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Assessment of Student Learning Gains in Oral Competency

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Educators have long recognized communication skills to be of primary importance to individual effectiveness. Listening and speaking are primary in that they are the first communication skills learned, acquired long before the individual learns to read and write. Yet although an early-learned skill, courses that develop these skills have the potential to continue to improve the individual's ability to communicate effectively throughout his or her life (Cutspec, McPherson, & Spiro, 1999; Huffman, Carson, & Simonds, 2000; Morreale, Hackman, & Neer, 1998; Morreale, Worley, & Hugenberg, 2009; Zabava-Ford & Wolvin, 1992). Morreale and Pearson (2008) make a strong case for oral communication as a prerequisite for personal, academic, and professional success. Building on earlier work demonstrating the centrality of the discipline, Morreale, Osborn, and Pearson (2000) provide fifty years of studies (1955-2006) to support this case. Listening and speaking are related to academic and relational success (Pearson, Child, Herakova, Semlak, & Angelos, 2010), and are of primary importance to later career opportunities and development (Farris, Houser, & Wotipka, 2013).

While the basic course in communication would seem to have a well-established track record in en-

hancing oral competency, there is limited empirical support to substantiate that the ways we teach this course are responsible for these gains (Morreale, Backlund, Hay, & Moore, 2011). In fact, Bertelsen and Goodboy (2009) found evidence of a decline in public speaking and performance courses as the means of achieving these social and workplace competencies, and raised the question as to whether content-driven classes (e.g., group dynamics, intercultural communication) are more effective in students achieving course outcomes. Waldeck, Kearney, and Plax (2001) point to general confusion among communication educators resulting in conceptual and operational overlap among related constructs, as well as a tendency to pay little attention to the process that takes place in the classroom, and depict communication education as largely atheoretical. Avanzino (2010) echoes this sentiment as well as the need to close the feedback loop with trial and error analyses of ongoing assessment programs. Finally, Canary and MacGregor (2008) point out the dominance of teacher-centric behaviors in assessments of communicative competence, which may confound perceptions of competency and an understanding of the process that leads to effectiveness in student outcomes, such as intellectual motivation and participation.

These concerns—a lack of empirical evidence, confusion regarding the assessment process itself, and emphasis on teachers rather than student outcomes—suggest a need to assess the short-term gains as well as long-term effects of the basic communication course. In part one of the current study, research using pre- and post-assessment measures seeks to address whether students perceive that they are learning what we think

they are learning in the basic course. Using communication competency as a theoretical base, undergraduates were assessed over a six-year period to determine perceived short-term gains. The second part of this study examines whether the same students perceived they were retaining what they learned months and years after taking the basic course.

ASSESSING LEARNING IN THE BASIC COURSE

A culture of assessment was established in the early 1980s across academic disciplines, as rising educational costs and calls for accountability became widespread (Backlund, Detwiler, Arneson, & Danielson, 2010; Morreale, 2007, pp. 24-25; Neill, Bursh, Schaeffer, Thall, Yohe, & Zappardino, n.d.; Tucker, 1994). Unfortunately, educators were often poorly prepared to measure effectiveness, and sometimes misunderstood the nature of assessment itself. In their review of current practices Morreale, Worley, and Hugenberg (2010) concluded that standardization across sections, as well as lack of systematic follow-up on student oral communication skill development is pervasive in the basic course. Morreale et al. (2010) discuss ongoing concern for consistency across multiple sections of the basic course as stemming from the reliance upon more inexpensive adjunct instructors and graduate assistants, with resulting compromise to a foundational core in communication theory and practice.

Beyond budgetary constraints and administrative challenges assailing the basic course, student preparation, attitudes, and behavior also have an impact. A teaching model that includes instructional objectives,

entering behavior, instructional procedures, performance assessment, and a feedback loop is required for assessment (Tucker, 1994, pp. 113-115). The instructor must have written objectives that suggest an order of progression, and course outlines segmented into discernible units with similar content across class sections. The syllabus for the basic course then becomes a written document of expectations that is consistent with basic, critical, and measurable concepts. After comparing 40 years of intensive study of the basic course Morreale et al. (2010) concluded that the latest educational trend toward re-visioning general education requirements will similarly require systematic review and accountability of the basic course through rigorous assessment (p. 427).

Fortunately, the National Communication Association has had an assessment agenda for several decades (Morreale et al., 2011). It recognizes several distinctive features of communication assessment. First, communication is a process skill requiring performance in authentic situations. While communication knowledge can be assessed with more traditional assessment tools (e.g., paper-and-pencil tests), communication skills are generally assessed by performance. Second, because communication is interactive, the appropriateness and effectiveness of that performance is based on the situation, perceptions of the perceiver, or impression made by the communicator. That means there may be more than one correct response/answer. Finally, assessment results are predictive of oral performance potential rather than the certainty of knowing that the basic course “worked” in producing competency. Since many factors can affect communication competency, multiple observations of

student performances in diverse situations must be assessed.

