2017

# Mentoring At-Risk Middle School Students to Reduce Communication Apprehension

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**ABSTRACT**

Research has demonstrated the efficacy of mentoring at-risk students in a number of fields from physical education to math and science. While separate research has found that many at-risk students lack effective communication skills, little research has explored the potential of communication mentoring in improving at-risk students' communication efficacy. In our study, we examined the effectiveness of communication majors in a senior capstone course mentoring at-risk middle school students. Mentors were assigned a protégé and were required to design a curriculum targeting specific communication apprehension concerns identified in each student and implement the curriculum over a 10-week period. Analysis of self-reported communication apprehension scores showed at-risk students prior to mentoring reported higher than average levels of communication apprehension. After mentoring, they reported statistically significantly lower levels of communication apprehension. The implications for mentoring, at-risk students, and improved middle school communication education are considered.

Mentoring at-risk middle school students has been studied for many years in disciplines including education (Navarro, 1998), health and physical education (Ryan & Olasov, 2013), math (Simon, Abrams, & McDonnough, 2008), and science (Monk et al., 2014). Additionally, mentoring activities in school settings have been determined to be a successful tool for reaching at-risk students (Carter, 2004; Coppock, 2005; Daloz, 2004; Komosa-Hawkins, 2012) and bolstering their confidence in their academic abilities (Holmes, Redmond, Thomas, & High, 2012).

Students are generally categorized as being at-risk when one or more of the following factors are present: poor attendance, behavioral problems, poverty, violence, failing grades, substance abuse, or failure to pass standardized tests (Slavin & Madden, 2004). Jones and Birdsell (2015) determined that at-risk students also

lack fundamental communication skills. The inability to communicate effectively could potentially deter at-risk students from engaging in healthy self-monitoring, appropriate self-advocacy, or effective communication with teachers and administrators. Jones and Birdsell (2015) argued that improving communication skills could move many students from at risk to progressing satisfactorily.

We sought to harness the strengths of mentoring programs with communication curricula by assigning undergraduate communication studies majors in their senior year to mentor at-risk, middle school students in communication skills. The methodology used and the results of the study are shared in this paper along with the implications for future research.

## Literature review

### Mentoring

In 2003, the National Mentoring Partnership defined mentoring as, "a structured and trusting relationship that brings young people together with caring individuals who offer guidance, support, and encouragement aimed at developing the competence and character of the mentee" (Balcazar, Davies, Viggers, & Tranter, 2006, p. 43). Through mentoring, strong relationships are formed and the relationship creates the greatest benefit for the at-risk student (DuBois, Holloway, Valentine, & Cooper, 2002). These relationships involve "the sharing of real life experiences and knowledge [which] has been shown to be an effective intervention strategy for at-risk middle school students" (Lampley & Johnson, 2010, p. 68).

As an intervention strategy, mentoring programs have been found to meet the needs of at-risk students unmatched by alternative approaches (Johnson, 2006). When partnered with a supportive, caring adult mentor, at-risk students not only enhanced their self-esteem, but improved their grades and learned how to establish obtainable goals (Flaxman, Ascher, & Harrington, 1998; Smink, 2000). Johnson and Lampley (2010) investigated the relationship of a mentoring program with at-risk student's GPA's, discipline referrals, and attendance records and found improvements in each that were statistically significant between pre and posttesting.

Since many at-risk students come from unstable homes, Daloz (2004) argued that good mentors provided at-risk students with a positive and influential person in their lives. The positive mentor influence often led to improved academic achievement (Daloz, 2004). Good mentors make a difference in at-risk students by providing guidance, passing on knowledge, sharing life experiences, providing insight into making sound judgments, and perhaps most importantly, establishing a friendship. McPartland and Nettles (1991) summarized the research regarding mentoring to show mentoring to consistently be a beneficial and cost-effective approach to assisting at-risk students.

### At-risk students

Students are typically categorized in school as overachievers, the average, and the at-risk (Dupree & Morote, 2011). The overachievers are self-sustaining, receive focus and attention from teachers, and have few issues getting accepted into college. Average students typically graduate high school but may or may not attempt college. The at-risk students are those students who have a higher dropout rate in high school and are less likely to go to college. At-risk students struggle in school whether they try and fail or fail to try. Typically, at-risk students have trouble in their home life and those troubles detract from their ability to learn in school (Dupree & Morote, 2011).

