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The Rochester Institute of Technology

Department of Communication

College of Liberal Arts

Opening Doors or Creating Barriers?: The Influence of Interpreters on Levels of
Communication Apprehension among Deaf and Hard-of-Hearing Students

by

Jenna K. Williams

A Thesis submitted

in partial fulfillment of the Master of Science degree

in Communication & Media Technologies

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This thesis is dedicated to my mother who allayed every doubt, listened to every complaint and dried every tear along the road to its completion with patience and understanding. Without her never-ending support and guidance I wouldn't be the woman I am today.

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OPENING DOORS OR CREATING BARRIERS: THE INFLUENCE OF INTERPRETERS
ON LEVELS OF COMMUNICATION APPREHENSION AMONG
DEAF AND HARD-OF-HEARING STUDENTS

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Abstract

Classroom communication apprehension (CA) affects roughly 70% of undergraduate college students (Bowers, 1986, p. 373). After a discussion of CA as a theory, a survey tool is presented to measure if there is a difference in the amount and type of CA experienced by deaf and hard-of-hearing college students when compared to their hearing peers. The survey includes McCroskey's PRCA-24 tool for measuring CA and several additional questions on how the presence of a sign language interpreter influences levels of classroom CA. The survey's 155 respondents report a statistically significant difference in the amount and type of CA experienced. Limitations and possibilities for future research are discussed.

Keywords: communication apprehension, deaf, postsecondary education, interpreter, PRCA-24

Opening Doors or Creating Barriers: The Influence of Interpreters on Levels of Communication Apprehension among Deaf and Hard-of-Hearing Students

Almost all individuals, at some point in their life, will experience communication apprehension. Communication apprehension is anxiety one experiences when communicating, or anticipating communicating, with others. This apprehension occurs most often when one is placed into an unfamiliar communication event and McCroskey (1984) indicates that for many people the only way to avoid this anxiety “is to withdraw from or avoid such communication situations” (p. 26).

Though estimates vary, researchers believe there are between 136,000-160,000 deaf and hard-of-hearing students attending postsecondary education programs throughout the United States (Walter, 2010, p. 18). Adding a third person to the student-professor relationship, i.e. a sign language interpreter, alters the dyadic relationship dynamic and may add to the degree of communication apprehension that occurs in both one-on-one communications and large-group discussions. Professors and deaf students, the focus of this study, often express their anxiety about being able to communicate clearly when using an interpreter; and the time required to interpret creates unnatural pauses that may also add to apprehension. To further complicate the situation, the interpreter may not have the subject knowledge necessary to communicate proficiently in classrooms rich with specialized vocabulary and jargon.

As noted by researchers (Marschark, Sapere, Convertino, & Seewagen, 2005), there is very little research on deaf and hard-of-hearing students in the post-secondary classroom, even less on their interaction with hearing students, and virtually none on the communication exchanges of these students and their professors. Similarly, while studies on communication

apprehension abound (see: Bowers, 1986; Hurt, Scott, & McCroskey, 1978; McCroskey, 1977; Richmond & McCroskey, 1985) there is no research available on how this communication construct specifically influences the experiences of deaf and hard-of-hearing students. With a growing number of deaf and hard-of-hearing students attending universities across the United States every year (Walter, 2010) it is more important than ever to understand how CA affects their educational experience. One of the most concentrated populations of deaf and hard-of-hearing students (over 2000) attend the Rochester Institute of Technology (RIT), making RIT the ideal place to study the dynamic of deaf students in primarily hearing classrooms (Rochester Institute of Technology, 2010).

The new information found in this study can be used by professors, interpreters and deaf students to understand how introducing a third party to the classroom influences the experiences of all involved. The information can also aid interpreter education programs in teaching new interpreters how to best decrease potential CA experienced by deaf and hard-of-hearing students.

Review of Related Literature

The term communication apprehension (CA) was coined by James C. McCroskey in 1970 and defined as “an individual’s level of fear or anxiety associated with either real or anticipated communication with another person or persons” (1977, pg. 78). Since that time, CA has become “the most widely researched concept in the field of communication studies” (Wrench, Brogan, McCroskey, & Jowi, 2008, p. 404). Though communication apprehension is often linked to shyness, it is well recognized that CA will affect 95% of the general population during their lifetime (McCroskey, 1977; Wrench, McCroskey, & Richmond, 2007) and 70% of undergraduate college students (Bowers, 1986, p. 373). CA is most often experienced when

facing, what McCroskey terms, “a threatening oral communication situation” (1977, p. 79).