Assessment Concepts in the Basic Course

Oral communication competence is typically viewed in a broad pragmatic fashion, revolving around the ability of students to choose among various communication behaviors in order to achieve their speaking goals. Their ability in this regard is reliant upon both *knowing what* is appropriate and *knowing how* to make them effective (Cooley & Roach, 1984; McCroskey, 1982). Phillips (1984) says educators must link behaviors and outcomes, since performance skill alone does not reflect competency. He suggests a model in which the communicator provides goal and action, the critic provides criteria and labels, and the participants shape outcomes. Competency can then be derived from observing behaviors and classifying these into situational categories of effectiveness based on an understanding of what behaviors the given case requires (knowledge or competency), actually doing what is required (skill), and accomplishing the required task (effectiveness). Phillips illustrates competency using the example of an engineer who understands how to build a bridge (knowledge). Skill is seen in building it, and effectiveness is judged by how well it works. This is akin to the cognitive (knowledge), behavioral (skills) and affective (motivational) domains in Morreale's (1994) model for the basic course.

Competency is perceived by individuals in the relationship; that is, it is an impression based partially on behavior as well as on the relational history of the communicators and the context. What is important is the congruity between definition of competence and

measurement of it (Spitzberg, 1988). Spitzberg's criteria for effective measurement of communication competency starts with an instrument systematically designed to deal with overt communication behaviors. "Knowledge" is an individual's understanding of the meaning of the concepts and how they are used in public communication. "Skill" is seen in the individual's ability to retain, process, and use this knowledge to produce situation-appropriate behaviors (Cooley & Roach, 1984). "Appropriate" behavior is determined by the organizational environment, which sets forth rules that determine acceptable norms for interaction and interpretation. The strategic choices of behavior available to the individual in a given situation depend upon an understanding of the attached meanings and intended goals. "Effectiveness" deals with the achievement of interactive goals. The ability of the communicator to choose among available behaviors to successfully accomplish goals within the constraints of the situation is also dependent upon that individual's "motivation" or willingness to communicate or continue communication (Morreale, 2007). Communication competency is the impression or judgment by others concerning the appropriateness and effectiveness of communication behavior (Rubin, 1990). It is the perception that the student is incorporating *knowledge*, *skill*, and *motivation* within the speaking situation to produce functional outcomes.

There are several helpful frameworks for understanding and assessing arenas of communication competency (Backlund et al., 2010; Neill et al., n.d.). Morreale and colleagues (Morreale, Hackman, & Neer, 1998; Morreale, Rubin, & Jones, 1998; and Morreale, 2007) define competency sets and illustrate a range of specific

concepts. Of particular importance to this study is the *Competent Speaker* evaluation form (Morreale, Moore, Taylor, Surges-Tatum, & Hulbert-Johnson, 1990; Morreale, Moore, Surges-Tatum, & Webster, 2007; SCA, 1993), which targets eight public speaking competencies (topic, thesis/purpose, supporting material, organizational pattern, language, vocal variety, pronunciation/grammar/articulation, and physical behaviors). The instrument was tested for validity and reliability, with supplementary training materials developed to score speeches (Moore & Awtry, 1991). While the *Competent Speaker* evaluation provided the framework for the studies that follow, Schreiber, Paul, and Shibley (2012) provide descriptions of other rubrics that can be used for assessment, and ultimately develop their own instrument. Other researchers like Hunter, Westwick, and Haleta (2014) use standardized tests like the *Personal Report of Public Speaking Anxiety* (PRPSA) or *Public Speaking Anxiety Inventory* as a means of assessing effectiveness as something other than oral skill. In their research, “success” meant fulfilling one of the purposes of the basic communication course by reducing speech fright.

Assessment Methods in the Basic Course

Frick, Chadha, Watson, Wang, and Green (2009) believe that among the many instructional design models proposed to measure assessment, models tend to focus on either the learning process (means) or how learners perceived the quality of the instruction they received (ends). Instruction does not cause student learning; that is, it is not a necessary or sufficient condition for learning to occur, since individuals may learn by trial and

error or disciplined inquiry. However, Hunt, Novak, Sendlak, & Meyer (2005) found positive outcomes from assessment efforts focused on a broader teaching purpose that develops a standardized and easy-to-use grading rubric. Krider and Detwiler (2010) and Cutspec et al. (1999) outline strategies for selecting assessment methods, tools, and data to provide a broader framework for applying these concepts.

Hooker and Denker (2014) note that using student self reports is a common practice in assessment, especially with a pretest and posttest survey of course content. Frick et al. (2009) strongly recommend learners be assessed both before and after instruction (p. 716). While the collection of speech evaluations and final grades can be used, there are often markers of areas outside of academic performance, such as attendance, extraversion, grade point averages, and group projects. In terms of the posttest, students may not be able to accurately recall information after time has passed, reflect affective biases, or be influenced by the final grade. However, as long as this type of assessment is specific to the course and can be generalized across disciplines, it can be an effective measure of learning.

While some researchers question whether a paper-and-pencil test can assess achievement in a public speaking class, measures of relevance, specificity, and reliability can establish credibility in assessment (Tucker, 1994). “Relevance” judges content in terms of appropriateness, taxonomic level, and extraneous abilities. “Specificity” relates to how well the assessment measured information that can only be obtained through this particular course. “Reliability” indicates that the assessment has yielded the same results over

several semesters. Error, confidence intervals, limitations of specific measurement methods, and bias in assessment are described in measures of central tendency, standard deviations, and correlations (Tucker, pp. 119-120).