Lippert, Titsworth, and Hunt (2005) reinforced the concern that at-risk students are "in danger of academic failure or exclusion from school . . . for a variety of inter-related reasons" (p. 1). Attempting to identify and address potential interrelated reasons can play a key role in moving an at-risk student out of the at-risk category. Hecker, Young, and Caldrella (2014) explained, "[c]atching behavioral problems early and taking the time for 'appropriate interventions' can be critical in preventing both behavioral and academic difficulties" (p. 21).

Among the problems that can be targeted early are communication skills. Communication skills as a topic of concern for at-risk students was specifically highlighted by McWhirter, McWhirter, McWhirter, and McWhirter (1994) when the authors argued that low achieving or at-risk students needed to develop five *C's* of competence to help them succeed. One of the identified *C's* was "communication with others" (p. 190). Unlike much of the at-risk education focus on reading and mathematics, McWhirter et al. recognized communication abilities and perceptions of self-efficacy in communication might play a role in improving at-risk student performance. It follows, then, that communication apprehension might impede at-risk student success.

### Communication apprehension

McCroskey (1977) defined communication apprehension (CA) as "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (p. 241). People who are fearful of communicating usually tend to keep quiet or try to avoid a social situation entirely. While it is common to associate communication apprehension with public speaking and/or "stage fright" (Clevenger, 1959, p. 134), communication apprehension applies to a broad range of areas involving communication. McCroskey and Richmond (1982) echoed this sentiment by identifying that an individual can experience communication apprehension in any situation, not just public speaking.

Communication apprehension and learning challenges have long been connected. Roby (2009) noted that individuals tended to have more communication apprehension when they were not taught an adequate amount of communication

skills. In a meta-analytic review of communication apprehension, Allen and Bourhis (1996) concluded that there was a negative relationship between the level of communication apprehension and communication skills. McCroskey (1976) made this connection when he noted, "Communication apprehensives learn less than low communication apprehensive throughout their elementary and secondary education" (p. 5). Chesebro et al. (1992) found that at-risk middle school students had more communication apprehension when speaking in groups and to strangers than national norms indicate is typical. Negative relationships between communication skills and academic success can clearly lead to negative consequences for students.

Improving communication skills can improve a student's academic classification. Rosenfeld, Grant, and McCroskey (1995) examined the inverse of Chesebro et al.'s (1992) study by looking at communication apprehension among talented or *gifted* students. The results of the study argued that talented/gifted students had very low apprehension when speaking in groups or with strangers when compared to national norms. Rosenfeld, Richman, and Bowen (1998) expanded upon earlier studies by looking at the role of supportive communication in at-risk middle school students. The authors discovered that at-risk students with poor communication skills received poor or very low supportive communication at home. Rosenfeld and Richman (1999) tested the same hypothesis on at-risk high school students and discovered similar results.

### Communication and academic success

Communication skills are closely related to both academic and social success. Rozkan (2014) examined the relationship between communication skills, problem-solving skills, and self-efficacy perception in adolescents and concluded that communication skills and interpersonal problem-solving skills were significantly correlated to social self-efficacy. Communication skills and interpersonal problem-solving skills were also found to be important predictors of social self-efficacy.

Communication competence can be increased and apprehension reduced through curriculum interventions (Rubin, Rubin, & Jordan, 1997). Communication skills are not innate and must be taught. Richmond, Wrench, and McCroskey (2013) noted,

> Most of us are born with this potential to learn communication; whether or not we acquire effective communication skills is up to our teachers and to us. Through careful instruction, personal observation, experience, and practice an individual can learn many of the communication skills needed to be a better communicator. (p. 15)

Many high schools struggle to introduce communication education for even the highest achieving students. When at-risk students are not on track to graduate, the remedial focus in most high school curricula is on reading, writing, and mathematics, not improved communication. At the middle school where the research for this study was conducted, there was no required public speaking class or *formal*

communication-training course of any kind. That is typical in most states' middle school curricula. Students may occasionally give presentations in regular classes but receive very little, if any, instruction from a faculty member who specialized in communication.

Effective communication skills must be taught. At-risk students can lack good communication skills role models or may grow up in environments where the importance of communication skills is not emphasized (Daloz, 2004; Rosenfeld et al., 1998). Additionally, mentoring has been identified as a successful tool in reaching at-risk students.

