywords:** Educational strategies, Motivation, Reading motivation, Self-determination theory, Technology uses in education.

Student engagement is largely dependent upon the quality of the interactions among and between students and teachers. The interactive classroom is a place where students may ask and accept quality questions and where they frequently receive constructive feedback as to the success of their efforts. For those who work closely with undergraduate students, the creation and maintenance of an interactive learning environment can be quite challenging. Larger enrollments and the pressures of standardized testing (such as the *Praxis* examinations) may impede efforts to establish meaningful communication between instructor and student, while the increasing complexity of students' lives outside the classroom may discourage community-building efforts and student collaboration. Far too often, the unfortunate end result of these circumstances is the college course as "fast food drive thru": a one-size-fits-all, sterile approach to teaching and learning that leaves both instructor and student dissatisfied with its result.

Increasingly, instructors are looking to alternative means to promote interactivity and student engagement. Popular learning tools such as IF-AT forms, mobile phone short message services and *Second Life*, to name a few, have been employed towards this end (Contner, et. al., 2008; Markett et. al., 2006; Kemp & Haycock, 2008). Though their means may differ, these and many other technologies are used with a common purpose: to circumvent the obstacles that impede student engagement. These approaches vary a great deal with respect to their success in this

endeavor. Difficulties such as cost, ease of use and student/faculty reluctance to adopt these new technologies means may hamper efforts to use technology as a vehicle to promote teaching and learning. Therefore, there is a great need for action research projects that address these variables relative to the effectiveness of such emerging instructional methods.

This paper will examine two such methods—digitized feedback and the Turning Point active response system—and the extent to which these technologies enhanced classroom interactivity and promoted student learning and motivation. In doing so, I will first outline the pedagogical basis for each strategy and then describe the outcomes from its implementation with pre-service teachers enrolled in my undergraduate educational psychology courses.

### **USING DIGITIZED ORAL FEEDBACK**

Effective feedback is that which indicates to students what they have done well as well as that which must be done to improve their work (Denton et. al., 2008). The provision of constructive feedback is a crucial component of the teaching and learning process. As such, investigations as to the impact of task-related feedback on academic performance have generated a considerable amount of interest.

Some universities (including that in which this research study was conducted) categorize undergraduate educational psychology as a *Writing Across the Curriculum* course. For each course classified in this manner, a key instructional

objective is that students' improve their ability to write clearly and effectively. This effort is based upon the belief that writing should occupy a prominent place in the academic curriculum. The efficacy of the *Writing Across the Curriculum* movement is largely dependent upon the feedback students receive on their written submissions. Effective feedback need not necessarily be overly critical, complex or lengthy, but should instead equip students with the means by which they may take responsibility for their learning. This might include alluding to past written assignments which remind students of previously successful strategies (Dorow & Boyle, 1998). It should also be personalized, addressing the individual strengths and weaknesses of individual submissions in a constructive manner (Rae & Cochrane, 2008). Finally, feedback should be clear, presenting to students a comprehensible plan for improvement (Guenette, 2007).

Adhering to these criteria is particularly important, given that under certain circumstances individuals may discredit accurate appraisals, even from a knowledgeable source (e.g. Lundgren & Rudawsky, 1998.). Feedback that does not center on the potential for student growth may actually be more harmful than helpful for students' sense of efficacy (Rae & Cochrane, 2008). Students may also disregard misleading or confusing feedback, even in instances in which the course instructor is viewed as a competent expert (Zacharias, 2007). Additionally, feedback which erodes a student's sense of confidence while failing to suggest practical means by which a student may improve is likely to be ignored (Ryoo, 2004). Conversely, successful assignment-related feedback is that through which the instructor actively motivates students to apply constructive criticisms and self-manage the learning experience (Nicol and MacFarlane-Dick, 2006). Thus, it will be a fruitful endeavor for classroom teachers at all levels to explore means by which the latter may be consistently achieved.