Often these situations are viewed as “threatening” due only to the person’s unfamiliarity with expectations.

McCroskey makes an important distinction between “trait apprehension,” a kind of CA that affects multiple areas of an individual’s life, and “state apprehension” which is specific to a given... communication situation” (1977, p. 79). The following literature review focuses on state apprehension because this study proposes to measure how the presence of a sign language interpreter specifically affects classroom CA and not all areas of a deaf or hard-of-hearing individual’s life.

State communication apprehension can be brought about by a variety of elements including but not limited to unfamiliarity, dissimilarity, conspicuousness, and degree of attention from others (Buss, 1980). In more serious cases, CA can lead to physical symptoms such as flushing, sweaty palms, queasy stomach and general discomfort (Bowers, 1986). Bauer (1986) surveyed undergraduate college students and found that 38% reported having some physical symptoms of apprehension when faced with having to communicate with an audience.

Unlike trait apprehension, state apprehension is not within an individual’s power to control as it is largely affected by other communicators and the environment. “Often, then, the only method of avoiding the unpleasant aspects of situational [state] CA is to withdraw from or avoid such communication situations” (McCroskey, 1984, p. 26). Specifically, in the classroom 58% of college students admitted to employing avoidance to deal with CA and 23% sometimes skip class altogether (Bowers, 1986). Prior history in similar communication situations can also add to CA; “[i]f an individual has failed before it is increasingly likely that he or she will fear

failure again, and hence will become more apprehensive” (McCroskey, 1984, p. 26); if an individual experiences a successful communication event, the opposite is true.

The antithesis of communication apprehension is willingness to communicate, an ability shown to have as positive an impact on quality of life as CA has negative (Richmond & McCroskey, 1985; McCroskey, 1992). Studies of college students show that those with a high willingness to communicate also scored high on self-perceived communication competence (Burroughs & Marie, 1990; McCroskey, Burroughs, Daun, & Richmond, 1990); thus “people who have a greater tendency to communicate with others also perceive themselves as more competent when communicating” (Wrench, Brogan, McCroskey, & Jowi, 2008, p. 406).

All the factors of CA and willingness to communication are incorporated in the professor/deaf student classroom dynamic. Deaf students have reported feeling isolated by the necessity of sitting in the front of the room to clearly see both the interpreter and professor (Kersting, 1997). This may amplify the tendency of students with severe CA to select seats “that permit them to engage in the least interaction possible...at the periphery of the room rather than in the front or center” (Hurt, Scott, & McCroskey, 1978, p. 149).

Students report that even the act of having an interpreter in the classroom “means you [are] probably in your deaf club [and] that you don’t fall into the hearing category... [hearing students] will be nice but nothing more than that” (Kersting, 1997, p. 257). Additionally, if a professor wishes to converse with a deaf student, frequently he or she must speak through an interpreter, leading to a degree of conspicuousness and attention from others not present in the professor/hearing student dynamic.

The importance placed on prior history when approaching a communication event makes it possible that one unskilled interpreter or difficult deaf student could color the perception of a professor to all future interactions with interpreters and deaf students. Such a negative experience is an unfortunate but common occurrence of mediated communication since even the most skilled interpreters cannot provide full access to deaf students “[i]f ‘full access’ is deemed to mean exiting a course lecture with knowledge equivalent to hearing classmates” (Marschark, Sapere, Convertino, & Seewagen, 2005, p. 46).

Willingness to communicate has a positive affect on both parties, so it is of concern that deaf students’ perception of the interpreter’s communication skills may be transferred to their perception of the professor and vice versa. While research shows that “students in mainstream classrooms are often sensitive to when it is the interpreter or the instructor who is hard to comprehend” (Marschark, Sapere, Convertino, & Seewagen, 2005, p. 44) no such research exists to indicate whether professors can differentiate between communication misunderstandings on the part of the interpreter and those of the deaf student.

Overall, classroom communication apprehension is a widely experienced event that has the ability to influence every part of a student’s classroom experience. CA colors student decisions on whether or not to interact with other students, ask a question during class or participate in classroom discussions. Introducing an interpreter into the communication event may compound the affects of CA for deaf and hard-of-hearing students in mainstream classrooms. However, without an interpreter many deaf and hard-of-hearing students would have minimal comprehension.

This study will investigate the following research questions about the CA experienced by deaf and hard-of-hearing college students:

RQ1: What is the difference between the degree of classroom communication apprehension of deaf or hard-of-hearing students when using an interpreter compared to those who don't?