Morreale et al.'s (2011) thorough overview of communication assessment noted little empirical support confirming that the ways we teach this course are responsible for gains in oral competency. Similarly, Hunt et al. (2005) categorized and synthesized 61 empirical studies published from 1989 to 2004 in the *Basic Communication Course Annual*, the national journal devoted to research in the basic course. In that time, only five studies dealt explicitly with assessment of student outcomes in the basic course. In subsequent publications (2005-2014), there were few assessment studies in the *Basic Communication Course Annual*. For example, Meyer, Hunt, Comadena, Simonds, Simonds and Baldwin (2008) assessed classroom management training for graduate teaching assistants. Simonds, Meyer, Hunt, and Simonds (2009) assessed Illinois State University's five-year practice of using student portfolios. Pearson et al. (2010) provided an overall assessment of the basic public speaking course by examining fifteen student attributes divided into course engagement characteristics, dispositions, and demographics hypothesized to affect learning and public speaking skill development in the basic course. A pretest-posttest design was utilized to determine whether students' scores on cognitive, behavioral, and affective assessment instruments improve from the beginning to the end of the semester, with statistical evidence of increased student learning in all three domains.

LeBlanc, Vela, and Houser (2011) used a case study approach to test their hybrid course, which included a central unit on intercultural communication. Farris et al. (2013) examined the assessment tools used to demonstrate student learning of public speaking skills in their hybrid version of the basic communication course. Statistical analyses were conducted to determine the validity of two assessment instruments measuring student public speaking competency. They assessed change in public speaking behaviors after students received this training. A pre-post design to determine whether trained or untrained students would improve more throughout the course of the semester revealed the trained group experienced a greater increase in competency.

Morreale et al. (2011) noted 340 studies over a 35-year period that look at how communication is assessed. Best practices require development of a research-driven model for student learning and program assessment that provides valid and reliable results administrators need to facilitate strategic planning with faculty as they define, review, and redefine their academic programs. While such a program is not currently available, Spitzberg (2011) has developed an innovative interactive media package to assess various communication skills as well as critical thinking called IMPACCT. Self- and peer-ratings are used to assess students' knowledge, skills, and motivation. While Spitzberg's work is in the early stages of development, IMPACCT shows promise as a theoretically-based, multi-faceted measure of communication competency.

Pascarella (2006) examined thousands of studies conducted on college students over the past 50 years,

including the subset of work that tried to establish its impact. His work falls outside the communication discipline and basic course design, and therefore does not deal with some of the distinctive challenges oral competency researchers would have. However, Pascarella believes longitudinal, pre-and posttest designs provide the best quality data for analysis, especially when replicated, to discover why a course or program has impact (p. 515). Mapping the role of the “within college” experience on “life after college” provides an important end goal that can motivate both educator and student alike (Pascarella, Wolniak, & Pierson, 2003).

In the current study, a pretest/ posttest method was used to evaluate two core questions about oral communication competency. Researchers first wanted to know if students perceive that they are learning what is taught in the basic course. In Study One, a pre- and post-assessment test was conducted among undergraduates over a six-year period to measure their perceptions of learning specific course goals at the end of the basic course (short-term gains). Using communication competency concepts as the point of reference, researchers predicted the following for Study One:

- H₁: Students will show improved scores on perceptions of knowledge.
- H₂: Students will show improved scores on perceptions of skills.
- H₃: Students will show improved scores on perceptions of motivation.

In Study Two, researchers want to know if student perception of learning persists over time. To answer this question, students who had taken a basic course were

asked to complete the assessment test one more time. Those who agreed to do so were retested at least eight weeks after taking the basic course to see if students perceived that any learning gains held over time. This would determine whether the basic course consistently demonstrates these positive effects over a longer term, suggesting longer-term gains. It is hypothesized that:

H4: Perception of course improvements in knowledge, skills, and motivation will be maintained over time.

METHOD

For 10 years, a small Midwestern liberal arts college has used a pre/post assessment to document yearly student changes after taking a basic course in oral communication. Pre- and post-assessment includes all students who completed one of the following basic course requirements: an eight-week public speaking course for non-majors, a 16-week hybrid course usually taken by Communication majors and minors, or a 16-week argumentation and debate course. All three courses use an Aristotelian model that incorporates invention (generating raw material for a speech), organization (formulating and displaying a coherent plan for accomplishing the speech purpose), delivery (presenting ideas to an audience extemporaneously, and in an engaging manner), and audience analysis (considering and adapting invention, organization, and delivery with the peer audience in mind).

The assessment tool is a 24-item survey given at the beginning and end of the course. The eight speaking competencies developed for *The Competent Speaker* con-

tain categories consistent with communication competency theory—i.e., their perception of knowledge, skill, and motivation (Morreale, 2007; Morreale et al., 2000; Spitzberg, 1988). Each speaking competency is randomly repeated throughout the survey. For example, vocal variety is represented in perception of *knowledge* (e.g., “I am familiar with how to use vocal variety techniques—changes in rate, volume, or pitch—to heighten and maintain an audience’s interest”), perception of *skill* (e.g., “I use vocal variety to heighten and maintain the interest of an audience”), and perception of *motivation* (e.g., “When giving a speech, I think it’s important to vary the rate, pitch, and volume of my voice”). Student identification numbers are used in data collection to insure anonymity. Demographic information collected for administrative purposes includes the student’s sex, classification (i.e., freshman, sophomore, junior, or senior), and academic major. The researchers can also identify which of the three basic courses the student took, as well as whether an adjunct or full-time faculty member taught the course.

The assessment survey uses a seven-point Likert scale, anchored by “strongly agree” on one end and “strongly disagree” on the other. The pretest is administered in class on the first day of the course; on the last day of the course, it is repeated as the post-assessment. The department’s administrative assistant enters the survey data onto an Excel spreadsheet for all sections of all courses, with the resulting pre-post scores routinely calculated and recorded yearly for the department’s annual assessment report.