With this goal in mind, I sought to identify a successful method of providing feedback to my undergraduate educational psychology students. Over the course of one academic year (two semesters), I introduced digitized oral feedback (the recording of constructive comments to an electronic file which could then be accessed by students through an online course shell) as a medium to address some of the confounding influence of environmental factors that detract from the implementation of task-related feedback. Specifically, my oral feedback was designed to promote student competence, encourage meaningful interaction both with me and with the

subject matter, and suggest several functional options from which students might select to improve their work. The goals of this endeavor were threefold:

- 1) To establish digitized oral feedback as a viable component in the assessment process;
- 2) To use electronic feedback as a means to enhance the intrinsic motivation of students in my undergraduate educational psychology course;
- 3) To improve the writing skills of students in my undergraduate educational psychology course

### **Method**

**Participants.** Participants in this study included 37 sophomores (23 females and 14 males with a mean age of 23.13) enrolled in two sections of my introductory educational psychology course at Cleveland State University, a medium-sized university in the Midwest. This course addresses principles of development, learning, motivation and assessment, and is considered to be the primary preparatory course for the Principles of Learning and Teaching *Praxis* teacher licensure examination (PLT). Those students who elected to participate in this study signed and submitted an informed consent form on day one of the semester. All students in this sample were education majors pursuing a degree in early childhood (n=14), middle (n=4) or secondary education (n=19); as per the requirements of the pre-service teacher program, all students were expected to take and pass the PLT prior to beginning their senior-year student teaching semester. All students in this sample reported having at least "some" familiarity with the WebCT course platform--not surprisingly, as it is commonly used in courses throughout the university.

**Measures and analysis.** I began pilot testing of digitized oral feedback based on principles of self-determination theory during the semester prior to beginning this study. During that semester, eleven students from one section of my undergraduate educational psychology course elected to receive digitized oral feedback in the form of an attached mp.3 file and uploaded to the regular WebCT course shell for their portfolio artifact, in lieu of traditional written comments. This step in the process allowed me to refine the process by which I created and posted the mp.3 files that contained my feedback. At the conclusion of the semester, I conducted focus group meetings with students who received this digitized feedback to assure that the prerequisites for effectiveness of the method had been met; namely that feedback was provided in a clearly accessible format, that it was worded in such a way as to enhance students' intrinsic motivation

and that students perceived the feedback as a useful source in the writing/revision process.

At the beginning of spring semester, I randomly assigned one of my two sections of the undergraduate educational psychology course to the treatment condition, in which students received digitized oral feedback, and the other to the control condition, in which students received traditional written feedback. I then instructed students in both sections to submit all written assignments electronically as a word processing document to a pre-designated submission dropbox within the WebCT course platform. Students in the treatment section were informed as to the nature of the feedback they would receive on written classroom assignments and given explicit instruction as to how to access the digitized feedback, which consisted of an mp.3 file in which I outlined the strengths and weaknesses of the particular student's submitted assignment, through the WebCT course shell.

The digitized oral feedback I provided to students in the treatment section of my educational psychology course was carefully correlated with the principles of self-determination theory; specifically, all statements that I made in the mp.3 file were crafted to assure support of each student's need for competence, autonomy, and relatedness. I provided students in the control condition with written feedback via the *track changes* feature of a word processing program, which allowed me to indicate the strengths and weaknesses of a student's submitted assignment within the actual written text. In both the treatment and control sections, a record of feedback was retained throughout the semester. Digitized oral feedback was coded to indicate the use of statements in support of competence, autonomy and relatedness, and all written feedback was copied and preserved for purposes of comparison relative to the adherence of each to the principles of self-determination theory.

On both the first and final day of the semester, I administered three instruments to students in both the treatment and control sections of the course—*The Post-Experimental Intrinsic Motivation Inventory*, *The Perceived Competence for Learning Questionnaire*, and *The Perceived Autonomy Support: Learning Climate Questionnaire*—which assessed student perceptions of the learning climate relative to the need for competence, autonomy and relatedness (see Deci & Ryan, 2000 for psychometric properties of these instruments). For administration #1, I informed students that their responses should reflect their overall assessment of learning experiences prior to taking this course. For the final administration, students in both sections were instructed to base their responses *solely* on their experiences in my course. I then evaluated

and compared the longitudinal improvement of student responses in both the treatment and control situations.

