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## Assessing Markers of Student Development for Dually and Non-Dually Enrolled Students in an Online Basic Public Speaking Course

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## Research Article

# Assessing Markers of Student Development for Dually and Non-Dually Enrolled Students in an Online Basic Public Speaking Course

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### Abstract

*Critics of college dual enrollment programs suggest that online courses could pose significant challenges for dually enrolled students due to the online learning environment structure, concerns of academic achievement, and limited access to academic support. These concerns call into question the merits of online instruction for institutions who offer the basic public speaking course online to provide access to a broader base of students (e.g., in inner cities and rural areas). Dual enrollment continues to increase in popularity, especially within the general education curriculum, which includes the basic public speaking course at many institutions. Research shows these students excel academically, but a student development perspective is lacking. For these reasons, this study assessed dually enrolled and non-dually enrolled students in an online basic public speaking course by measuring and comparing pretest and posttest findings on a communication-related marker of student development, public speaking anxiety, and a correlated marker of student development, imposter phenomenon. Findings show that, with regard to these markers, dually enrolled students within an online basic public speaking course have some similar outcomes to those of non-dually*

*enrolled students. This study hopes to lay the groundwork for additional scholarship and dialogue regarding the best practices for dual credit courses in the communication discipline.*

Well over 1 million high school students each year are served by dual credit courses (Thomas, Marken, Gray, & Lewis, 2013), college-level courses that allow high school students to enroll and earn high school and college credit concurrently (Jensen & Nickelsen, 2008). These courses have been a part of the academic fabric in the United States for several decades (Hoffman, Vargas, & Santos, 2009). Considering a vast majority of dual enrollment courses are a part of the general education curriculum (Cassidy, Keating, & Young, 2010), as are a number of basic communication courses (Morreale, Myers, Backlund, & Simonds, 2016), exploring the course's impact on the dually enrolled student population has the potential to enhance communication education research and improve basic course instruction. As previous research identified, dual credit students tend to perform as well or better than traditional students academically (Andrews, 2004; Young, Joyner, & Slate, 2013). However, what has not been thoroughly investigated for this population are student development outcomes, which are also “essential to mastery of higher-education outcomes” (Broido & Schreiber, 2016, p. 66). Therefore, the current study assesses dually and traditionally enrolled students in the online basic public speaking course from a student development perspective, specifically looking at student growth in the area of emotion management as measured through student experiences of decreased public speaking anxiety and imposter phenomenon.

While widespread statistics regarding dual enrollment in the basic communication course are not yet available, the basic public speaking course at our institution, alone, has experienced roughly a 700% increase in dual enrollments from 2014 ( $N = 15$ ) to 2017 ( $N = 106$ ). Despite this extensive growth, little to no instructional or communication education research has explored this growing segment of our student population within the basic communication course. In one comprehensive study, Barnett and Stamm (2010) stated, “[o]nline dual enrollment has only recently begun to receive attention among educators and policymakers as an educational model with potential for reaching a wide range of students” (p. 14). This dearth of evidence-based practices specific to the dual credit demographic is salient because dual credit students are likely to have different needs than typically enrolled college students. In a recent issue of the *Basic Communication Course Annual*,

Broeckelman-Post and MacArthur (2016) reinforced the need for broadening our research lens to include less-researched student demographics, stating:

Unfortunately, one of the weaknesses in basic course, communication education, and instructional communication research is that most of this research does not represent the learning experiences of many of today's college students, nor does it help to discern the potentially differing needs of these groups of students. (p. 23)

Basic communication course assessment that fails to include outcomes aimed at student development and changing student demographics may fail to meet evolving student needs. Although assessment may traditionally be seen as examining and measuring markers of successful academic outcomes alone, the National Communication Association quotes Dr. Joseph M. Valenzano III who stated, “the Basic Course plays a significant role in undergraduate student academic success, professional development, and personal growth” (National Communication Association, 2015, par. 5). In addition to this imperative to focus on student development outcomes beyond mere academics in our basic courses, the doubts critics have cast upon the merits of dual credit instruction, especially in online contexts (Zinth, 2014), underscore a need to explore whether online courses can foster such outcomes for the dual credit student population.

## **Literature Review**

### **Dual Enrollment**

The growth of dual credit (also known as concurrent enrollment; Hebert, 2001) courses has been described as “explosive” (Andrews, 2001). According to Waits, Setzer, and Lewis (2005), “71% of public high schools in the U.S. offered dual credit courses in the 2002-2003 school year” (p. 1). By 2005, all 50 states offered these courses (Bragg, Kim, & Rubin, 2005), and in 2010, nearly 1.3 million high school students took a dual credit course from a Title IV degree-granting institution (Marken, Gray, & Lewis, 2013). Dual credit courses occur in different formats and differ from state-to-state (Barnett & Stamm, 2010; Hebert, 2001).

One initial purpose of these courses was to give highly motivated and prepared high school students more challenging courses (JoHyun, Kirby, & Bragg, 2006), but

concurrent enrollment can also open the doors to higher education for a broader student body. Hoffman et al. (2009) state:

An emerging body of research and practice suggests that providing college-level work in high school is one promising way to better prepare a wide range of young people for college success, including those who do not envision themselves as college material. (p. 43).

Over the past 30 years, these offerings have expanded to include students who are average or even underprepared (JoHyun et al., 2006). Although not the norm, some states have used these courses to mitigate high-risk students' potential for dropping out (Burns & Lewis, 2000).

Dual credit course delivery varies by program, institution, and funding source. Such courses can occur in three primary formats: courses taught in high schools by high school teachers or college instructors; college campus-based courses; and online courses (Barnett & Stamm, 2010). The National Center for Education Statistics (NCES) reported that, of the 53% of colleges and universities ( $N = 1650$ ) who enrolled high school students for dual credit in their courses during the 2010-2011 academic year, a vast majority accepted dual credit students in face-to-face courses on their campuses (83%) (Marken et al., 2013). Most of these institutions offered face-to-face courses in classrooms located at high schools (63%), and nearly half (48%) offered the courses via online modes of instruction (Marken et al., 2013).

Thomas et al. (2013) stated that, among high schools surveyed by NCES during the same year, 82% ( $N = 1500$ ) had students involved in dual enrollment courses, yielding a total number of 1,435,200 dually enrolled students. Of those schools, 62% had students who took concurrent or dual enrollment courses at the high school, while 52% had students taking these courses on college campuses, and 33% had students enrolled concurrently through distance education. Considering the robust percentage of high school students involved in online dual credit course offerings, research on instructional formats, learning outcomes, and student development outcomes of dual credit courses is sparse (Barnett & Stamm, 2010). Despite the differences in instructional format, however, the goal of dual enrollment programs remains the same. Cassidy et al. (2010) posited that the goal of dual enrollment programs is to "provide [students] with more rigorous curricula and prepare them for college coursework and expectations" (p. 1). In light of the stability, growth, and

goals of dual enrollment programs, it is not surprising that dual enrollment programs have been met with both acclaim and skepticism.

### **Strengths and Weaknesses of Dual Credit Courses**

Dual credit courses have been both praised and criticized, and the research on their impacts has shown both positive and negative results. One positive impact regards the fact that dual credit courses offer an alternative for students who want to grow in their academic development. Mansell and Justice (2014) posited that dual credit classes allow high school students to “become acclimated with college level expectations” (p. 6). Thus, dual enrollees are more college ready than their peers (An & Taylor, 2015). This finding supports the assertion that, once in college, dual credit students performed more successfully than their peers who had not taken dual credit courses (Taylor, 2015). This seems to be especially true in the math subject area (Kim, 2014).

Additional benefits of dual credit offerings were found in students’ willingness to embark on science, technology, math, and engineering (STEM) majors once they arrived in college (Medvide & Blustein, 2010). Dually enrolled students also enjoyed financial savings due to the often deeply discounted or subsidized tuition dual credit programs provide (Huntley & Schuh, 2002; Mansell & Justice, 2014). Furthermore, allowing students to make early progress toward their degrees can heighten students’ academic momentum (Wang, Chan, Phelps, & Washbon, 2015), often yielding stronger persistence to graduation, decreasing their time-to-degree, and boosting college grades (Allen & Dadgar, 2012; JoHyun & Bragg, 2008). These benefits were found for both genders and translated to low-income and minority students, as well (Taylor, 2015).