Study One

In Study One, results from the past six years (2009-2015) were combined and analyzed, with a total of 2,485 paired student responses. This represents roughly 20% of the student population each year, which is consistent with the number of students enrolled in basic communication courses on a yearly basis. There were 1,159 freshmen, 855 sophomores, 272 juniors, and 191 seniors who completed these courses, again reflecting the expected prevalence of underclassmen in the basic course. Of the collected demographic information (i.e., sex, student classification, and students' major), only sex and student classification were used in this analysis. A data set including students from all courses surveyed over six years was created in order to demonstrate what changes occurred immediately after taking the basic course. Paired sample t-tests, independent samples t-tests, and analysis of variance with subsequent post hoc comparisons were used to analyze the data in Study One.

All of the measures in the pre- and post-tests had high reliability: pre-knowledge (Cronbach's $\alpha = .854$), pre-skills (Cronbach's $\alpha = .833$), pre-motivation (Cronbach's $\alpha = .847$), post-knowledge (Cronbach's $\alpha = .728$), post-skills (Cronbach's $\alpha = .768$), and post-motivation (Cronbach's $\alpha = .845$). In addition, Study One data provides evidence of a significant, positive correlation between average student perception of their post-knowledge, post-skills, and post-motivation and final course grade ($r = .181, p < .0005$). A multiple linear regression was also calculated to predict course grade based on sex, student classification, and student perception of their post-knowledge, post-skills, and post-motivation. A significant regression equation was found ($F = 9.23, p$

<.0005), with an R^2 of .064. All three variables were significant predictors of course grade. Specifically, being female is associated with higher grades ($p <.05$); being an upperclassmen is associated with lower grades ($p <.005$); and higher student perception of post-knowledge, post-skills, and post-motivation is associated with higher course grades ($p <.0005$). While actual gains in knowledge and skills are conceptually distinct from perception of gains in knowledge and skills, this study is consistent with prior research that indicates student perception of learning does in fact correlate positively with various measures of learning (e.g., Cohen, 1981; Frick et al., 2009).

Study Two

Study Two involved a *Survey Monkey* request sent electronically to all students who had completed one of the three basic communication courses during their time on campus. Students were asked to complete the assessment survey one last time so their responses could be compared to the answers given on the first day they took the class. The survey request was made twice, once early in fall semester 2014, and again toward the end of the spring semester of 2015. In the fall, 1097 people were invited to participate and 265 responded. During spring semester, 1312 people were invited to participate (some repeated requests to students who had not responded to the first call), and 203 responded. More specifically, two people who took a basic communication course during 2008 were invited, but neither of them responded. From 2009, five people were invited and none responded. The response rate for 2010 was 7% (six responses out of 87 people). Among students taking the

class in 2011, the response rate was 18% (43 responses out of 243); for 2012, it was 31% (94 responses out of 301); for 2013, it was 30% (130 responses out of 427); for 2014, it was 28% (137 responses out of 491); and for 2015, it was 35% (36 responses out of 104). In summary, a total of 1660 unique individuals were asked to participate in this survey and 468 students completed the “post” post-assessment for the second study, an overall response rate of 28%.

Data was collected by the campus’ Institutional Research office, which allowed researchers to identify *when* students took the basic course as well as *which course* they took. The majority of the students had taken an eight-week course focused solely on public speaking ($N = 390$), more than 83% of the sample. Some of these students had taken the course as early as 2010, whereas others had taken the course as recently as the first quad of Spring semester 2015. The median course year was 2013.

Study One data was matched with Study Two data via student identification number to protect anonymity. Paired sample t-tests and multiple linear regression were used to analyze the data in Study Two. All of the measures in the post-posttests had high reliability: post-post- knowledge (Cronbach’s $\alpha = .894$), post-post-skills (Cronbach’s $\alpha = .872$), and post-post- motivation (Cronbach’s $\alpha = .887$). In conducting the paired sample t-tests in Study Two, students’ pretest scores were compared with post-posttest scores. Presumably, students do not continue to make gains following the end of the course as they are no longer being taught new information or acquiring/practicing new skills. Thus comparing post-test scores and post-posttest scores would address how

much, if any, gains in the students' perceptions of motivation, skills, or knowledge are lost. But such a comparison would not address the hypothesis—whether students perceive that they maintain improvements over time, i.e., retain a significant amount of the gains they had during the course. In short, Study Two was set up to address whether students perceive that they are significantly better off long term than they were at the start of taking the course.

RESULTS

Study One

Results for Hypotheses 1, 2, and 3 are displayed in Table 1. H₁ predicted that students will perceive improved scores on measures of knowledge. Post-knowledge scores were, in fact, significantly higher than pre-knowledge scores ($t = -72.41, p < .0005$), thereby supporting H₁. H₂ predicted students will perceive improved scores on measures of skills, and this is also supported ($t = -62.39, p < .0005$). Finally, H₃ predicted that students will perceive improved scores on measures of motivation. A paired-samples t-test comparing the pre- and posttest scores of students found a significant difference between the means of the pre-motivation and post-motivation scores ($t = -49.65, p < .0005$). As expected, students' post-motivation scores were significantly higher than their pre-motivation scores, showing support for this hypothesis.