Mentoring programs clearly have a role in helping at-risk students improve their academic performance in the areas of grades, goal-setting, and self-esteem. Communication apprehension has been linked to student ability with high-performing students experiencing low communication apprehension and at-risk students demonstrating high communication apprehension when speaking to strangers or when engaged in public speaking. In our study, we focused on a college-to-middle school mentoring program designed to (a) promote positive relationships between college mentors and at-risk middle school students and (b) explore the intersection between communication-specific mentoring and at-risk students' levels of communication apprehension. This focus allowed us to explore whether lack of communication efficacy plays a role in at-risk students' marginal academic performance; at-risk students should report higher than normal communication apprehension if there is a connection between communication apprehension and at-risk status. Further, the efficacy of communication mentoring was explored. If mentoring is effective at increasing communication performance and/or perceptions of communicative ability, communication apprehension should decrease after the mentoring intervention.

## Research questions

We asked two research questions. First, *Do at-risk middle school students report higher than average communication apprehension?* Researchers have suggested that communication skills are learned (Richmond et al., 2013) and since at-risk students have often struggled with other forms of instruction, they may well be behind on communication skills as well. Other researchers have linked student status (e.g. at-risk, gifted) with varying levels of communication apprehension in various contexts (Chesebro et al., 1992; Rosenfeld et al., 1995). Accordingly, we hypothesize a link between at-risk status and higher than average levels of communication apprehension.

Second, *Does mentoring at-risk students in specific areas of communication skill deficiencies decrease self-reported communication apprehension?* We predicted that students' communication apprehension could be successfully reduced through a program of communication skills mentoring. This prediction is supported by previous research (Flaxman et al., 1998; Holmes et al., 2012; Smink, 2000) that found

mentoring effective at improving confidence in other areas like self-esteem and science skills. Pretest to posttest decreases in reported communication apprehension would be evidence of the effectiveness of communication mentoring.

## Method

### Participants and context

At-risk middle school students ($N = 47$) were tested at a small public middle school in the Pacific Northwest. Consistent with the way other mentoring studies have identified and recruited at-risk students (Johnson, Gupta, Rosen, & Rosen, 2013; Jung, Molfese, & Larson, 2011; Kolar & McBride, 2011), all 47 students were recognized as at-risk and recommended for participation by the teachers, counselors, and administrators of two local middle schools.

Students were recommended for the program after their sixth grade year if their academic progress and interaction with school staff indicated that the student was at-risk to drop out of high school (based upon observable trends and patterns in the student body). The three main criteria used to determine if a student was at-risk were poor grades (multiple *D's* or *F's*), greater than 20% absentee rate, and scoring below the minimum state standard score in numerous subject areas on the standardized state tests.

None of the students in the program had Individualized Education Plans (IEPs), because they did not qualify for one.[1] It had been determined by the local school district that students with IEPs were receiving the attention and help needed to improve. The students in this program did not qualify for an IEP, yet were failing and deemed by school officials likely to drop out of school; staff was at a loss to explain why.

After receiving IRB approval to conduct the study, students self-identified demographic information on a written questionnaire. Twenty-eight students identified as Caucasian, 12 students identified as Hispanic, 4 identified as African-American, 1 was Asian, and 2 were designated as *other*. The average age for the test group was 12.7 years and there were 27 females and 20 males.

At-risk students in the study were placed in a class designed to encourage them to excel academically and begin thinking about college. The students, along with their parents, had to apply to the program, be interviewed, and accepted. The program was housed at the local Alternative School. The middle school students were bused to the Alternative School location for the first two periods of each day.

Sixteen college students in three different communication senior capstone courses at a small private college in the Pacific Northwest were trained as mentors for this project. Students voluntarily signed up for this course aware that it would involve mentoring at-risk middle school students (an additional section of the course was offered that did not involve the mentoring process). Each mentor read several articles on at-risk students and mentoring and authored several papers on communication apprehension to demonstrate understanding of the

topic. The course instructor spent the first three weeks of the course reviewing and discussing all of the assigned training material with the students/mentors. Each mentor was trained by the course instructor on how to properly administer tests on communication apprehension, including the McCroskey (1982) PRCA-24, how to conduct a blind study, and how to recognize communication apprehension.