Dual enrollment courses, however, are not without their critics. Institutions risk lost revenues from discounted dual credit tuition rates (Kinnick, 2012). Conversely, despite low enrollment costs, textbooks and fees could prevent disadvantaged students from receiving the benefits of these programs, creating a risk of discriminating against low-income students (Mansell & Justice, 2014). The most common critiques, however, relate to academic concerns, including inconsistent quality of dual credit offerings resulting from a large variance in state policies. While 30 states require annual reporting on particular criteria for dual credit enrollment, only 16 states require or encourage reporting of student outcome data (Andrews, 2000; Taylor, Borden, & Park, 2015). Quality assurance is generally most challenging

for those courses taught in high schools by members of high school faculties (Howley, Howley, Howley, & Duncan, 2013; Kinnick, 2012). Some research indicated that “dual enrollment benefits were found only when the courses were taught in community colleges and not at high schools” (Hofmann & Voloch, 2012, p. 64).

Beyond academic concerns, some college faculty members have expressed concern over the maturity level of dual enrollees and the potential negative impacts on the maintenance of quality and academic integrity of the courses these students are allowed to take (Andrews, 2000; Hofmann & Voloch, 2012; Ferguson, Baker, & Burnett, 2015). Others have lamented the dilemma faced by high school students who wish to take advantage of dual credit’s benefits but want to remain active in high school extracurricular activities, arguing that the program may “force participants to grow up too quickly” (Howley et al., 2013, p. 98). Still, others have asserted that positive outcomes for dual credit students, rather than broadening the potential demographic of college-ready students, might simply indicate that those students were better suited for the college environment in the first place (Andrews, 2000; Taylor et al., 2015).

Finally, critics have called into question the online learning environment for dual credit students, citing the lack of student data between online versus face-to-face learning environments (Zinth, 2014). In a report on the challenges of dual enrollment in rural areas, Zinth (2014) shared a collective concern regarding online dual credit courses and suggested that dual enrolled students may “experience greater challenges than their peers [who take the course] in a traditional classroom environment” (p. 5). The Stark Education Partnership (2015) agreed that online courses could be a particular challenge for dual enrolled students. They noted that “[m]ost first generation college students do not develop the key self-regulatory skills (such as awareness of strengths and weaknesses, practice in learning, and taking on challenging tasks) needed to succeed when taking online courses” (p. 3.) The need for student development outcome data in online and face-to-face delivery contexts has been established but not met by researchers. Zinth (2014) stated “if online dual enrollment courses do not achieve the success of students in brick-and-mortar environments, time and money are not well-invested and the promise of dual enrollment to increase college-readiness, and college-going and -completion are not realized” (p. 5). These concerns are particularly relevant in the basic communication course where a scant amount of research has explored online instruction (Westwick,

Hunter, & Haleta, 2016), let alone outcomes of dual or concurrently enrolled students.

### **Student Development in the Basic Communication Course**

Rodgers (1990) defined student development as “the ways that a student grows, progresses, or increases [their] developmental capabilities as a result of enrollment in an institution of higher education” (p. 27). Student learning and student development are “inextricably intertwined” (King & Baxter Magolda, 1996, p. 163), “with both essential to mastery of higher-education outcomes” (Broido & Schreiber, 2016, p. 66). Current student development theory states that “all aspects of development [are] interdependent” (Broido & Schreiber, 2016, p. 66) such that emotional and personal growth cannot be separated from progress in academic and cognitive areas.

While a plethora of student development theories exist, Chickering and Reisser’s (1993) Vectors of Identity Development have received more attention than any other psychosocial development theory (Jones & Abes, 2013). Widely considered a classic in student affairs literature, Chickering’s (1969) oft-cited work has been dubbed “one of the earliest and most influential works on the psychosocial development of college students” (Foubert, Nixon, Sisson, & Barnes, 2005, p. 46). The theory stated that, as a result of higher education, students’ identities should grow in seven areas or “vectors.” Chickering and Reisser’s (1993) revision placed the vectors in a specific order to represent “the sequence in which the vectors are likely to be experienced,” placing those “in the earlier stages of education...as building blocks for students’ identity” (Goldman & Goodboy, 2017, p. 72). They include (1) achieving competence, (2) managing emotions, (3) moving through autonomy toward interdependence, (4) developing mature interpersonal relationships, (5) establishing identity, (6) developing purpose, and (7) developing integrity. While more current models of student development exist to account for multiple identities and intersectionality, a benefit of the Chickering and Reisser (1993) model is that “it is possible to translate each of these vectors into specific, understandable terms that can be demonstrated by concrete student behaviors” (Schuh, 1989, p. 297). While development of competence is an important goal of the basic public speaking course, the current study focuses on the second vector, measurement of and change in markers of emotional management. Since one goal of emotional management deals with “dealing with fears before they immobilize” (Chickering & Reisser, 1993, p. 46), this change will be assessed for the online dual- and traditionally enrolled students in



this study, and operationalized by these students' public speaking anxiety (PSA) and imposter phenomenon (IP).

### Markers of Student Development in the Basic Course

The first variable, PSA has a time-tested and well-established history in instructional communication research as the most common form of communication apprehension (CA) (McCroskey, 1984), but one that is treatable through interventions in the basic public speaking course (Hunter, Westwick, & Haleta, 2014). The second, IP, (Clance & Imes, 1978; Clance, 1985), however, is relatively new to study in the communication discipline. The Clance IP Scale (CIPS; 1985) operationalizes one's tendency to experience anxiety due to a belief that he or she is a fraud. High IP sufferers fear that their phoniness will be found out, regardless of outstanding achievements, and IP tends to be most elevated for those of high intelligence (Clance & Imes, 1978). Imposter phenomenon is not only intuitively intertwined with CA and PSA (Arrington, 1998), but also strongly correlated with trait-like anxiety (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; Kolligan, Jr. & Sternberg, 1991; Topping & Kimmel, 1985) including PSA (Hunter, Westwick, Chromey, & Haleta, 2016). Therefore, examination of these variables may offer additional key insights into whether the online basic public speaking course leads to significant, measurable student growth regarding emotional management for both dually and non-dually enrolled students.

**Public speaking anxiety.** Research has established the potential negative student-success and career implications of high CA and PSA (Ericson & Gardner, 1992; McCroskey, Booth-Butterfield, & Payne, 1989; Richmond, Wrench, & McCroskey, 2013) and the robust success rate of some of its treatments (Duff, Levine, Beatty, Woolbright, & Park, 2007; Finn, Sawyer, & Schrodt, 2009; Hopf & Ayres, 1992). High CA students suffer significantly greater risk for dropping out of college (Ericson & Gardner, 1992; McCroskey et al., 1989; Rubin, Rubin, & Jordan, 1997). Furthermore, high PSA has shown dire consequences for academic and career success and satisfaction, as well, threatening to impair career aspirations, personal relationships, and self-image (Richmond et al., 2013). For these reasons, reducing PSA has been cited as a primary goal of the basic public speaking course (Kinnick, Holler, & Bell, 2011) and a key strength of the communication discipline (Bodie, 2010).

Nearly everyone experiences PSA at some time (McCroskey, 1984), but most experience it as a *state*—a temporary psychological condition that arises with a given speaking event and dissipates shortly after that event. Others, however, suffer from an inherent, *trait-like* PSA across multiple public speaking situations, even when no specific speaking event is planned (Booth-Butterfield & Booth-Butterfield, 2004). Many basic course instructors prioritize helping students overcome their fears associated with public speaking (Kinnick, 2012; Westwick, Hunter, & Haleta, 2015), and the course has proven effective at helping students reduce PSA (Broeckelman-Post & Hosek, 2014; Broeckelman-Post & Pyle, 2017; Hunter et al., 2014; Rubin et al., 1997; Suwinyattichaiorn & Broeckelman-Post, 2016). Infusion of anxiety treatments into the course design—especially a combination of exposure therapy, cognitive modification, and skills training—has proven effective in treating PSA both face-to-face (Dwyer, 2000; Hunter et al., 2014) and online (Westwick et al., 2015). Hence, appropriately designed face-to-face and online basic public speaking courses can improve college-level students' trait-like anxiety levels over the course of a single academic semester.