Because the data was available and of potential value to program administrators, demographic variables were examined. In Study One, an independent-samples t-test comparing the pre, post, and mean change for the

Table 1
Overall Change between PRE and POST Tests

	Pretest Mean (SD)	Posttest Mean (SD)	Change Mean (SD)	Paired Sample t (df)	Sig. P
Knowledge	4.32 (.95)	5.79 (.74)	1.47 (1.01)	-72.41 (2492)	***
Skills	4.67 (.88)	5.81 (.71)	1.15 (.92)	-62.39 (2484)	***
Motivation	5.35 (.88)	6.22 (.62)	.87 (.88)	-49.65 (2497)	***

Note: Scores based on Likert-type scale from 1 (strongly disagree) to 7 (strongly agree).

*** $p < .0005$

$N = 2485$ students with both pre-and posttest assessments

perception of knowledge, skills, and motivation scores of male and female students found a significant difference between the means of the two groups. This was true for perceptions in post-knowledge ($t = -3.321$, $p = .001$), mean change in knowledge ($t = -2.714$, $p < .005$), post-skills ($t = -3.031$, $p = .0005$), mean change in skills ($t = -1.856$, $p < .05$), pre-motivation ($t = -5.162$, $p < .0005$), and post-motivation ($t = -7.270$, $p < .0005$), Female students had significantly higher scores than male students in all of these areas, as seen on Table 2.

A one-way ANOVA was computed comparing pre, post, and mean change in the knowledge, skills, and motivation scores of freshman ($N=1,159$), sophomore ($N=855$), junior ($N=272$), and senior ($N=191$) students. A significant difference was found based on student classification for pre-knowledge ($F = 2.79$, $p < .05$), post-skills ($F = 2.63$, $p < .05$), and post-knowledge ($F = 3.37$, $p <$

Table 2
Mean Change by COURSE

	Pretest <i>Mean (SD)</i>	Posttest <i>Mean (SD)</i>	Change <i>Mean (SD)</i>
<i>Public Speaking Sections (8 weeks)</i>			
Knowledge	4.26 (.94)	5.80 (.74)	1.53 (1.00)
Skills	4.62 (.87)	5.82 (.70)	1.20 (.89)
Motivation	5.32 (.87)	6.23 (.62)	.91 (.86)
<i>Hybrid Sections (16 weeks)</i>			
Knowledge	4.57 (.97)	5.71 (.75)	1.14 (1.05)
Skills	4.90 (.94)	5.75 (.74)	.85 (1.03)
Motivation	5.47 (.96)	6.16 (.64)	.69 (1.02)
<i>Argumentation and Debate Sections (16 weeks)</i>			
Knowledge	4.75 (.87)	5.73 (.74)	.98 (.84)
Skills	5.03 (.74)	5.79 (.71)	.76 (.79)
Motivation	5.60 (.62)	6.16 (.59)	.56 (.63)

Note: Scores based on Likert-type scale from 1 (strongly disagree) to 7 (strongly agree)

N (for mean change) = 2,105 students in Public Speaking sections;
 309 students in Hybrid Sections;
 65 students in Argumentation and Debate Sections

.05). All possible pairwise comparisons using the Games-Howell method to correct for multiple tests revealed significant differences between seniors and freshmen as well as between seniors and sophomores. Specifically, senior students perceived themselves to have significantly higher levels of pre-knowledge ($m = 4.48$, $sd = .95$), post-skills ($m = 5.94$, $sd = .59$), and post-knowledge ($m = 5.91$, $sd = .63$), as compared to freshmen ($m = 4.31$, $sd = .95$ for pre-knowledge; $m = 5.79$, $sd = .77$

for post-skills; $m = 5.75$, $sd = .81$ for post-knowledge) and sophomores ($m = 4.30$, $sd = .93$ for pre-knowledge; $m = 5.79$, $sd = .96$ for post-skills; $m = 5.76$, $sd = .68$ for post-knowledge).

In Study One, demographic information was also examined to see whether there would be significant differences among public speaking, debate, and hybrid courses. A one-way ANOVA was computed comparing pre, post, and mean change knowledge, skills, and motivation scores of students within the three different types of courses. Table 3 illustrates these findings. A significant difference was found among the course types in students' perceptions of pre-knowledge ($F = 24.65$, $p < .0005$), pre-skills ($F = 21.04$, $p < .0005$), pre-motivation ($F = 8.86$, $p < .0005$), mean change in knowledge ($F = 29.75$, $p < .0005$), mean change in skills ($F = 26.60$, $p < .0005$), and mean change in motivation ($F = 12.52$, $p < .0005$). All possible pairwise comparisons using the Games-Howell method to correct for multiple tests revealed significant differences between public speaking students and students in the other two courses. Specifically, public speaking students perceived themselves as having significantly lower levels of pre-knowledge ($p < .005$), pre-skills ($p < .005$), and motivation ($p < .005$) as compared to debate students and hybrid students. For mean change in knowledge, skills, and motivation, public speaking students have significantly higher gains than debate or hybrid students (all $p < .005$). There are no significant differences between the perceptions of debate and hybrid students in pre-knowledge, pre-skills, pre-motivation, or mean change scores. In addition, the three groups are not significantly different from one another in post-knowledge, post-skills, or post-motivation.