## Intervention

Following training, each mentor was assigned two to three at-risk students and given a 10-week window to work with the protégés. Along with some other diagnostic scales, each at-risk student completed the McCroskey (1982) PRCA-24 scale to determine his or her level of communication apprehension.

Once the first sets of tests were administered, the mentors met with the course instructor to discuss test results. Mentors were required to identify specific communication skill deficiencies and needs in the protégés assigned to them. Based on those discussions, the mentors were then required to design curriculum to address the identified communication skill deficiencies. The mentors were required to present the proposed materials to the instructor to receive approval. Once approved, the mentors met with their protégés once a week for 10 weeks one on one to teach the material. The mentors also met weekly with the course instructor to review progress, discuss challenges and frustrations, and adapt and adjust material as needed.

The communication interventions designed by the mentors varied based upon the perceived needs of the protégé as determined after communication diagnostic testing and several one-on-one meetings. Activities included role-play, communication vocabulary development, discussion of hypothetical communication scenarios, training in nonverbal self-monitoring and expression, development of positive examples of emotion expression, and other communication-focused training developed by the mentor.

While it is beyond the scope of this article to lay out each activity and curriculum developed for this communication-mentoring project, the kinds of communication-focused mentoring that occurred were designed to decrease communication apprehension through the building of communication skills. For example, one protégé was determined not to understand the difference between confirming and disconfirming language—common concepts in communication studies that can be used to predict whether a communication exchange is likely to trigger conflict or not. The mentor designed a series of exercises reframing the concept to middle school language using the idea of *hot* and *cool* words. The mentor created worksheets with hypothetical situations where a conversation went bad. The protégé was given the opportunity to identify where the conversation went wrong, what words caused the conversation to go bad, and then provide options for what the person could have said to avoid the *hot* conversation climate. Another mentor determined that the protégé had poor listening skills and learned best through

role-playing. The mentor designed a series of role-playing scenarios and acted them out with the protégé who demonstrated a marked improvement in understanding the listening process. One mentor found that the protégé complained that no one liked him but had no idea that his nonverbal behavior (turning his back to the group, presenting an emotionless face, and putting his head down on the desk) might play a role in how positively others perceived him. The mentor developed a series of worksheets designed to teach specific nonverbal behaviors to present himself to others as he would like to be seen. When one protégé was found by the mentor to have some anger management issues that focused primarily around not knowing how to express hurt feelings in a positive way, the mentor designed a set of work-sheets on anger management. The mentor taught the protégé how to identify the root of the anger experienced, how to evaluate if the anger was real or fabricated, and then ways to communicate that emotion in a positive and healthy way.

These are a few examples of the how the numerous individual communica-tion deficiencies were addressed between mentor and protégé.[2] All lessons and activities were monitored, evaluated, and assessed by the professor of the senior capstone course and were changed, adapted, or modified as needed or as the student progressed. A two-step mentoring process took place. The professor of the course mentored the mentors and the mentors mentored the protégés.

### Instrumentation

Communication apprehension was measured using McCroskey's (1982) Personal Report of Communication Apprehension (PRCA-24) instrument. The PRCA-24 was selected because of its widespread recognition as an effective measure of commu-nication apprehension (Levine & Mccroskey, 1990; McCroskey, Beatty, Kearney, & Plax, 1985; & McCroskey & Richmond, 1982). The PRCA-24 contains 24 statements regarding feelings about communicating with others measured on a five-point Likert scale. The PRCA-24 produces an overall communication apprehension score and four apprehension sub-scores on communicating in various communication contexts: small group communication, large group communication, dyadic inter-action, and public speaking.

### Reliability

Alpha reliability estimates for the 24-item composite communication apprehen-sion score range from .93 to .95 (McCroskey et al., 1985). The sub-scores are only slightly less reliable than the overall PRCA-24 communication apprehension score (McCroskey & Beatty, 1984), but the instrument has yielded test–retest reliability coefficients over .80 with stability across time (Rubin, Graham, & Mignerey, 1990).