As a general education requirement at most schools, the basic communication course can mitigate potential barriers to overall academic success such as PSA, thereby serving important functions in student growth and development and, hence, bolstering college retention (Ericson & Gardner, 1992; Richmond et al., 2013). However, this finding has not been tested in the dual credit student population. If PSA reduction is not obtained in basic public speaking courses for those who are dually enrolled, communication programs may miss the opportunity to lay the foundation for psychosocial development that Chickering and Reisser (1993) identified as vital for students' growth, development, and academic success for the remainder of their educational experience. Therefore, the significant influx of dual enrollment students into our courses creates an imperative to assess changes in PSA within this specific, relatively new student demographic. Due to the wealth of research findings regarding the PSA reduction experienced by traditional students as a result of the basic public speaking course, and due to research regarding positive learning outcomes for dual credit students, we hypothesize that both traditional and dual credit students will experience PSA reduction. Since dual credit students may come into the class with higher levels of PSA, however, we hypothesize that their PSA reduction is likely to be even greater than that experienced by the traditional students. Therefore, the following hypotheses have been posed in light of the relevant research on dual enrollment and speaking anxiety:

H1a: Dual credit and traditional students who complete a basic public speaking course experience a decrease in PSA.

H1b: Dual credit students who complete a basic public speaking course experience a greater decrease in PSA than traditional students who complete the course.

**Imposter phenomenon.** Psychologists Pauline Rose Clance and Suzanne Imes (1978) initially developed the term imposter phenomenon (IP) to explain why high achieving women felt inferior to their peers, as though they would one day be discovered as frauds, undeserving of their achievements or accolades. King and Cooley (1995) identified symptoms associated with IP, including depression, lack of self-confidence, and anxiety. “Think of it as a twisted version of the Socratic paradox—the more you know, the more you feel like you know nothing” (Bahn, 2014, para. 1). Worse, for many people these fears led them toward intensely driven work, garnering success, which led to further accomplishments and praise, “thereby triggering another round of imposter feelings” (Jarrett, 2010, para. 5). For this reason, intense imposter feelings can inhibit performance and cause the sufferer to maintain lower aspirations than those of which he or she is capable (Studdard, 2002), including turning down career advancement opportunities (Clance & O’Toole, 1988).

Those who believe intelligence is fixed—that one is born with a certain amount of intelligence and it cannot be changed—are more likely to report imposter fears (Kumar & Jagacinski, 2005). Dweck (1986) asserted that those individuals with low self-confidence and those who believe they have low intelligence, like those with high IP, tend to avoid challenges and their performance declines. In fact, psychologists propose that the contributing factor for the absence of women in top positions in their fields is because of the imposter phenomenon (Spinath, 2011). That said, further research has found that this malady is more widespread than Clance and Imes had imagined, affecting both men and women (Bernard, Dollinger, & Ramaniah, 2002; Buchalter, 1993), and people at varying levels of achievement (Cromwell, 1989). Research comparing IP among male ( $n = 53$ ) and female ( $n = 51$ ) marketing managers found no significant difference between them (Buchalter, 1993). Additionally, Clance (1985) stated that the college environment is somewhat of a breeding ground for IP. Clance (1985) also iterated:

The types of demands placed on students seem to create conditions which contribute to an increase in IP behaviors and feelings. Students tend to score higher on the IP test than any other group. This is probably because they are regularly being graded or evaluated, and on the basis of these evaluations, decisions are made that will profoundly affect their lives and determine whether they can proceed toward their goals. (p. 110)

Imposter phenomenon is widespread throughout the academy (Clance, 1985), including the basic public speaking course, as shown by a recent study which found that over 90% of basic public speaking students began the course with moderate to high levels of IP (Hunter et al., 2016). Due to the high incidence of IP among college students, the potentially dire consequences of IP, and the assertion that college creates or exacerbates IP, further investigation of this variable in relationship to students' development of emotional management skills in the online basic public speaking course is warranted. The magnitude of the issues surrounding IP is especially relevant for dual enrolled students considering the challenges that dual credit courses present (Stark Education Partnership, 2015; Zinth, 2014) and the developmental leap required of those students as compared with traditional students. Although dual credit students have attained levels of success not available to all of their peers, they are still, in fact, high school students taking college courses—a phenomenon ripe with possibilities for imposter feelings. Additionally, high achievers, like high school students taking college-level courses, tend to report stronger IP (Kolligian, Jr. & Sternberg, 1991). Since it is likely the dual credit students would begin the course with higher levels of IP than the traditional students, they may stand to reap greater benefits from the potential for the course to reduce IP. Thus, the following hypotheses were posed in light of the relevant research on dual enrollment and imposter phenomenon:

H2a: Dual credit and traditional students who complete a basic public speaking course experience a decrease in IP.

H2b: Dual credit students who complete a basic public speaking course experience a greater decrease in IP than traditional students who complete the course.

## Methodology

To assess impacts of the online basic public speaking course on dual credit and traditional students' speaking anxiety and imposter phenomena, this study employed a pre/posttest design following the methodology and design employed by Broeckelman-Post and Pyle (2017). Furthermore, quantitative measures replicated part of McCourt's (2007) CA research methodology in that a survey measuring PSA was "given on a website to students enrolled in an online introductory college public speaking course at the beginning of a semester and then again at the end of that semester" (p. 3). The survey for this study added the Clance (1985) IP scale.

### Snapshot of the Online Public Speaking Course

The online course assessed in this study is a part of a multi-section, standardized course at a mid-sized, Midwestern university that offers both face-to-face and online versions of the basic public speaking course. The course standardization includes the use of the same customized textbook, speaking assignments, rubrics, and exams across all face-to-face and online sections. The online course design was modeled after the face-to-face course, and appropriate modifications were made to adapt the course to the online learning environment (for a detailed description of our face-to-face course design, please see Hunter, Westwick, and Haleta (2014).

Despite these modifications for the online course design, the teaching philosophy, learning objectives, and course content remained the same. A lead instructor, who developed the online course, provides training for all other instructors who teach the course in this format. This training allows calibration of instruction across all online sections. Like the face-to-face course sections, the online learning environment utilizes modules that include discussion boards and weekly lectures using the same PowerPoint© presentations (in the online versions, the vocal narration is added by a highly trained and seasoned instructor). In these lectures, the instructor discusses course content, assignment details, and skill development.

As in the face-to-face sections, the speech assignments build from relatively simple speaking situations to more challenging speaking situations. Students in the online course deliver their recorded speeches to an audience of three adults to provide a more realistic speaking experience. These speeches are then uploaded onto the online discussion board for formal evaluation by the instructor as well as peer review from fellow students. Peer feedback is an important component of our course

design, enhancing student opportunities for both confidence building and skill development.

### **Snapshot of the Dual Credit Program and Requirements**

Dual credit offerings are relatively new to the university in which this study took place, but they have been encouraged or mandated by the administration as a tool to attract students to the university. The dual credit courses at the university are offered at a rate of \$40 per academic credit as compared with non-dual enrolled tuition of \$300 per credit. Thus, a three-credit basic communication course is offered for \$120 as opposed to the traditional rate of \$900. Students must also purchase the course textbook, which retails for approximately \$60.

Dual enrolled students are permitted to take courses face-to-face at the university; however, due to the number of rural school districts in the state, a majority of dual credit students must take dual credit courses online. Trained communication faculty members, rather than high school teachers, teach the basic course at this institution. As noted earlier, although the program is still in its infancy, there has been a continual increase in the number of dual credit students enrolled in the online basic course since its inception.