Table 3
Differences by SEX

	Pretest (SD)	Posttest (SD)	Change (SD)
MEN			
Knowledge	4.33 (.94)	5.75 (.77)	1.41 (1.02)
Skill	4.66 (.89)	5.77 (.71)	1.11 (.92)
Motivation	5.27 (.89)	6.13 (.67)	.86 (.93)
WOMEN			
Knowledge	1.41 (1.02)	4.30 (.93)	5.83 (.72)
Skills	1.11 (.92)	4.68 (.85)	5.85 (.71)
Motivation	.86 (.93)	5.43 (.82)	6.30 (.57)

Note: Scores based on Likert-type scale from 1 (strongly disagree) to 7 (strongly agree)

N = 1151 men, 1270 women

To test for any significant differences between students taught by full-time faculty ($N = 1,690$) and students taught by adjuncts ($N = 795$), an independent-samples t-test was computed comparing the pre, post, and mean change motivation, skills, and knowledge scores of students taught by full-time faculty and students taught by adjunct faculty. A significant difference was seen between the means of the two groups for pre-knowledge ($t = 2.352, p < .05$) and pre-skills ($t = 2.184, p < .05$), as well as mean change in knowledge ($t = -3.663, p < .0005$), mean change in skills ($t = -3.402, p = .001$), and mean change in motivation ($t = -2.058, p = .05$). Students taught by adjunct faculty perceived themselves as having significantly lower levels of pre-knowledge ($m = 4.27, sd = .91$) and pre-skills ($m = 4.62,$

$sd = .83$) than students taught by full-time faculty ($m = 4.35$, $sd = .96$ for pre-knowledge; $m = 4.70$, $sd = .90$ for pre-skills;). There are no significant differences between the two groups in their perceptions of post-knowledge, post-skills, or post-motivation. Students taught by adjunct faculty perceived themselves to have significantly higher gains in knowledge, skills, and motivation than students taught by full-time faculty, but this may be attributed to the larger percentage of respondents who completed an eight-week public speaking course.

Study Two

To test H_4 that course improvements will be maintained over time, paired-samples t-tests were computed comparing the pre- and post-posttest scores of students. Results for H_4 are displayed in Table 4. A paired-samples t-test comparing the pre- and post-posttest scores of student perceptions found a significant difference for both knowledge and skills. Post-post- knowledge scores were perceived to be significantly higher than pre-knowledge scores ($t = -10.24$, $p < .0005$), and post-post-skills scores significantly higher than pre-skills scores ($t = -4.34$, $p < .0005$). A paired-samples t-test comparing perceptions of the pre- and post-post-test scores showed significant difference between the means of the pre-motivation and post-post-motivation scores ($t = 5.13$, $p < .0005$). Unexpectedly, students' perceptions of post-post-motivation scores were significantly lower than their pre-motivation scores.

An exploratory multiple linear regression was calculated to predict post-posttest scores based on the demographic variables available in Study Two. This in-

Table 4
Overall Change between PRE and POST Tests

	Pretest Mean (SD)	Posttest Mean (SD)	Change Mean (SD)	Paired Sample t (df)	Sig. p
Knowledge	4.32 (.95)	4.80 (.76)	.53 (1.04)	-10.24 (411)	***
Skills	4.67 (.88)	4.84 (.72)	.20 (.92)	-4.34 (410)	***
Motivation	5.35 (.88)	5.11 (.71)	-.24 (.93)	5.13 (407)	***

*** $p < .0005$

$N = 408$ students with both pre-and posttest assessments

cluded student sex, student classification when the student took the course, semester/quad in which the course was taken, course taken (public speaking, hybrid, or debate course), whether the course was taught by full-time faculty or an adjunct, and what year the student took the course. A significant regression equation was found for each of the post-posttest scores: perceptions of post-post-knowledge ($F = 2.060$, $p < .05$), with an R^2 of .039; perceptions of post-post-skills ($F = 2.36$, $p < .05$), with an R^2 of .044; and perceptions of post-post-motivation ($F = 2.73$, $p < .01$), with an R^2 of .051. Both student classification (when the student took the course) and what year the student took the course were significant predictors of post-post-test scores. Specifically, taking the course earlier during their college years (e.g., as freshmen as compared to as sophomores, juniors, or seniors) is associated with the perception of higher post-post-test scores. On the other hand, taking the course in a more recent year (e.g., 2013 as compared to 2010) is associated with higher post-posttest scores. An exploratory

one-way ANOVA was computed comparing perceptions of the post-post knowledge, skills, and motivation scores of students based on course year (i.e., the year in which the student took the course). Table 5 illustrates these findings. A significant difference was found among the course year in perceptions of post-post-skills ($F = 3.47$, $p = .004$). All possible pairwise comparisons using the Games-Howell method to correct for multiple tests revealed significant differences in perceptions for students who took the course in 2013 as compared to 2014. Perhaps not surprisingly, students who took the course in 2014 perceived themselves to have significantly higher levels of post-post-skills ($p = .014$) as compared to students who took the course in 2013. None of the other groups of student perceptions in skills were significantly different based on course year; in other words, students who took the course in 2010, 2011, 2012, and 2015 were not significantly different from one another, nor were

Table 5
Mean Post Posttest Scores by COURSE YEAR

	Knowledge Mean (SD)	Skills** Mean (SD)	Motivation Mean (sd)
2010 N=6)	5.15 (.71)	5.23 (.71)	5.38 (.62)
2011 (N=43)	4.65 (.81)	4.75 (.82)	5.03 (.74)
2012 (N=94)	4.74 (.82)	4.75 (.77)	5.00 (.74)
2013 N=130)	4.71 (.81)	4.70 (.74)	5.04 (.72)
2014 (N=137)	4.91 (.66)	4.98 (.62)	5.22 (.66)
2015 (N=36)	4.95 (.61)	5.05 (.61)	5.28 (.54)
Total (N=446)	4.80 (.75)	4.84 (.72)	5.11 (.70)

** $p < .01$

they significantly different from those who took the course in 2013 or 2014.