## Results

Students in both sections of my course adapted to the required procedures fairly quickly. Without exception, all students were able to access feedback and make adjustments based upon instructor comments. It seemed, however, that students in the early section who received digitized oral feedback were more vocal in their support for this process. In both open-ended questions provided at the culmination of the semester, as well as informally throughout the semester itself, students testified to the efficacy of this approach. Samples of student responses are as follows:

*Q. What did you like best about the recorded (oral) feedback?*

A1. It was more personal and detailed than feedback I've received in other courses

A2. It was convenient, personal and corrective

A3. I received more specifics on what I need to do to improve my papers

*Q. Did the recorded feedback make it easier or more difficult to meet your instructor's expectations?*

A4. It definitely made it easier because you can say more on tape than writing on paper; Dr. Harper let me know if I truly knew what I was doing and how well I understood the material

A5. It made me feel confident in redoing my papers because a friendly voice made it easier to meet Dr. Harper's expectations

A6. I think the feedback was helpful; I wrote the comments right on the hard copy as I listened. This will help me to prepare for the PLT.

*Q. Would you recommend using recorded feedback again? Why or why not?*

A7. Yes, this is a beneficial alternative to written feedback. The personal attention was very appreciated.

A8. I would use it again, because I think it pinpoints problems for students.

As mentioned, student-participants also completed three instruments at both the onset and the conclusion of the semester: *The Post-Experimental Intrinsic Motivation Inventory*, *The Perceived Competence for Learning Questionnaire*, and *The Perceived Autonomy Support: Learning Climate Questionnaire* (see Deci & Ryan, 2000). Students who received digitized oral feedback

showed greater gains in perceived competence, autonomy, and intrinsic motivation and more positive perceptions of the classroom climate than

did their counterparts who received written feedback (see Table 1).

Table 1. *Mean student perceived competence, autonomy and intrinsic motivation across conditions.*

	Digitized oral feedback (treatment section)			Written feedback (control section)			$\Delta_D - \Delta_W$
	Beginning	End	Change ( $\Delta_D$ )	Beginning	End	Change ( $\Delta_W$ )	
Perceived competence	5.78	5.98	.20	6.09	5.70	-.39	.59
Autonomous regulation	6.10	6.20	.10	5.88	5.82	-.06	.16
Controlled regulation	4.79	4.65	-.14	4.84	4.35	-.50	.36
Intrinsic motivation	5.41	6.08	.67	4.79	5.48	.69	-.02
Academic Climate	4.87	6.50	1.63	5.04	6.25	1.21	.42

Each final subscale score (reflecting the students' experiences in EDB 302 only) was higher for those who received digitized oral feedback than for those who received written feedback, suggesting that digitized oral feedback enhanced student autonomy, intrinsic motivation and relatedness to a greater degree than did written feedback.

*Outcome #3:* At both the beginning and the conclusion of the semester, I informed students in both sections of the course that copies of all student submissions would be retained for the purpose of gauging longitudinal student progress. These data were also analyzed by a second rater, trained in educational psychology, establishing an inter-rater reliability of just over .80 with respect to the scoring of written submissions. Students who received digitized oral feedback exhibited a consistent trend of improvement on their case study responses, while the scores of those who received written feedback changed far less from their initial evaluation scores over the course of the study.

### **Discussion**

The results of this study suggest that digitized oral feedback is a viable alternative to written feedback in support of academic self-determination and learning. The literature states that feedback is most effective when it is provided in such a way as to address the individual strengths and weaknesses

of the learner, encouraging and offering a number of ways in which one can change behaviors and practices. Digitized oral feedback provides a novel means through which this criterion may be addressed. The provision of oral feedback required few resources beyond a minimal cost for recording equipment, and, through the utilization of currently existing technologies such as WebCT, it can be provided in a manner that is not disruptive to the learning process. Ultimately, its implementation contributed to an increase in students' perceptions of competence, intrinsic motivation, autonomy and a view of the learning environment that was more positive than that gleaned from other educational experiences. Finally, with respect to quality of student writing, there was an overall trend indicating improvement over the course of the semester among students who received digitized oral feedback. These indications of success, low technological implementation cost (with most digital recorders available for less than \$100.00), and ease of use supports the potential utility of this approach.