The state Board of Regents sets the program admission requirements. As such, high school juniors and seniors who reside in the state in which the university is located are eligible to take part in the dual credit program if they meet the enrollment requirements. High school juniors are eligible for the program if they have earned an ACT composite score of 24, rank in the top one-third of their class, or have earned a cumulative GPA of 3.50. High school seniors are eligible if they have earned an ACT composite score of 21, rank in the top one-third of their graduating class, or have earned a cumulative GPA of at least 3.25. Additionally, high school juniors and seniors who have met undergraduate admissions requirements and have an ACT score of 18 are also eligible. Additional undergraduate admission requirements include four years of English (or ACT English sub-score of 18), three years of advanced math—Algebra I and higher (or ACT math sub-score of 20), three years of laboratory science (or ACT science reasoning sub-score of 17), three years of social science (or ACT reading sub-score of 17), one year of fine arts (includes vocal, instrumental and studio arts), and basic computer skills (students should have basic keyboarding, word processing, spreadsheet and internet skills).

## Participants

The sampling frame for this study included all students enrolled in the online sections of the previously discussed, multi-section, standardized basic public speaking course at a mid-sized, Midwestern University from summer 2015 to spring 2017 semesters (about 1000 students). Those sampled were 292 undergraduate students ( $n = 83$  males,  $n = 207$  females, and  $n = 2$  missing data) who opted to take part in the study for extra credit; 117 (40.1%) students were enrolled as dual credit students, and the remaining 175 (59.9%) participants were traditionally enrolled students. Because this course meets a university general education requirement, a large variety of student majors were represented. Participants ranged in age from 16 to 51 ( $M = 18.84$ ,  $SD = 3.66$ ).

## Procedure

During the first week of classes, a link to the measurement instrument (entered into a QuestionPro© survey) along with the implied consent letter necessitated for human subject research was emailed to each class instructor, who then emailed the letter with the link to all of their students. In the email, instructors announced a 10-point (1.25 % of total points available in the course) extra credit opportunity for those who completed the questionnaire once at that time and once again during the final week of class.

## Instrumentation

PSA was operationalized for numerical analysis and pretest/posttest comparison by utilizing McCroskey's (1970) Personal Report of Public Speaking Anxiety (PRPSA). The questions on the PRPSA are written on a 5-point Likert-type scale, 1 being *strongly agree* and 5 being *strongly disagree*, indicating how well each statement applies to the participant. This questionnaire consists of 34 statements that measure levels of anxiety that are solely speech related. Each statement describes a personal characteristic, such as "My thoughts become confused and jumbled when I am giving a speech." The results indicate whether the person has high (131 and above), moderate (98-130), or low anxiety (below 98). McCroskey (1970) stated that the average citizen of the United States has a score of 114.6, which indicates a level of anxiety, which lies within the moderate range. A similar average was reported among college students as recently as 2014 (Hunter et al., 2014). The PRPSA scale has

proven to be highly reliable (Smith & Frymier, 2006). The reliability for PRPSA in the current study was  $\alpha = .96$  initial course and  $\alpha = .96$  postcourse.

To operationalize IP for statistical analysis, the Clance Impostor Phenomenon Scale (CIPS) was utilized (Clance, 1985). The scale was created to assist individuals in identifying IP as well as the strength of those characteristics. The questions on the CIPS are written on a 5-point Likert-type scale, 1 being *not at all true* and 5 being *very true*, indicating how each characteristic applies to the participant (Clance, 1985). The survey consists of 20 questions describing situations like “I’m afraid people important to me may find out that I’m not as capable as they think I am.” The results indicate whether the individual has few imposter characteristics (less than 40), moderate imposter experiences (between 41 and 60), frequent imposter feelings, (61 to 80), and intense imposter experiences (more than 80). A higher score indicates a more significant impact of IP on the individual (Clance, 1985). Previous research has shown a high level of reliability for the scale,  $\alpha = .92$  (Chrisman et al., 1995). The reliability for the CIPS was  $\alpha = .87$  initial course and  $\alpha = .88$  postcourse.

## Results

To reduce the familywise error rate, a within-subjects split-plot MANOVA was conducted to determine whether students’ perceptions of their public speaking anxiety and imposter feelings changed over the course of the semester for dually enrolled and non-dually enrolled online public speaking students (see Table 1 for means and standard deviations by student type). To check the assumption of homogeneity among variances, we used Box’s test for the Equality of Covariance Matrices, which was not significant,  $F = 2.517$ ,  $p < .005$ . Therefore, Wilks’ Lambda was used (Keppel & Wickens, 2004). Additionally, because previous research had shown a moderate, positive correlation between the dependent variables, PSA and IP, (Hunter et al., 2016), we tested correlations between these two variables on the pretest data and the posttest data for the current dataset (see Table 2 for correlations by student type). None of these correlations were stronger than moderate, thus ensuring our data were free of multi-collinearity concerns.

Furthermore, multivariate tests showed that there were between-subjects effects for dually enrolled and non-dually enrolled students, [ $\lambda = .962$ ,  $F(2, 289) = 5.725$ ,  $p < .05$ ,  $\eta_p^2 = .038$ , power = .863]. Moreover, there was a significant within-subjects effect for time, [ $\lambda = .762$ ,  $F(2, 289) = 45.207$ ,  $p < .05$ ,  $\eta_p^2 = .238$ , power = 1.0]. However, a significant within-subjects effect for time by type of student (dual and



non-dual enrolled) was not found, [ $\lambda = .994$ ,  $F(2, 289) = .913$ ,  $p > .05$ , power = .207].

Additionally, univariate tests of within-subjects effects were significant for speaking anxiety, [ $F(1, 290) = 72.922$ ,  $p < .01$ ,  $\eta_p^2 = .201$ , power = 1.0], and imposter feelings, [ $F(1, 290) = 5.506$ ,  $p < .05$ ,  $\eta_p^2 = .019$ , power = .648]. Tests of between-subjects effects were significant for speaking anxiety [ $F(1, 290) = 7.345$ ,  $p < .001$ ,  $\eta_p^2 = .025$ , power = .771]. However, tests of between-subjects effects were not significant for imposter feelings [ $F(1, 290) = .550$ ,  $p > .005$ ,  $\eta_p^2 = .002$ , power = .115].

**Table 1**  
**Means and standard deviation by student type**

	Dually Enrolled	Non-Dually Enrolled
Public Speaking Anxiety, Pretest	$M = 109.63$ $SD = 18.89$	$M = 114.28$ $SD = 23.40$
Public Speaking Anxiety, Posttest	$M = 100.28$ $SD = 18.59$	$M = 107.98$ $SD = 22.51$
Imposter Feelings, Pretest	$M = 58.49$ $SD = 11.74$	$M = 57.42$ $SD = 12.38$
Imposter Feelings, Posttest	$M = 59.73$ $SD = 10.97$	$M = 58.87$ $SD = 12.16$

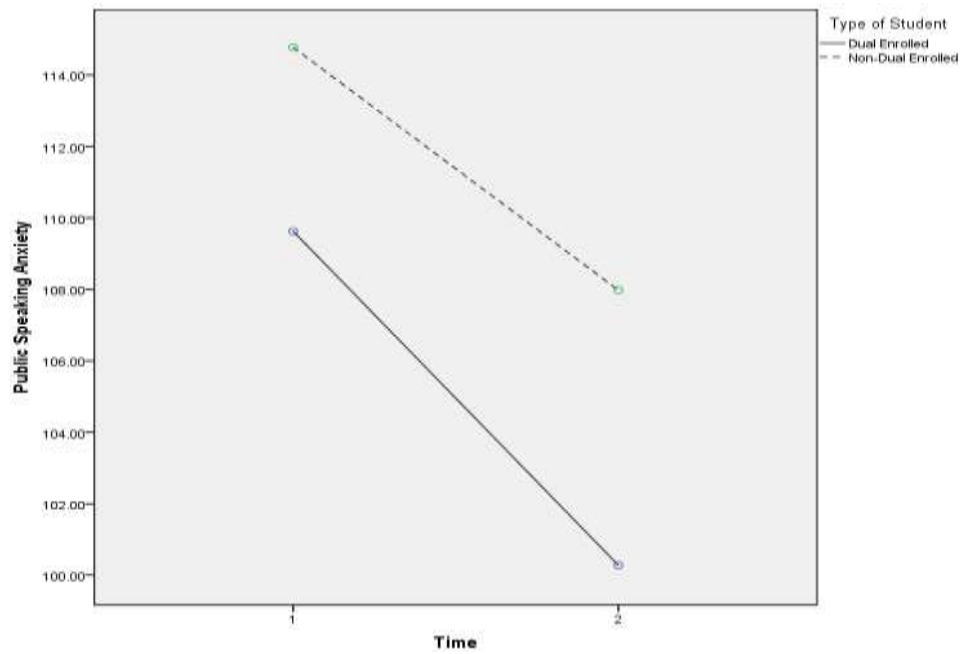


Figure 1. Public speaking anxiety by student type.