RQ2: Which in-class interpreter behaviors do deaf or hard-of-hearing students say either enhance or diminish their level of communication apprehension?

RQ3: How does level of classroom communication apprehension of deaf or hard-of-hearing students compare to the degree of communication apprehension reported by hearing students?

Methods

Sampling Procedure

To be considered for inclusion students must have attended the Rochester Institute of Technology during the 2009-2010 academic year and registered as deaf or hard-of-hearing. Because all deaf and hard-of-hearing students are required to cross-register with both the Rochester Institute of Technology college of their choice and National Technical Institute for the Deaf (NTID), the NTID student directory provides a complete list of deaf and hard-of-hearing students attending RIT.

There are 1,417 students listed in the NTID student directory, including 141 hearing students in the ASL-English Interpretation program; removing these students leaves 1,276 deaf and hard-of-hearing students who made up the potential sample group. All deaf and hard-of-hearing students were emailed and had an equal opportunity to participate in the survey. The

student PRCA-24 responses previously published by McCroskey (1982) were compared to those of the deaf and hard-of-hearing students in this survey to see if there was a difference in the level of CA experienced.

Each student was contacted through their university provided email address two times: an original invitation to the survey, and a follow-up reminder email for those who had not yet responded (see Appendix B).

Survey Tool

Because of the large sample population ($N = 1276$) and desire to use McCroskey's already established PRCA-24 survey tool, a survey method was chosen for this research study. Though the study originally targeted a representative sample of the population, a low response rate of 12.15% ($n = 155$) keeps the sample from being truly representative.

The PRCA-24 is a 24-item Likert-style five-point survey developed by McCroskey and considered to be the most reliable tool for measuring communication apprehension. The PRCA-24 provides not only an overall measure of an individual's communication apprehension, it also measures the results into four sub-categories: meeting, public, interpersonal and small group.

The results of the PRCA-24 were used to categorize students as high, medium or low in communication apprehension using the scoring tool provided by McCroskey (1982). PRCA-24 scores can range from 24-120; scores below 51 are considered very low in CA, scores of 51-80 show average CA, and scores of 81 or higher represent high levels of CA. This CA ranking is used to discuss the findings of survey questions pertaining to students' perceptions of the role of interpreters in the classroom. Results sought correlations between the degree of communication apprehension experienced and the use of interpreters in the classroom.

The survey was distributed online through RIT's Clipboard online survey tool. Both deaf and hard-of-hearing students were asked to complete the Personal Report of Communication Apprehension (PRCA-24) as well as several five-point Likert-style questions about their use of American Sign Language interpreters in the classroom, two open-ended questions pertaining to the behaviors of classroom interpreters, and a series of standard demographic questions (see Appendix B). In addition to standard demographic questions respondents were asked about their degree of hearing loss. The question asked participants to identify their level of hearing loss in decibels by using the *Degree of Hearing Loss* (American Speech-Language-Hearing Association, n.d.). Responses to these additional questions about students' experiences with interpreters measured if CA came from the necessity of communicating through a third party.

Results

Research Question 1

RQ1 asked about the difference in levels of communication apprehension reported by deaf and hard-of-hearing students who communicated primarily through interpreters and those who used other access services such as C-print, note-taking and lipreading. An independent *k*-test found no statistically significant difference between the two groups (sig. = .926).

Research Question 2

RQ2 was a qualitative question asking about in-class interpreter behaviors that either enhanced or diminished the levels of CA experienced by deaf and hard-of-hearing students. To answer this research question, answers to open-ended survey questions about which interpreter behaviors either encouraged or prevented deaf and hard-of-hearing students from participating in classroom situations were coded for content. Each question will be discussed separately.

Interpreter behaviors encouraging participation.

Out of 155 total respondents, 97 answered survey question 8 which asked about interpreter behaviors that encouraged classroom participation. 32.99% ($n = 32$) respondents reported that they either did not use an interpreter (may use other access services, such as note-taking or C-print), or did not feel that interpreter behaviors influenced how they behaved in the classroom. The remaining 67.01% ($n = 65$) of responses were coded for similarities by looking for repeated words or concepts among answers, and behaviors mentioned in more than five responses were considered for further discussion.

Table 1

Interpreter Behaviors Encouraging Participation

Behaviors	Frequency
Strong voice interpreting skills	20
Signing skill	18
Personality/“friendly” attitude	16
Being professional	8
Having specialized content knowledge	7
“Exciting” body/facial expression	7
Encouraging the student to participate	6

Interpreter behaviors preventing participation.