DISCUSSION AND LIMITATIONS

As demonstrated with this sample, taking a course in oral communication resulted in improved scores on student perceptions of knowledge, skills, and motivation. In Study One, regardless of the class taken, the course instructor, and demographic variables, all student groups showed significant ($p < .0005$) change in the desired direction between pre- and posttest assessments in each domain. In Study Two, significant long-term learning gains were perceived by students in terms of their knowledge of course concepts and skill in applying them in performance. In other words, the sample size and subsequent analyses gives empirical confidence to the claim that students perceive that they are learning and retaining what is taught in the basic course.

Students who come into the required eight-week public speaking course initially perceive lower levels of knowledge, skills, and motivation than their peers who select the 16-week hybrid or argumentation courses. This should not be surprising as the eight-week students are fulfilling general education requirements. They may come into the class with lower expectations, or see the class as a means to an end (i.e., to check off a general education requirement). However, despite their initial reluctance, the public speaking students show significantly higher gains. It is also encouraging to see that in the end, the three groups were not significantly different from one another in oral communication competency, as measured in their perceptions of post-

knowledge, post-skills, and post-motivation scores. Similarly, LeBlanc et al. (2011) concluded from similar pre- and post-assessment research that students had a better understanding of the concepts associated with oral communication competency after receiving instruction in the basic course.

Although not the intent of this study, the available demographic information provided additional insight into these short-term learning gains. Females perceived themselves to have significantly higher levels of post-knowledge, change-knowledge, post skills, change-skills, pre-motivation, and post-motivation than male students. The overall stronger performance by female students in some areas does raise interesting questions of how sex differences may impact overall speaking competency, classroom compliance, and course preparation time. These results are also consistent with work by Pearson and Child (2008), Pearson et al. (2010), and Morreale (2007). In this study, male students were also more likely to complete their basic course requirement later in their college career. This procrastination could reflect lower motivation that could adversely affect the emotional climate of the classroom, but qualitative research that focuses on understanding this data is needed to better interpret these causal linkages (Pascarella, 2006; Pearson et al., 2010).. What is most encouraging is that both male and female undergraduates exhibit growth within these courses, which shows administrators how and what students perceive themselves to be learning as a result of an oral communication requirement.

Demographic analyses also showed that there were some significant differences based on student classifica-

tion. When student classification was cross-tabulated by sex for all students who took the pre-assessment ($N=3084$), 1451 freshmen, 1043 sophomores, 356 juniors, and 234 seniors were represented. As expected, the majority of students in this sample were freshmen (47%) or sophomores (35%), and their responses provide additional incentives for why underclassmen need to be in this course early in their college careers. Perceptions of knowledge, skills, and motivation are enhanced, and students are provided with tangible tools for continued success in college (LeBlanc et al., 2011). The small sample of seniors (about 8% of the study) appear to come in knowing more than freshmen and sophomores (according to pre- and post-knowledge assessments) and show significantly higher levels of post-skills, but this could be attributed to greater confidence and experience. There is no available data about those students who took the pre-test but, for whatever reason, never completed the course. However, Morreale (2007) provides helpful insight into the interplay of motivation and speech apprehension among students in public performances that may be at work here, especially in a self-screening process that takes place, allowing students to drop a course for whatever reason. While students in this study perceived themselves as having significantly lower motivation on average in the post-posttest as compared to the pre-test, this would make sense once the class is completed.

Students' perceptions of knowledge and skills scores were significantly higher than pre-test scores, even some time after taking the course. This was especially true with younger students. In Spitzberg's (2011) work with 1880 undergraduates, he found a similar effect in

self-perceptions of competence that increased significantly over the semester. In order to rule out a cohort effect that suggests first-semester freshmen tend to be on a developmental path of increased communication skills and self-evaluation as they transition to a new environment, Spitzberg recommends students in the same school at the same time who are not enrolled (and have not taken the basic course) be assessed. These findings would give program administrators ammunition for the argument that a basic course in oral communication competency is not only important, but is perceived to have the greatest short-term and long-term effects when taken early in the student's college career. Without this comparison, it remains important to note that in all three domains, student perceptions improved on measures of critical competencies from the beginning to the end of the course.

The demographic analysis also enlarges the discussion by providing information about students' perceptions of the course instructor. On some campuses, using graduate teaching assistants or adjuncts to teach the basic course is an economic fact-of-life. This is not the reality within the population studied, as more than two-thirds of the students were taught by full-time faculty and demonstrated significant differences in their perceptions of pre-knowledge and pre-skills, as well as mean change in knowledge, skills, and motivation. However, while students taught by adjunct faculty perceived significantly lower levels of pre-knowledge and pre-skills than students taught by full-time faculty, there were no significant differences between the two groups in post-knowledge, post-skills, and post-motivation. That is, there may be a higher level of motivation

among students coming into a class with a full-time instructor, but students in classes taught by adjunct faculty perceived significantly higher gains in knowledge, skills, and motivation. Expectations may be at work in this regard. Students interpret the value of oral competency initially at a low level since it is a general education requirement, but may find the course to be more valuable than anticipated. The consistent training and communication of course goals and practices that takes place on this campus may also explain why both student groups perceived short- and long-term gains in learning course materials. Further examination of related studies of adjunct and graduate teaching assistants, *à la* Meyer et al. (2008) may broaden an understanding of teaching effectiveness and retention of these gains.