### Validity

Construct- and criterion-related validities of the PRCA-24 are well established. McCroskey and Beatty (1984) found that the four sub-scores predicted state anxiety

**Table 1.** High-, average-, and low-level ca ranges on the PRCA-24 composite and subscales.

| CA context | High CA | Average CA | Low CA |
|---|---|---|---|
| | M | M | M |
| Small group communication | >20 | 20–11 | <11 |
| Large group communication | >20 | 20–13 | <13 |
| Dyadic communication | >18 | 18–11 | <11 |
| Public speaking | >24 | 24–14 | <14 |
| Composite PRCA-24 score | >80 | 80–51 | <51 |

experienced in related contexts, and public speaking communication apprehension scores on the instrument have been shown to predict communication avoidance and withdrawal (Beatty, 1987) and speech duration (Beatty, Forst, & Stewart, 1986). The PRCA-24 correlates negatively (−.70) with assertiveness (McCroskey et al., 1985) as the construct would suggest.

### Norming

The PRCA-24 has been used on a large national pool of communicators producing known norm scores for the overall instrument and each subscale (McCroskey, 1982). National norms for the PRCA-24 are based on a sample of 40,000 college students and 3,000 non-student adults (which yielded virtually identical means and standard deviations) providing data at the composite and subscale levels (McCroskey, 1982). Composite scores on the PRCA-24 range from 24 to 120, and, as Table 1 illustrates, low, average, and high level ranges of CA have been established for the composite and sub-scale scores. Composite scores below 51 represent people who have very low CA. Scores between 51 and 80 represent people with average CA. Scores above 80 represent people who have high levels of trait CA.

### Data collection

Collection of pretest PRCA-24 data occurred at the first mentoring session and was moderately blind (Babbie, 2013). Students were asked to respond to the PRCA-24 test questions as a part of the regular class curriculum (i.e. the testing was conducted in the course of a normal class period). Mentors knew subjects' names, but subjects were never informed as to the specific variables measured in the instrument. Mentors told protégés the test was just part of a *get to know you* exercise. The PRCA-24 was administered again at the conclusion of the 10-week mentoring intervention.

## Results and discussion

Our first research question was related to at-risk students and if they would report higher than average communication apprehension (CA). Data collected on the pretest PRCA-24 suggested the answer to this question is, yes. The mean pretest composite communication apprehension score of 81 (SD = 18.4) reported by the

**Table 2.** National norms, pretest and posttest means and standard deviations for all study variables.

| CA Context | PRCA-24 national norms (n = 43,000) | | Pretest (n = 47) | | Posttest (n = 47) | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD |
| Small group communication | 15.4 | 4.8 | 19.6* | 5.1 | 16.3** | 5.6 |
| Large group communication | 16.4 | 4.2 | 20.0* | 4.8 | 16.9** | 5.6 |
| Dyadic communication | 14.2 | 3.9 | 18.5* | 4.5 | 15.4** | 4.7 |
| Public speaking | 19.3 | 5.1 | 22.9* | 6.1 | 19.1** | 6.0 |
| Composite PRCA-24 score | 65.6 | 15.3 | 81.0* | 18.4 | 67.7** | 19.9 |

*Pretest mean differs significantly ($p < .001$) from the PRCA-24 national norm mean;
**Posttest mean differs significantly ($p < .001$) from the pretest mean; Posttest mean is NOT significantly different than national norm mean.

at-risk middle school students in this study falls within the high CA range on the PRCA-24.

As Table 2 shows, the differences between the norm for CA scores and the higher CA scores reported by the at-risk students at the time of the pretest were statistically significant. For the at-risk sample, the values of the mean and standard deviation for the composite PRCA-24 were 81 and 18.4, respectively. The national mean is 65.6. The difference between the sample mean and the national mean is statistically significant at the .001 level ($t = 5.742$, d$f = 46$). Further, the Hedges' effect size value[3] ($g = 1.01$) suggested high practical significance as the at-risk middle school students were more than one standard deviation higher in CA than the national norm.

The at-risk students reported higher levels of CA than the national average on each of the four subscales of the PRCA-24 assessing CA in specific communication contexts. For the at-risk student sample, the values of the mean and standard deviation of reported CA in small group communication were 19.6 and 5.1, respectively. The national mean is 15.4. The difference is significant at the .001 level ($t = 5.624$, d$f = 46$) and the effect size was relatively large ($g = .88$).

For the at-risk student sample, the values of the mean and standard deviation of reported CA in large group communication were 20.0 and 4.8, respectively. The national mean is 16.4. The difference is significant at the .001 level ($t = 5.227$, d$f = 46$) with a large effect size ($g = .86$).