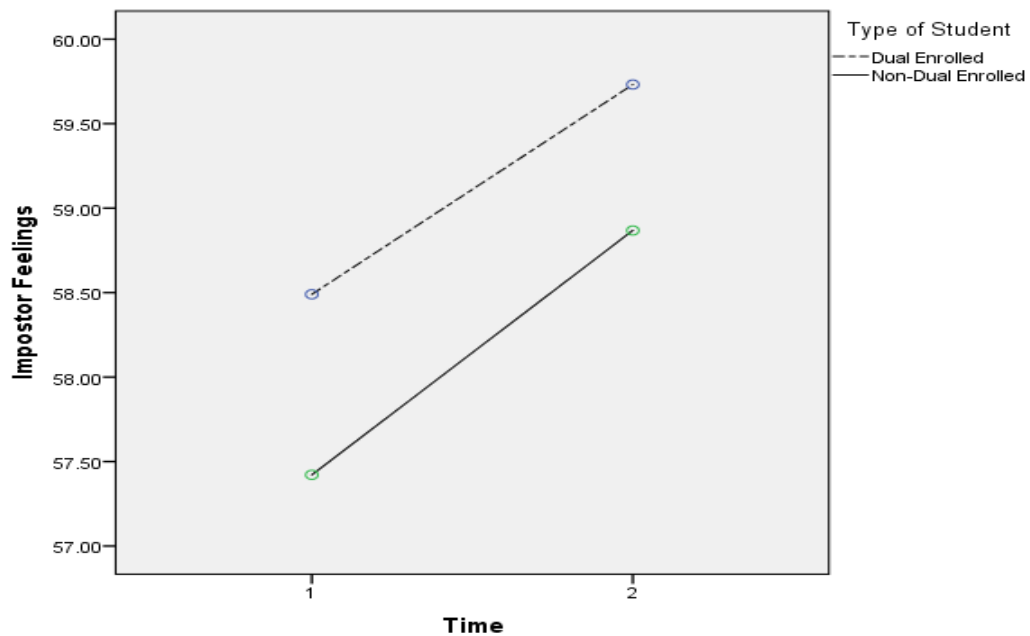


Figure 2. Imposter feelings by student type

The statistical analysis illustrates that H1a is supported as dually enrolled and non-dually enrolled students had a significant decrease in public speaking anxiety by the end of the semester. H1b was not supported as dually enrolled and non-dually enrolled students experienced similar decreases in public speaking anxiety by the end of the semester. H2a and H2b were not supported as dually enrolled and non-dually enrolled students both experienced minimal growth in imposter feelings as opposed to the decrease predicted. The results of data are illustrated in Figures 1 and 2.

**Table 2**  
**Correlations by student type**

	1	2	3	4
	Speaking Anxiety (Pre)	Imposter Feelings (Pre)	Speaking Anxiety (Post)	Imposter Feelings (Post)
1	1	.402**	.765**	.283**
2	.392**	1	.395**	.643**
3	.709**	.318**	1	.281**
4	.299**	.696**	.409**	1

Note: Correlations above the diagonal represent dually enrolled students.

Correlations below the diagonal represent non-dually enrolled students.

\*\*p < .01

## Discussion

We examined changes in PSA and IP in the entire sample ( $N = 292$ ) as a result of the basic public speaking course. Across the semester-long time interval, results indicate that the group of 292 dually and traditionally enrolled students experienced significant reductions in PSA, but not in IP. To examine if these changes were different for the two types of students, we conducted between-subjects analyses, as described next.

The extent to which the course produced between-subjects differences between dual credit and traditional college students on measurements of PSA and IP was examined. The results demonstrated that PSA and IP differences as a function of

student type (dual credit or traditional student) did not approach statistical significance. These results were contrary to our expectations since we had predicted that the dual credit students would experience greater reductions in both PSA and IP.

Together, these results demonstrate that although both groups of students experienced reduced PSA, the dual credit students did not experience greater reductions than the traditional students. Additionally, neither group of students experienced reduced IP. Although we would have preferred to see a decrease in imposter feelings among both types of student groups, we were pleased to see that neither group had dramatic increases. These findings suggest that the current course design is not creating additional negative imposter feelings for either type of student.

Specifically, H1a, which predicted that dual and traditionally enrolled students would experience reduced PSA as a result of the basic public speaking course, was supported. This study found that the dual credit posttest mean PSA of 100.28 ( $SD = 18.59$ ) was 9.35 points lower than their pretest mean of 109.63 ( $SD = 18.89$ ). Traditional students also enjoyed a reduction of 6.3 points on the PSA, from their pretest mean of 114.28 ( $SD = 23.40$ ) to their posttest mean of 107.98 ( $SD = 22.51$ ). Therefore, the basic public speaking course at this university successfully lowered the PSA of dual credit students as well as traditional college students. These findings, taken in concordance with one another, indicate that a dual credit public speaking course, like other dual credit courses, can be a successful experience—perhaps even more successful for the particular high school students it attracts than for the average college student.

H1b, which predicted a significantly larger reduction in PSA for dual credit students than for traditional students, was not supported. Our failure to reject the null hypothesis that these two groups' outcomes were equivalent indicates that the basic public speaking course at the institution tested is roughly equivalent in its effects for dual and non-dual credit students. This finding is imperative, especially in light of some of the concerns and criticisms expressed by Zinth (2014) and the Stark Education Foundation's (2015) about teaching dual credit courses in the online format.

H2a, that the course would significantly reduce students' IP, was not supported, nor was H2b, that dual enrolled students would derive greater IP reductions than traditionally enrolled students. The course does not appear to reduce IP. In fact, for both traditional and dual credit students, IP increased slightly, but not significantly upon completion of the course. Essentially, both groups began with moderate levels

of IP and ended within the moderate levels of IP. The non-dual enrolled students' pretest mean was 57.42 ( $SD = 12.38$ ) compared to the posttest mean of 58.87 ( $SD = 12.16$ ). Future research should explore more deeply the reasons why imposter feelings were not significantly reduced for either group of students. One potential explanation lies in previous research findings that, as part of the imposter cycle, those suffering from IP often exhibit a higher feeling of these imposter experiences after being given a new task (McGregor, Gee, & Posey, 2008). Therefore, participants' experiences may be in flux throughout the semester as assignments are given and completed. This fluctuation may account for the lack of significant change in IP, depending on when the student completed the survey. A future study should have participants complete the CIPS prior to a particular assessment being assigned and again after the completion of the assessment.

### **Discussion and Implications**

The results of this study indicate that, given the particular institution studied with its specific dual credit policies and previously tested success in the online format, student success on certain markers for dual credit students can be comparable to or even better than traditional online college students. Results of this study have four major implications, each of which is discussed in detail below.