Out of 155 total respondents, 98 answered survey question 9 which asked about interpreter behaviors that prevented classroom participation. 33.67% ($n = 33$) respondents reported that they either did not use an interpreter (may use other access services, such as note-

taking or C-print), or did not feel that interpreter behaviors influenced how they behaved in the classroom. The remaining 66.33% ($n = 65$) of responses were coded for similarities by looking for repeated words or concepts among answers, and behaviors mentioned in more than five responses were considered for further discussion.

Table 2

Interpreter Behaviors Preventing Participation

Behaviors	Frequency
Lack of skill/deletions when voicing	24
Lack of ASL skill	11
Bad attitude	11
Long lag time	11
Lack of specialized content knowledge	7
Dull/boring body/facial expression	7
Asking a student to repeat information	6
Side conversations with professor/interpreter/other students	6

The interpreter behavior reported to have the greatest influence on students' level of CA and willingness to communicate (survey questions 8 and 9) was the interpreter's ability to voice interpret their comments correctly. Interestingly, the way that deaf students judged the success of a voiced interpretation varied from a belief that if an interpreter asked for clarification or did not begin voicing immediately it meant that he or she was unable to voice correctly versus students who preferred that the interpreter receive the entire message before beginning to interpret into English.

Regardless of where students fell on this issue, most expressed frustration with interpreters “just assuming they have the right idea” when voicing, because, according to deaf students, “they usually don’t” (Williams, 2011). As predicted by McCroskey, an unsuccessful communication event increases the fear of future attempts being unsuccessful and reduces an individual’s willingness to communicate (McCroskey, 1984). Many deaf students seem to be aware that their level of communication apprehension can effect their ability to successfully complete a course: “If the interpreter's skill was horrible, that has prevented me from be able participate in class. It can hurt my participation grade” (Williams, 2011).

The second most frequently reported interpreter behavior in both questions was the ability to successfully interpret from spoken English to a signed message. There was also a general feeling that students wanted to be told exactly what was being spoken in the classroom, not the interpreter’s interpretation of the message. Many students commented on a desire for interpreters to stay as close as possible to the spoken message while still incorporating some important linguistic features of ASL.

Attitude was also ranked third among interpreter behaviors and words like “friendly”, “welcoming” and “approachable” appeared in multiple responses. Students reported the importance of shared trust, mutual respect and good rapport with their interpreters while also emphasizing the need for interpreter professionalism. One student summed up the balance between a friendly relationship and a degree of professionalism: “[Interpreters need a] laid-back or down to earth personality they can be good people and professional at same time [sic]” (Williams, 2011).

Research Question 3

RQ3 asked about how the levels of communication apprehension differ between deaf and hard-of-hearing and hearing college students. Deaf and hard-of-hearing students report statistically significant differences in the amount and type of CA they experience when compared to college students as a whole. Note that the results from this survey were compared to the results reported in the original PRCA-24 by McCroskey (1982). Though the published data is from 1982, McCroskey reports, “The most recent data from college students was reported last year [2010]. They were no different than those in 1982” (J. Williams, personal communication, January 19, 2011). Table 3 shows the results in detail.

Table 3

Differences in Amounts and Types of Communication Apprehension

	deaf and hard-of-hearing students	Original PRCA-24 results
Group*	16.8 (SD = 4.5)	15.4 (SD = 4.8)
Meetings**	16.5 (SD = 5.0)	16.4 (SD = 4.2)
Dyad (Interpersonal)*	16.3 (SD = 4.1)	14.2 (SD = 3.9)
Public**	18.7 (SD = 5.0)	19.3 (SD = 5.1)
Total Score*	68.6 (SD = 15.6)	65.6 (SD = 15.3)
* = $p < 0.05$, ** = $p < 0.01$		

Discussion

It is unsurprising that many of the interpreter behaviors students reported as adding to their CA are the opposite of the behaviors reported to decrease CA. In fact the top three responses in both categories are the same: interpreting skills in both ASL and spoken English and attitude.

The concern presented in the literature review about an interpreter's behavior being mistaken for the behavior of deaf students they work with was also discussed by survey respondents. In response to open-ended survey questions 8 and 9, students made comments such as: "[Interpreters] tend to screw up even the easiest stuff which make my classmates *not take me seriously*." More directly; "Interpreters are *a reflection of the deaf student*, and if the deaf student doesn't behave [a certain] way, neither should the interpreter" (Williams, 2011, *emphasis added*).