For the at-risk student sample, the values of the mean and standard deviation of reported CA in dyadic interactions were 18.5 and 4.5, respectively. The national mean is 14.2. The difference is significant at the .001 level ($t = 6.467$, d$f = 46$) with a very large effect size ($g = 1.10$).

Similar results were found on the final subscale—feeling toward public speaking. For the at-risk student sample, the values of the mean and standard deviation of reported CA in public speaking contexts were 22.9 and 6.1, respectively. The national mean is 19.3. The difference is significant at the .001 level ($t = 4.014$, d$f = 46$) with a medium effect size ($g = .71$). In clear support of the predicted relationship of the variables in research question one, the data showed that prior to

mentoring these at-risk students reported mean CA scores meaningfully above the national average in every communication context.

Research question two related to mentoring at-risk students in specific areas of communication skill deficiencies would decrease their self-reported communication apprehension. Analysis of the post-mentoring responses to the PRCA-24 suggests it does; when compared to either the students' pretest scores or the national averages on the PRCA-24, mentoring appears to have lowered at-risk student CA.

To compare students' post-mentoring perceptions of their feelings toward communicating in various contexts to their pre-mentoring feelings, paired-samples $t$-tests of their pre and posttest PRCA-24 scores were conducted. The mean composite CA score decreased from 81.0 (SD = 18.4) on the pretest to 67.7 (SD = 19.9) on the posttest with a medium effect size ($d$ = .69).[4] The difference between the two means is statistically significant at the .001 level ($t$ = 10.576, d$f$ = 46). Most interestingly, the difference between the national sample's mean composite CA score ($M$ = 65.6$)$ and the students' overall score on the posttest ($M$ = 67.7, SD = 19.9) was not statistically significant ($t$ = .733, d$f$ = 46, $p$ = .467) where it had been on the pretest. Through mentoring, this sample of at-risk students went from high levels of self-reported CA to levels well within the 51 to 80 point range McCroskey (1982) identified as average CA.

Similar results were found on the subscales. Paired sample $t$-tests revealed statistically significant differences between the pretest and posttest scores on all four subscales. In the small group communication context, the mean CA subscore decreased from 19.6 (SD = 5.1) to 16.3 (SD = 5.6) on the posttest with a medium effect size ($d$ = .62). The difference is statistically significant at the .001 level ($t$ = 6.831, d$f$ = 46). The mean score on the large group CA subscale decreased from 20.0 (SD = 4.8) on the pretest to 16.9 (SD = 5.6) on the posttest, another statistically significant difference ($t$ = 7.762, d$f$ = 46, $p$ < .001) with medium effect size ($d$ = .59). The mean CA score for dyadic interactions decreased from 18.5 (SD = 4.5) to 15.4 (SD = 4.7) on the posttest ($d$ = .67). The difference is statistically significant at the .001 level ($t$ = 8.133, d$f$ = 46). Finally, the mean score for public speaking CA fell from 22.9 (SD = 6.1) on the pretest to 19.1 (SD = 6.0) on the posttest. The difference is statistically significant at the .001 level ($t$ = 8.072, d$f$ = 46) and the effect size is medium ($d$ = .63).

Comparing the at-risk students' post-mentoring PRCA-24 sub-scores to the national averages and suggested ranges of low, average, and high CA on each subscale offers further support for the value of communication mentoring in reducing CA. Mean scores on each sub-scale at the time of the posttest fell within what the McCroskey (1982) PRCA-24 instrument identified as *moderate* CA (p. 82). McCroskey describes communicators with this level of CA as "average" and aware that there are times when they should talk and times when they should not. He further describes communicators with CA at these levels as apprehensive in some situations but not in others. Before mentoring, these at-risk students reported CA levels characterized by McCroskey as likely to be reported by the shy, withdrawn,

fearful, tense, and nervous. Unlike with the pretest, comparison of the posttest subscale averages to the known national norms did not produce any statistically significant differences.