#### **College Public Speaking Courses Can Reduce Dual Credit Student PSA**

The major implication of this study is the finding that public speaking courses can be effective at reducing the student development marker of public speaking anxiety for dual credit students under certain conditions. One likely reason for this finding may be the academic standards established for students in the dual credit program. Therefore, this finding indicates that one of the goals of dual credit offerings—to allow additional challenges for students who are prepared for them—is likely being met. As proponents of dual credit assert, these courses increase access to college by offering a more affordable option for students deemed college-ready. Therefore, ensuring positive course outcomes for these qualified students is essential, especially in an introductory course like basic public speaking and with regard to foundational student development, such as enhanced emotional management as indicated by the reduction of PSA. Dual credit courses in public speaking can help build students' confidence, thereby allowing them a chance to demonstrate that they are, indeed, college material, and setting them on the pathway to success in higher education. Additional research should explore changes in speaking anxiety within

online dual credit public courses that have less restrict admissions policies to test the extent of PSA outcomes for students with different levels of academic preparedness.

### **Those Benefits Can Be Derived in Online Courses, When Done Well**

The second major implication of this study is the indication that online delivery of the basic public speaking course, in particular, can be effective for both dual and non-dual credit students in anxiety reduction. The online format of the basic public speaking course is effective at reducing dual credit students' PSA. Previous research (Westwick et al., 2015) already established that through effective course design the online basic public speaking course could be successful at reducing traditional college students' PSA. This study confirms that the course reduces PSA for the dual credit population as well. This finding can quell some of the concerns and criticisms expressed by Zinth (2014) and the Stark Education Foundation (2015) about online dual credit courses. For institutions with similar constraints as our university where the geographic location of dual enrollees is often remote, this finding is imperative in that it suggests that in terms of speaking anxiety, the dual credit students can achieve the same type of success as traditional online students and students in a brick-and-mortar environment.

### **Course Directors Need More Dialogue Regarding Dual Credit Best Practices**

This study's third implication is that the communication discipline will greatly benefit from opening up a dialogue to establish best practices for teaching dual credit courses, serving dual credit students, and harnessing the benefits that these courses have to offer our students and our discipline. Broeckelman-Post and MacArthur (2016) stated:

Unfortunately, one of the weaknesses in basic course, communication education, and instructional communication research is that most of this research does not represent the learning experiences of many of today's college students, nor does it help to discern the potentially differing needs of these groups of students. (p. 23)

Through the current study, we have set forth to lay the groundwork for such a dialogue. The results of this study lead us to suggest recommendations for best practices in offering dual credit communication courses:

**Online courses work.** As this study shows, dual credit students can experience success in online courses. The course design used in this study was successful in reducing speaking anxiety and in creating an environment that did not increase imposter feelings. Thus, it illustrated that universities who need to teach the online dual credit basic course online can do so successfully. Therefore, if your institution can serve students better by offering your basic course online, this may be a good option for you.

**Design meticulously.** If you choose to offer online courses to dual credit students, make sure your online course design is meticulous. Our institution has the luxury of having a well-trained, lead-online course designer who oversees online sections of the course. If you do not have this option, resources abound for best practices for online course design.

**Uphold the same standards you have for traditional students.** It appears that the criteria for enrollment in the dual credit program tested may be effective at attracting a demographic of non-apprehensive high school students, so maintaining grading and/or class placement or ACT requirements is one way to ensure that students are served by traditional PSA interventions. However, as we work to provide an effective learning environment for all types of students, exploring changes in learning outcomes and course assessments for these two groups of students will be important in maintaining standardization.

### **A Wealth of Future Research Exists for Basic Course Directors/Instructors**

The final major implication of this study regards the wealth of future research possibilities in the field of dual credit education. Perhaps our course failed to reduce IP because our current course model is not necessarily designed to reduce feelings of IP for traditional or dually enrolled students. In further exploring Chickering and Reisser's (1993) vectors for psychosocial development, this or other measures of student development should be examined to ensure that students are fortified in their foundational development. There is a need for basic course directors to continue to develop activities and learning programs which are designed specifically to assess the basic course in both academic and student development outcomes and to test their impacts on dual and traditionally enrolled students.

Another area for future research regards high school students who did not participate in and/or complete the course. Future research studying eligible students who do not opt to take dual credit courses may offer our discipline a rich new ground for scholarly and societal impact. Highly apprehensive and high IP students may be missing dual credits' benefits, even if they are college-ready in terms of their academic preparedness and maturity levels. An opportunity exists for interventions to attract more apprehensive students so that they can enjoy not only the benefits of the dual credit courses, but also the personal, social, and professional benefits of PSA reduction.

### **Limitations**

One primary limitation not previously mentioned regards the fact that the dual-credit to traditional college student ratio of withdrawals from the course was not tested in this study. An additional limitation regards the lack of academic learning outcome assessment in the current study. Future research should incorporate markers of both academic and student development growth to assess whether the decreases in dual credit students' PSA are accompanied with stronger public speaking knowledge and skills. Comparing markers of psychosocial development based on differences in grade distribution of key public speaking assignments and comparing these markers by students' GPA would help determine the relationship between academic success and student development. An additional limitation of the study was the difference in cell sizes within the sample. Therefore, to help mitigate impacts of this limitation, the repeated measures MANOVA and Box's M were employed to ensure homogeneity of variances among the cells. This study is also limited in that it cannot speak to long-term benefits of the course. Future studies should test whether the speaking anxiety reduction that students gain from the online basic public speaking course is enduring, and, especially, whether there is a difference in the endurance of those findings between dual credit and traditional college students.

### **Conclusion**

While dual credit offerings have existed for decades, scant research in the communication discipline has tested our course outcomes for this unique population of students. By assessing two potential markers of emotional student development, PSA and IP, this study establishes the groundwork for additional scholarship and much-needed dialogue regarding the best practices for dual credit courses in the communication discipline. In so doing, we have found that a basic public speaking



course can serve dual credit students in lowered apprehension and that an online format of the course can achieve those outcomes. Further research might uncover methods by which our discipline may maximize our service to a changing body of college communication students, and, perhaps, even use the dual credit opportunity to extend our service to communication avoidant populations whose apprehension may have previously impeded their pursuit of higher education.

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### References

- Allen, D., & Dadgar, M. (2012). Does dual enrollment increase students' success in college? Evidence from a quasi-experimental analysis of dual enrollment in New York City. *New Directions for Higher Education*, 2012(158), 11-19.  
doi:10.1002/he.20010
- An, B. P., & Taylor, J. L. (2015). Are dual enrollment students college ready? Evidence from the Wabash National Study of Liberal Arts Education. *Education Policy Analysis Archives*, 23(58), 1-26. doi:10.14507/epaa.v23.1781
- Andrews, H. A. (2000). Lessons learned from current state and national dual-credit programs. *New Directions for Community Colleges*, 2000(111), 31-39.  
doi:10.1002/cc.11104
- Andrews, H. A. (2001). The dual-credit explosion at Illinois' community colleges. *Community College Journal*, 71, 12-16. Retrieved from <https://eric.ed.gov/?id=EJ621915>

- Andrews, H. A. (2004). Dual credit research outcomes for students. *Community College Journal of Research and Practice*, 28, 415-422. doi:10.1080/1066892049044445
- Arrington, M. I. (1998). Communication apprehension, race, and the impostor phenomenon: A literature review. *Florida Communication Journal*, 26, 94-113. Retrieved from <https://floridacom.org/>
- Bahn, K. (2014, March 27). Faking it: Women, academia, and impostor syndrome. *Chronicle of Higher Education*. Retrieved from <https://chroniclevitae.com/news/412-faking-it-women%7C-academia-and-impostor-syndrome>
- Barnett, E. A., & Stamm, L. (2010). Dual enrollment: A strategy for educational advancement of all students. Washington, DC: Blackboard Institute. Retrieved from <http://files.eric.ed.gov/fulltext/ED549164.pdf>
- Bernard, N. S., Dollinger, S. J., & Ramaniah, N. V. (2002). Applying the big five personality factors to the impostor phenomenon. *Journal of Personality Assessment*, 78, 321-333. doi:10.1207/S15327752JPA7802\_07
- Bodie, G. D. (2010). A racing heart, rattling knees, and ruminative thoughts: Defining, explaining, and treating public speaking anxiety. *Communication Education*, 59, 70-105. doi:10.1080/03634520903443849
- Booth-Butterfield, M., & Booth-Butterfield, S. (2004). *Communication apprehension and avoidance in the classroom: A text and course outline* (2nd ed.). Littleton, MA: Tapestry.
- Bragg, D., Kim, E., & Rubin, M. (2005, November). Academic pathways to college: Policies and practices of the fifty states to reach underserved students. Paper presented at the meeting of the Association for the Study of Higher Education, Philadelphia, PA.
- Broeckelman-Post, M. A., & Hosek, A. M. (2014). Using in-class versus out-of-class peer workshops to improve presentational speaking. *Basic Communication Course Annual*, 26, 57-94. Retrieved from <http://ecommons.udayton.edu/bcca/vol26/iss1/11/>