### **TURNING POINT ACTIVE RESPONSE SYSTEM IN THE CLASSROOM**

Most undergraduate teacher-education programs mandate that students should enroll in at least one educational psychology course before being placed in a field setting. It is here that

preservice teachers are first introduced to the theories and concepts that form the basis for teaching and learning. Despite the importance of the subject matter, those who teach undergraduate educational psychology must still at times cope with issues of student disengagement. This disconnect may be inspired by the difficulties in gauging student comprehension, especially given the content-heavy nature of this course. Given the persistent demands of the academic semester, some students may quickly fall behind in their reading, fail to comprehend and benefit from course lectures and perform poorly on course assessments. Subsequently, they will be likely to disengage.

As was shown to be the case with respect to carefully constructed digitized oral feedback, student engagement can be facilitated through the implementation of prompt feedback (Higgins et. al., 2002). Additionally, the vehicle through which feedback is offered to students has the ability to influence student affect (Epstein et. al., 2002). Specifically, students expressed positive regard for courses where feedback was immediate, promoted interaction (both among students and between students and teachers), and focused on understanding (Cotner et. al., 2008). Instructors have also viewed systems which facilitate these conditions favorably, reporting both motivational and cognitive benefits (Draper & Brown, 2004).

With this in mind, I decided to try out the *Turning Point* active response system in my undergraduate educational psychology course. The *Turning Point* system allows instructors to easily create an interactive learning environment using both familiar and unfamiliar instructional media. This technology uses a software program as an add-on to Microsoft PowerPoint. As an instructor creates a presentation to coincide with a particular class meeting's topical lecture, he or she may then intersperse any number of constructed response questions to which students will respond using a small hand-held response card keypad. As a student presses a particular key to indicate his or her reply to a *Turning Point* question slide, it is stored using a small USB receiver. The instructor may then display the percentage of students who indicate each particular response within a PowerPoint slide. Questions may be created to serve a number of different purposes, and the subsequent data garnered from student responses can be manipulated in a number of ways. *Turning Point* question slides may, for example, be designed as multiple choice or true-false questions which evaluate the accuracy of student responses, Likert-scale type questions which allow students to rate a particular topic on a nominal scale, or

questions which allow students to prioritize a set of responses. Data are preserved on the USB response receiver, which allows an instructor to compare responses both among students and across a number of questions for a particular student.

I used *Turning Point* software to design interactive presentations which I hoped would encourage students to actively engage in learning. The goals of this implementation were as follows:

1) Students who were taught using the *Turning Point* active response system will express positive regard for the educational psychology course, which will correspond with a subsequent increase in student engagement;

2) Use of the *Turning Point* active response system will facilitate student comprehension of the course material.

### **Method**

**Participants.** Forty-six undergraduate students enrolled in two sections of my undergraduate educational psychology course at Cleveland State University participated in this study. All students were education majors pursuing a degree in early childhood (n=19), middle (n=2) or secondary education (n=25). Of the twenty-four students in the section randomly designated to receive the experimental treatment, seventeen were female and seven were male with a mean age of 24.5. Of the 22 students in the section randomly designated as a control section, 18 were female and 4 were male with a mean age of 26.64. All students in both sections of this course reported having at least "some" familiarity with Microsoft PowerPoint, as it is commonly used in classes across the university.

**Measures and analysis.** In the treatment condition, *Turning Point* software and response cards were utilized throughout the semester. In this class, both high and low-level interactive questions were interspersed throughout each PowerPoint presentation. On the first day of the semester, I told students in this section that their final course grade would include, in addition to examinations and written responses, their participation on and success in responding to these *Turning Point* question slides. I also instructed students in the use of the keypad number response cards. Each class meeting, student responses were discussed and reviewed in class and, in cases where low-level questions were used, I immediately informed students as to the accuracy of their responses. Conversely, students in the control condition of this course were taught using standard PowerPoint presentations which correlated with each class meetings' lecture topic. I also informed students in

the control section that their final grade would include course examinations, written assignments and daily participation, measured by attendance and the frequency of student responses throughout the semester.