The need for an interpreter to have specialized content knowledge appeared in multiple responses to survey questions 8 and 9. An interpreter's inability to understand jargon and high concepts related to a specific discipline seems to be a frequent hindrance to deaf and hard-of-hearing students being able to participate fully in classrooms. This may be a need specific to university interpreting where specialized content and jargon are discussed and an understanding of these terms is a requirement for entry into the in-group.

Also interesting to note is the fact that deaf and hard-of-hearing students varied not only the amount of CA they experienced, but also the type of CA. Though their overall reported level of CA was higher, deaf and hard-of-hearing students reported lower levels of CA when engaged in public speaking. Several factors may lead to this lower level of CA including extra preparation

time suggested when working interpreters or simply that deaf and hard-of-hearing students are speaking through a third-party.

The information found in this study is vital for interpreter education programs, that frequently teach interpreting students to do the very things deaf and hard-of-hearing students report increasing their levels of CA, such as requesting clarification or repeated information. Interpreters must find new strategies in order to get the information they need to deliver an accurate interpretation while avoiding adding to the CA of deaf and hard-of-hearing students.

Conclusion

Like all studies, this one has its limitations. All students surveyed attend the Rochester Institute of Technology, a university that prides itself on its large deaf and hard-of-hearing population, employs the largest staff of professional American Sign Language interpreters in the world, and focuses on Deaf cultural awareness (Rochester Institute of Technology, n.d.). Due to this focus, most faculty and hearing students have had some interaction deaf and hard-of-hearing students and so the results of the study cannot be considered typical of the experiences of deaf and hard-of-hearing students at other universities.

Another limitation is the survey's low response rate. Out of 1,276 survey invitations, 155 students responded. This is a response of about 12% and not high enough to produce a representative sample of the population. However, the information found through this survey can still provide a significant perspective on how interpreter behaviors influence the amount of classroom CA experienced by deaf and hard-of-hearing students.

Though this study focuses only on deaf and hard-of-hearing students' classroom communication apprehension, future research could use this method to survey any group of

individuals who are learning in a classroom not taught in their native language and using an interpreter. The survey could also be used to explore the difference in CA between deaf and hard-of-hearing students attending a university such as RIT, where such students represent a large sub-culture, and deaf or hard-of-hearing students who attend a university with only a few deaf students.

More research could also reveal the reason behind deaf and hard-of-hearing students reporting lower levels of CA when public speaking while reporting higher levels in every other CA category. This information may provide valuable insight into behaviors that can reduce the amount of CA felt by all students when giving oral presentations.

Finally, since no such research currently exists, it would be interesting to survey educators who have deaf/hard-of-hearing students in their classrooms to see if they report a higher degree of CA when interacting with these students. Without this important missing piece, it is impossible to fully understand how having a third-party such as an interpreter influences classroom CA.

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Appendix A: Literature Search Methods

Search Terms: communication apprehension; deaf college student; deaf; deafness; hearing; professor deaf student; professor deaf communication apprehension; hearing loss; deaf communication apprehension

Databases:

- Academic Search Elite (EBSCO)
- Dissertations & Theses (ProQuest)
- ERIC (EBSCO)
- Gallaudet University Index to deaf Periodicals
- JSTOR
- Linguistics and Language Behavior Abstracts (CSA)
- NTID deaf Index
- NTID Instructional Technology and deaf Education Conference
- PsycArticles (EBSCO)

Appendix B: Survey Invitation for Deaf and Hard-of-Hearing College Students

Dear NTID Student,

You are invited to take part in a survey about your experiences in mainstream classrooms at RIT. By participating, you will help to add to the body of research about how Deaf and hard-of-hearing students participate in mainstream classrooms through the use of access services.

The survey should take less than 30 minutes to complete. All information you provide will remain strictly confidential. This survey is a part of my master's thesis, and I will be the only person with access to your answers. There will be no information linking your name or DCE account to your answers.

If you have any questions, please contact me at jkwdis@rit.edu.

If you are interested in participating, please click here [survey link] to take the survey.

Thank you!

Sincerely,
Jenna Williams
Graduate Student, Communication and Media Technologies

Biographical Sketch

Jenna K. Williams was born in Cleveland, OH. She received her Associate of Applied Science and Bachelor of Science in ASL-English Interpretation from the National Technical Institute for the Deaf in 2007 and 2008 respectively. Since graduating, she has received her national interpreter certification (NIC) from the Registry of Interpreters for the Deaf and currently works full time as an American Sign Language interpreter at the National Technical Institute for the Deaf.