- Broeckelman-Post, M. A., & MacArthur, B. L. (2016). Traditional students, multilingual learners, and university type: The vital missing comparisons in our basic course research. *Basic Communication Course Annual*, 28, 22-32. Retrieved from <http://ecommons.udayton.edu/bcca/vol28/iss1/8/>
- Broeckelman-Post, M. A., & Pyle, A. S. (2017). Public speaking versus hybrid introductory communication courses: Exploring four outcomes. *Communication Education*, 66, 201-228. doi:10.1080/03634523.2016.1259485
- Broido, E. M., & Schreiber, B. (2016). Promoting student learning and development. *New Directions for Higher Education*, 2016(175), 65-74. doi:10.1002/he.20200
- Buchalter, S. F. (1993). Fear of success, fear of failure, the impostor phenomenon and job success and satisfaction among male and female marketing managers (Unpublished doctoral dissertation). Columbia University, Albany, NY.
- Burns, H., & Lewis, B. (2000). Dual-enrolled students' perception of the effect of classroom environment on educational experience. *The Qualitative Report*, 4(1), 1-10. Retrieved from <http://nsuworks.nova.edu/tqr/vol4/iss1/7>
- Cassidy, L., Keating, K., & Young, V. (2010). Dual enrollment: Lessons learned on school-level implementation. Retrieved from <https://www.sri.com/work/publications/dual-enrollment-lessons-learned-school-level-implementation>
- Chickering, A. W. (1969). *Education and identity*. San Francisco, CA: Jossey-Bass.
- Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Chrisman, S. M., Pieper, W. A., Clance, P. R., Holland, C. L., & Glickauf-Hughes, C. (1995). Validation of the Clance impostor phenomenon scale. *Journal of Personality Assessment*, 65, 456-467. doi: 10.1207/s15327752jpa6503\_6
- Clance, P. R. (1985). *The impostor phenomenon: When success makes you feel like a fake*. Atlanta, GA: Peachtree Publishers.

- Clance, P. R., & Imes, S. A. (1978). The impostor phenomenon in high achieving women: Dynamics and therapeutic interventions. *Psychotherapy: Theory, Research and Practice*, 15, 241-247. doi:10.1037/h0086006
- Clance, P. R., & O'Toole, M. A. (1988). The impostor phenomenon: An internal barrier to empowerment and achievement. *Women and Therapy*, 6, 51-64. doi:10.1300/J015V06N03\_05
- Cromwell, B. F. (1989). The impostor phenomenon in the classroom: Personality and cognitive correlates (Unpublished doctoral dissertation). Old Dominion University, Norfolk, VA.
- Duff, D. C., Levine, T. R., Beatty, M. J., Woolbright, J., & Park, H. S. (2007). Testing public speaking anxiety treatments against a credible placebo control. *Communication Education*, 56, 72-88. doi:10.1080/03634520601016186
- Dweck, C. (1986). Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048. doi:10.1037/0003-066X.41.10.1040
- Dwyer, K. K. (2000). The multidimensional model: Teaching students to self-manage high communication apprehension by self-selecting treatments. *Communication Education*, 49, 72-81. doi:10.1080/03634520009379194
- Ericson, P. M., & Gardner, J. W. (1992). Two longitudinal studies of communication apprehension and its effects on college students' success. *Communication Quarterly*, 40, 127-137. doi:10.1080/01463379209369828
- Ferguson, C., Baker, P., & Burnett, D. (2015). Faculty members' perceptions of rigor in dual enrollment, accelerated programs, and standard community college courses. *New Directions for Community Colleges*, 2015(169), 83-91. doi:10.1002/cc.20135
- Finn, A. N., Sawyer, C. R., & Schrodt, P. (2009). Examining the effect of exposure therapy on public speaking state anxiety. *Communication Education*, 58, 92-109. doi:10.1080/03634520802450549

- Foubert, J. D., Nixon, M. L., Sisson, V. S., & Barnes, A. C. (2005). A longitudinal study of Chickering and Reisser's vectors: Exploring gender differences and implications for refining the theory. *Journal of College Student Development*, 46, 461-471. doi:10.1353/csd.2005.0047
- Goldman, Z. W., & Goodboy, A. K. (2017). Explaining doctoral students' relational maintenance with their advisor: A psychosocial development perspective. *Communication Education*, 66, 70-89. doi:10.1080/03634523.2016.1202996
- Hebert, L. (2001). A comparison of learning outcomes for dual-enrollment mathematics students taught by high school teachers versus college faculty. *Community College Review*, 29, 22-38. doi:10.1177/009155210102900302
- Hoffman, N., Vargas, J., & Santos, J. (2009). New directions for dual enrollment: Creating stronger pathways from high school through college. *New Directions for Community Colleges*, 2009(145), 43-58. doi:10.1002/cc.354
- Hofmann, E., & Voloch, D. (2012). Dual enrollment as a liminal space. *New Directions for Higher Education*, 2012(158), 101-107. doi:10.1002/he.20019
- Hopf, T., & Ayres, J. (1992). Coping with public speaking anxiety: An examination of various combinations of systematic desensitization, skills training, and visualization. *Journal of Applied Communication Research*, 20, 183-198. doi:10.1080/00909889209365328
- Howley, A., Howley, M. D., Howley, C. B., & Duncan, T. (2013). Early college and dual enrollment challenges: Inroads and impediments to access. *Journal of Advanced Academics*, 24, 77-107. doi:10.1177/1932202X13476289
- Hunter, K. M., Westwick, J. N., & Haleta, L. L. (2014). Assessing success: The impacts of a fundamentals of speech course on decreasing public speaking anxiety. *Communication Education*, 63, 124-135. doi:10.1080/03634523.2013.875213

- Hunter, K. M., Westwick, J., Chromey, K., & Haleta, L. (2016). The basic course as a foundation for student success: A pilot study assessing students' impostor phenomenon. Paper presented at the meeting of the Central States Communication Association, Grand Rapids, MI.
- Huntley, H. J., & Schuh, J. H. (2002). Post-secondary enrollment: A new frontier in recruitment and retention. *Journal of College Student Retention*, 4, 83-94. doi:10.2190/4XQF-P3CB-LQM8-BQQL
- Jarrett, C. (2010). Feeling like a fraud. *The Psychologist*, 23, 380-383. Retrieved from <https://thepsychologist.bps.org.uk/volume-23/edition-5/feeling-fraud>
- Jensen, E. P., & Nickelsen, L. (2008). *Deeper learning: 7 powerful strategies for in-depth and longer lasting learning*. Thousand Oaks, CA: Corwin Press.
- JoHyun, K., & Bragg, D. D. (2008). The impact of dual and articulated credit on college readiness and retention in four community colleges. *Career and Technical Education Research*, 2, 133-158. doi:10.5328/CTER33.2.133
- JoHyun, K., Kirby, C., & Bragg, D. D. (2006). Dual credit: Then and now. Retrieved from <http://occr.illinois.edu/docs/librariesprovider4/dual-credit/then-now>
- Jones, S. R., & Abes, E. S. (2013). *Identity development of college students: Advancing frameworks for multiple dimensions of identity*. San Francisco, CA: Jossey-Bass.
- Keppel, G., & Wickens, T. D. (2004). *Design and analysis: A researcher's handbook* (4th ed.). Upper Saddle River, NJ: Pearson.
- Kim, J. (2014). Relationship of tech prep and dual credit to college readiness and retention. *College Student Journal*, 48, 337-346.
- King, P., & Baxter Magolda, M. B. (1996). A developmental perspective on learning. *Journal of College Student Development*, 37, 163-173.
- King, J. E., & Cooley, E. L. (1995). Achievement orientation and the impostor phenomenon among college students. *Contemporary Educational Psychology*, 20, 304-312. doi:10.1006/ceps.1995.1019