At the beginning of each individual class session, students in the treatment condition were presented with the following Turning Point Likert-scale response question; *“On a scale from 1 to 10, with 1 indicating ‘not carefully at all’ and 10 indicating ‘very carefully’, how carefully did you review today’s assigned reading?”* These data were retained using the USB response card-created excel file each week to yield a sum score for each individual student. Students in the control section were also presented with this question orally at the beginning of each class meeting, indicating their response on a half-sheet of paper; these data were preserved using an excel file. For each section, all student scores were then summed and divided by the students in each section and the number of weeks in the semester (15) to yield a mean score which indicated how carefully students in each section reported reading the assigned text in preparation for class.

At the conclusion of the final class meeting of the semester, I likewise presented a Turning Point Likert-scale response question to students in the treatment section which asked *“On a scale from 1 to 10, with 1 indicating ‘not at all’ and 10 indicating ‘a great deal’, how much did you enjoy this course?”* Students in the control section were asked to indicate their response to this question, which was presented orally, on half-sheets of paper.

The number of student verbal responses in both the treatment and control sections of this course

were tallied each week by a student volunteer. These responses were then summed and divided by the number of weeks in the semester (15) to yield a mean response score for each section. Attendance was taken in each class period in both the treatment and control conditions recorded as a percentage of the total class membership. These percentages were then summed for each group and divided by the number of weeks in the semester (15) to yield a mean attendance score for each section of the course. Finally, mean scores for the four 50-item multiple choice examinations upon which a large portion of the course grade was based were denoted for each student in both the control and treatment sections of the course. These scores were then summed for each section and divided by the number of students in the treatment and control conditions to yield a mean combined exam grade for each section.

### Results

The data in this study suggest that students in the treatment condition were more likely than those in the control condition to maintain a focus on learning with respect to the educational psychology subject matter over the course of the semester. Specifically, those in the section using the Turning Point active response system reported higher levels of class enjoyment, were more likely to read carefully in preparation for class and participated at a higher rate than did those who were taught using only PowerPoint presentations. Finally, those in the treatment condition were absent less frequently from class and exhibited a slightly higher mean class grade than those in the control condition. (see Table 2).

Table 2. Mean evaluation of Turning Point active response system.

	Section means		Means per class period		
	Reported enjoyment of class (rated 1-10)	Combined exam grade	Reported reading preparation (rated 1-10)	# of student verbal responses	% of students in attendance
Turning Point section	9.21	87.38	9.36	13.19	93.6
Control section	8.50	86.41	8.57	10.38	86.2
Mean diff. (T – C)	.71	.97	.79	2.83	7.4

### Discussion

A major frustration for those who teach a large-enrollment, content-heavy course like undergraduate educational psychology is the challenge of encouraging all students to take reasonable risks in the classroom. It is often difficult to motivate undergraduate students to share their reflections and experiences with their peers in a formal classroom setting. The Turning Point active response system allowed my students the opportunity to test their understanding and share their opinions in a low-stakes context which, over time, inspired them to more openly share their reflections and experiences in class. For young people who have been taught for the majority of their college tenure using PowerPoint in an expository manner, the novelty of the technology-assisted classroom interaction certainly enhanced their perceptions of my course. Further, the expectation of learning as a collaborative endeavor was promoted using constructed-response question slides, which motivated my students to read carefully, attend regularly and participate frequently, all behaviors that contributed to their success on course examinations. In sum, the use of the Turning Point active response system successfully motivated academic self-regulation, changing the ways in which my students prepared for and interacted in the formal classroom.

### CONCLUSIONS

Using technology with which most undergraduate students are familiar (i.e. *WebCT* or *Microsoft PowerPoint*), as a basis for more interactive, somewhat less-familiar media such as digitized oral feedback and the *Turning Point* active response system, may encourage students to actively engage in learning. The results of these investigations presented here certainly suggest that such efforts can be fruitful. Digitized oral feedback

was highly effective, largely because this technology provided a more personal and easily used forum through which I was able to promote student autonomy, competence and relatedness. Such feedback was more effective in promoting student engagement than was written feedback (Alexander & Wade, 2000; Black & Deci, 2000; Deci & Ryan, 2000). The interactive climate and prompt feedback promoted by the Turning Point active response system was similarly effective, as has been demonstrated elsewhere for large-enrollment courses (Cotner et al., 2008). Specifically, the use of these technologies contributed to increased perceptions of competence, intrinsic motivation, autonomy while promoting pro-achievement behaviors like regular attendance, careful reading and engaged learning that will increase the likelihood of academic success.