The demographic analysis in Study Two provided information about one last variable: the length of time elapsed since taking the basic course. Looking at the students' average post-posttest scores by course year, only post-post-skills scores were significantly different when comparing students who took the course in 2013 as compared to 2014. This could indicate that students perceive a small decline in their skills over the first year since taking the course but that the perceived decline is short-term. In other words, because students are no longer giving speeches as regularly as when taking the course (if at all), they may perceive an initial decline in their skills. After that initial perceived decline, however, students seem to perceive that they retain skills they developed while taking the course. This interpretation seems likely given that otherwise, average post-post-test scores were not significantly different based on course year, indicating that the average gains students retain

in skills and knowledge is fairly consistent across time. While this provides some evidence for the long-term value of an oral competency course, more research is needed to strengthen confidence in this finding given the relatively small sample size in Study Two.

One key limitation in this research was the use of pre- and posttest methodology. Work by Boyd, Morgan, Ortiz, and Anderson (2014) raises concerns about the use of student self-reports in the assessment process. Since communication competency theory deals with the perception of behavior that is appropriate and effective in the public speaking context, they worry that students may have become more familiar with course concepts by studying them, but without actually gaining measurable skills in public speaking. They are also concerned that the judgment of appropriateness and effectiveness is based solely on the perceptions of students who may not want to take the course or recognize a need for it. They wonder if the size of the class, number of performances, and amount of feedback would have an impact on these student perceptions.

As a corrective measure, LeBlanc et al. (2011) suggest the use a control group (i.e., those students who have not taken the public speaking course) to compare the results of students who received instruction with those who did not in order to extend an understanding of other important independent variables. Boyd et al. (2014) used pre- and post-assessments with standardized instruments, oral speech evaluations, and writing rubrics (though with a small student sample) to target areas of improvement, encourage active learning, and make a case for additional resources for on-going course changes. Looking down the road, understanding the im-

pact of the basic communication course ultimately may be best tested by using mixed-methods, where both qualitative and quantitative approaches are coordinated and purposefully employed (Pascarella, 2006).

Concerning this research's methodology, Kruger and Dunning (1999) find self-ratings problematic in a different way. They believe individuals may hold overly favorable views of their abilities, leading to incorrect conclusions, as well as an inability to realize they are wrong (what they term as a "metacognitive error"). Motivational biases can be one explanation for this problem. However, some learning domains give competence to individuals resulting in knowledge and skills that are clearly (and unavoidably) bounded in reality. In these cases, an individual's self-rating may exhibit a bias that is considerably more negative than that given their peers (p. 1132). Pascarella, Wolniak, and Pierson (2003), and Pike (2004) provide further explanation of the value as well as limitations of pre-and post-assessment results that are relevant to this discussion.

Another potential limitation to these findings is that there are no predictors to discern impact. Although longitudinal pre-posttest designs have provided the most credible body of evidence concerning college impact (Pascarella, 2006), in generalizing these findings to curricular development, is the course content and instruction the primary change agent? It seems likely that the students' perceptions on the post-test are affected by individual characteristics, socialization effects, or statistical controls. Such things as prior speech training or experience in front of an audience, student grade point average, amount of rehearsal time, communication apprehension level, student motivation, gender, writing com-

petency, amount of time spent on the course, or the effectiveness of feedback would provide helpful background information and expand this study (Farris et al., 2013).

The assessment instrument used in this study appears to be reliable, but replication of this data would strengthen the confidence level in the concepts taught in the basic course as well as rationale for including those concepts. Beyond the value of improving student learning and educational pedagogy, assessment plays a vital role in fulfilling the mission of the institution (Boyd et al., 2014). As a “service course,” assessing the basic course also provides justification for the value of this education in an era of tight budgets and administrative decision-making. Hunt et al. (2005) concluded that the student benefits of becoming a better speaker is matched by the credibility and control a solid assessment program can give to the communication departments that sponsor these courses. However, Hunt et al. caution that this should not be at the expense of the course’s identity (p. 30).

In conclusion, students’ ability to develop greater oral communication competency is primary to personal, academic, and professional success. Oral competency is reliant upon both *knowing what* is appropriate and *knowing how* to make it effective (Cooley & Roach, 1984; McCroskey, 1982). The eight concepts endorsed by the National Communication Association (SCA, 1993) suggest that *knowing what* is appropriate to teach is clear and consistent. Authentic assessment that includes a hierarchy of concepts and skills, identification of the most difficult concepts, and even potential areas where students might “over-learn” material (Sprague, 2002)

can help instructors focus class time better. The key to *knowing how* to make these concepts consistently effective for different kinds of speakers in the basic course is embedded in the assessment process. Even within a required eight-week public speaking class, a relevant and engaging curriculum delivered by a qualified professional can make a significant difference. This is especially true when the course is taken early in the students' college career. Furthermore, this learning can persist over time as instructors usefully model and reinforce oral communication knowledge and skills, and provide motivational incentives to recreate them in different situations. Despite the drawbacks of self-reports, and need for replication of these findings, the very good news is that the students' perceptions of learning gains in knowledge and skills from the basic course seem to be occurring within even the most reluctant students, providing encouragement and justification for speech education.

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