- Kinnick, K. N. (2012). The impact of dual enrollment on the institution. New *Directions for Higher Education*, 2012(158), 39-47. doi:10.1002/he.20013
- Kinnick, K. N., Holler, E., & Bell, M. (2011). Assessing the impact of learning communities as an alternative delivery models for the public speaking course. *Basic Communication Course Annual*, 23, 172-214. Retrieved from <http://ecommons.udayton.edu/bcca/vol23/iss1/11/>
- Kolligian Jr., J., & Sternberg, R. J. (1991). Perceived fraudulence in young adults: Is there an impostor phenomenon? *Journal of Personality Assessment*, 56, 308-326. doi:10.1207/s15327752jpa5602\_10
- Kumar, S., & Jagacinski, C. M. (2005). Imposters have goals too: The imposter phenomenon and its relationship to achievement goal theory. *Personality and Individual Differences*, 40, 147-157. doi:10.1016/j.paid.2005.05.014
- Mansell, N., & Justice, M. (2014). Learning from the past: Dual credit. *Administrative Issues Journal: Education, Practice, and Research*, 4, 1-10. doi:10.5929/2014.4.1.5
- Marken, S., Gray, L., & Lewis, L. (2013). Dual enrollment programs and courses for high school students at postsecondary institutions: 2010–11 (NCES 2013-002). Retrieved from U.S. Department of Education, National Center for Education Statistics: <https://nces.ed.gov/pubs2013/2013002.pdf>
- McCourt, M. (2007). The effect of an introductory speech course on student's speech anxiety (Unpublished master's thesis). Eastern Michigan University, Ypsilanti, MI.
- McCroskey, J. C. (1970). Measures of communication-bound anxiety. *Speech Monographs*, 37, 269-277. doi:10.1080/03637757009375677
- McCroskey, J. C. (1984). The communication apprehension perspective. In J. A. Daly & J. C. McCroskey (Eds.), *Avoiding communication: Shyness, reticence, and communication apprehension*. Beverly Hills, CA: Sage Publication.

- McCroskey, J. C., Booth-Butterfield, S., & Payne, S. K. (1989). The impact of communication apprehension on college student retention and success. *Communication Quarterly*, 37, 100-107. doi:10.1080/01463378909385531
- McGregor, L., Gee, D. E., & Posey, K. E. (2008). I feel like a fraud and it depresses me: The relation between the imposter phenomenon and depression. *Social Behavior and Personality: An International Journal*, 36(1), 43-48. doi:10.2224/sbp.2008.36.1.43
- Medvide, M. B., & Blustein, D. L. (2010). Exploring the educational and career plans of urban minority students in a dual enrollment program. *Journal of Career Development*, 37, 541-558. doi:10.1177/0894845309350920
- Morreale, S. P., Myers, S. A., Backlund, P. M., & Simonds, C. J. (2016). Study IX of the basic communication course at two- and four-year U.S. colleges and universities: A re-examination of our discipline's "front porch". *Communication Education*, 65, 338-355. doi:10.1080/03634523.2015.1073339
- National Communication Association. (2015, September 29). Defining the basic course. Retrieved from <http://ams.natcom.org/teachingandlearning/basiccourse/defining/>
- Richmond, V. P., Wrench, J. S., & McCroskey, J. C. (2013). *Communication apprehension, avoidance, and effectiveness* (6th ed.). Upper Saddle River, NJ: Pearson.
- Rodgers, R. F. (1990). Recent theories and research underlying student development. In D. G. Creamer & Associates (Eds.), *College student development: Theory and practice for the 1990s* (pp. 27-79). Alexandria, VA: American College Personnel Association.
- Rubin, R. B., Rubin, A. M., & Jordan, F. F. (1997). Effects of instruction on communication apprehension and communication competence. *Communication Education*, 46, 104-114. doi:10.1080/03634529709379080
- Schuh, J. H. (1989). A student development theory to practice workshop. *Journal of Counseling & Development*, 67, 297-298. doi:10.1002/j.1556-6676.1989.tb02606.x



- Smith, T. E., & Frymier, A. (2006). Get 'real': Does practicing speeches before an audience improve performance? *Communication Quarterly*, 54, 111-125.  
doi:10.1080/01463370500270538
- Spinath, B. (2011, March). Great pretenders: People who feel their success is undeserved. *Scientific American*, 22(1). Retrieved from  
<http://www.scientificamerican.com/article/great-pretenders/>
- Stark Education Partnership. (2015). Do facilitated online dual credit courses result in deep learning? Retrieved from Stark Education Partnership website:  
<http://www.edpartner.org/pdfs/Deep%20Learning.pdf>
- Studdard, S. (2002). Adult women students in the academy: Imposters or members? *Journal of Continuing Higher Education*, 50(3), 17-24.  
doi:10.1080/07377366.2002.10401202
- Suwinyattichaiorn, T., & Broeckelman-Post, M. A. (2016). Assessing the effects of a public speaking course on native and non-native English speakers. *Basic Communication Course Annual*, 28, 87-115. Retrieved from  
<http://ecommons.udayton.edu/bcca/vol28/iss1/12/>
- Taylor, J. L. (2015). Accelerating pathways to college: The (in)equitable effects of community college dual credit. *Community College Review*, 43, 355-379.  
doi:10.1177/0091552115594880
- Taylor, J. L., Borden, V. M., & Park, E. (2015). State dual credit policy: A national perspective. *New Directions for Community Colleges*, 2015(169), 9-19.  
doi:10.1002/cc.20128
- Thomas, N., Marken, S., Gray, L., & Lewis, L. (2013). Dual credit and exam-based courses in U.S. public high schools: 2010-11 (NCED 2013-001). Retrieved from U.S. Department of Education, National Center for Education Statistics website:  
<https://nces.ed.gov/pubs2013/2013001.pdf>
- Topping, M. E., & Kimmel, E. B. (1985). The impostor phenomenon: Feeling phony. *Academic Psychology Bulletin*, 7, 213-226.

- Waits, T., Setzer, J. C., & Lewis, L. (2005). Dual credit and exam-based courses in U.S. public high schools (NCES Publication No. 2005-009). Retrieved from U.S. Department of Education, National Center for Education Statistics website: <https://nces.ed.gov/pubs2005/2005009.pdf>
- Wang, X., Chan, H., Phelps, L. X., & Washbon, H. I. (2015). Fuel for success: Academic momentum as a mediator between dual enrollment and educational outcomes of two-year technical college students. *Community College Review*, 43, 165-190. doi:10.1177/0091552115569846
- Westwick, J. N., Hunter, K. M., & Haleta, L. L. (2015). Shaking in their digital boots: Anxiety and competence in the online basic public speaking course. *Basic Communication Course Annual*, 27, 44-77. Retrieved from <http://ecommons.udayton.edu/bcca/vol27/iss1/10/>
- Westwick, J. N., Hunter, K. M., & Haleta, L. L. (2016). A digital divide? Assessing self-perceived communication competency in an online and face-to-face basic public speaking course. *Basic Communication Course Annual*, 28, 48-86. Retrieved from <http://ecommons.udayton.edu/bcca/vol28/iss1/11/>
- Young Jr., R. D., Joyner, S. A., & Slate, J. R. (2013). Grade point average differences between dual and nondual credit college students. *Urban Studies Research*, 2013, 1-6. doi:10.1155/2013/638417
- Zinth, J. D. (2014). Dual enrollment: A strategy to improve college-going and college completion among rural students. Retrieved from the Education Commission of the States website: <http://www.ecs.org/clearinghouse/01/12/61/11261.pdf>