Taken as a whole, the benefits of employing these technological resources appeared to be threefold: 1) students are asked to demonstrate knowledge of theories of growth and development and their relevance in the classroom, 2) novelty of the technological vehicle encouraged students who might otherwise be reluctant to engage and, 3) creative utilization of technology was modeled for pre-service teachers. Since, despite encounters with numerous forms of technology that facilitate the tasks of daily life (e.g., email, word processing), many educators are still hesitant to use technology to reinforce instructional objectives (Alexander & Wade, 2000), this last result is as vital as the rest. In order to enhance their productivity and professional practices, preservice teachers must learn to utilize technological means to communicate objectives, collaborate with students and colleagues, and promote lifelong learning in their students; therefore, as instructors of educational psychology, we must find ways to model these uses for our students.

### REFERENCES

- Alexander, P. & Wade, S. (2000). Contexts that promote interest, self-determination, and learning: Lasting impressions and lingering questions. *Computers in Human Behavior*, 16, 349-358.
- Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, 84, 740-756.
- Cotner, S., Fall, B., Wick, S., Walker, J. & Baepler, P. (2008). Rapid feedback assessment methods: Can we improve engagement and preparation for Exams in large-enrollment courses? *Journal of Science Educational Technology*, 17, 437-443.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

- Denton, P., Madden, J., Roberts, M., & Rowe, P. (2008). Students' response to traditional and computer-assisted formative feedback: A comparative case study. *British Journal of Educational Technology* 39, 486-500.
- Dorrow, L., & Boyle, M. (1998). Instructor feedback for college writing assignments in introductory classes. *Journal of Behavioral Education*, 8, 115-129.
- Draper, S. & Brown, M. (2004). Increased interactivity in lectures using an electronic voting system. *Journal of Computer Assisted Learning*, 20, 81-94.
- Epstein, M., & Brosvic, G. (2002). Students prefer the immediate feedback assessment technique. *Psychology Report*, 90, 1136-1138.
- Guenette, D. (2007). Is feedback pedagogically correct? Research design issues in studies of feedback on writing. *Journal of Second Language Writing*, 16, 40-53.
- Higgins, R., Hartley, P., & Skelton, A. (2002). The conscientious consumer: Reconsidering the role of assessment feedback in student learning. *Studies in Higher Education*, 27, 53-64.
- Kemp, J., & Haycock, K. (2008). Immerse learning environments in parallel universes: Learning through Second Life. *School Libraries Worldwide*, 14, 89-97.
- Lundgren, D.C. & Rudawsky, D.J. (1998). Female and male college students responses to negative feedback from parents and peers. *Sex Roles*, 39, 409-429.
- Markett, C., Sanchez, I., Weber, S., & Tangney, B. (2006). Using short message service to encourage interactivity in the classroom. *Computers and Education*, 46, 280-293.
- Nicol, D. & MacFarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model of seven principles of good feedback practice. *Studies in Higher Education*, 31, 199-218.
- Rae, A. & Cochrane, D. (2008). Listening to students. *Active Learning in Higher Education*, 9, 217-230.
- Ryoo, M. (2004). The effects of teacher feedback on EFL students' writing in a Korean university class. *The Journal of ASIA TEFL*, 1, 115-130.
- Zacharias, N. (2007). Teacher and student attitudes toward teacher feedback. *Regional Language Journal*, 38, 38-52.

---

**Brian E. Harper** is an Assistant Professor in the department of Curriculum and Foundations at Cleveland State University. A former classroom teacher in the Philadelphia, PA, public school system, Dr. Harper completed his doctoral work at The Ohio State University in Educational Psychology. His research interests include African American racial identity development and motivational psychology, particularly as it applies to students in urban settings. Much of his current work focuses on African American students and the factors that promote or inhibit academic self-regulation

---