## Limitations and suggestions for future research

Perhaps the biggest limitation for this study was the sample size. However, despite the sample size, we found significance ($p < .001$) and effect sizes ranging from .71 to 1.01 when comparing at-risk students' pretest subscale and overall scores on the PRCA-24 to the national average and when comparing at-risk students' pretest scores to their own post-mentoring scores (effect sizes ranged from .59 to .69). These preliminary results should justify additional studies of this kind in other, larger school districts or broader geographic regions. As the sample size increases, so may the types of demographic data gathered as it can be argued that students become less individually identifiable in larger, aggregate groups. Identifying the way previously identified academic factors, such as attendance, GPA, and performance on standardized tests or domestic factors, such as socioeconomic status and exposure to drugs/violence (Slavin & Madden, 2004) influence the intervention's success would enhance the curriculum's development. In the long term, we would expect academic improvements, as students are better able to express themselves with teachers, counselors, and peers. Future researchers should explore these improvements longitudinally, tracking students from the initial categorization of at-risk to graduation or the removal of the at-risk label.

Future researchers might also analyze data collected by the mentors as mentoring programs offer benefits to mentors as well as protégés. Lee, Germain, Lawrence, and Marshall (2010) explored college students' navigation of a youth mentoring program and discovered, "Particular mentoring program components can enhance college students' mentoring commitment and provide them with opportunities for interaction across boundaries of difference, leading to multiple benefits" (p. 33). When exploring the benefits derived by college students' when mentoring at-risk youth in a service learning course, Weiler et al. (2013) found that college students' "had significantly higher scores at post-intervention regarding mentors' civic attitudes, community service self-efficacy, self-esteem, interpersonal and problem solving skills, political awareness, and civic action" (p. 236). Monk et al. (2014) explored the role of mentors in teaching math and science to at-risk students and found, "Mentors improved their science communication skills, benefitted personally by giving back to the community, and took pride in their student's work" (p. 385). Therefore, based on the results from our study, we conclude that the development of mentoring programs for at-risk middle-school students by college communication students is not only justified but also essential to addressing the needs of at-risk students. Early detection of communication skill deficiencies in at-risk students can help assess the needs of the at-risk student. Through mentoring and education of healthy communication skills, many at-risk students may be

able to overcome their deficits to help them advocate for themselves in a positive, proactive manner and move out of the at-risk category.

Preliminary analysis of mentor comments gathered as part of the study implementation suggests what some of the "multiple benefits" (Lee et al., 2010, p. 33) of mentoring might be to college students. Mentors in our study were required to keep a journal of their weekly meetings and report what took place, how they felt, and what they were learning. Those mentors reported such insights as "I learned that it takes so much more than a test to even get close to the root of someone's communication deficiencies," "The only truly effective way to understand them [protégés] is to spend time with them and listen," "I learned what to do and what not to do when working with young [at-risk] students," "I only wish I could have spent more time building a solid relationship with these girls," and "This was a really good experience and I think there is much to learn in regards to helping [at-risk] students improve their communication skills." For this group of senior communication majors, the role of mentor with at-risk students may have taught them more than any lecture, reading, or PowerPoint Presentation ever could.

In 2010, the Common Cores State Standards[5] were introduced, which included English Language Arts Standards in Speaking and Listening. These standards in speaking and listening centered on comprehension, collaboration, and presentation of knowledge and ideas[6] in an attempt to address the long known fact (among communication educators) that high school graduates are grossly underprepared in communication skills. As communication educators explore what the communication common core should consist of and how it should be implemented, this study indicates the value and role that mentoring can play in the learning process. Communication departments should engage in conversations exploring what role, if any, they could possibly play in their local primary and secondary education systems. Middle school at-risk students found to have low communication skills improved their deficiencies through mentoring. At-risk students, in general, have lower PRCA-24 scores but mentoring can improve those scores overall and move at-risk students from being high CA to average CA. The benefit of mentoring at-risk middle school students should become a part of the broader conversation about what skills students should be expected to gain during their education.

## Notes

1. An IEP is not the sole determining factor for an at-risk student. There are many other variables to consider such as attendance and grades as was the case with this school district.
2. Additional examples, if desired or needed, can be obtained by contacting the lead author of this article.
3. Hedges' *g* is preferred over Cohen's *d* for *t* tests where standard deviations and sample size differ between the two groups because it weights the relative size of each sample.
4. Given the 1.5 difference in SD, Gates' delta was calculated as well (delta = .72), but Cohen's *d* as the more conservative estimate of effect size is reported here.

5. © Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.
6. www.corestandards.org/assests/CCSSI.ELAStandards.pdf.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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