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UMI®
MEASURING COMMUNICATION APPREHENSION IN CHILDREN

by

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DISSERTATION

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>v</td>
</tr>
<tr>
<td>CHAPTERS</td>
<td></td>
</tr>
<tr>
<td>CHAPTER 1 - Introduction</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER 2 - Review of Literature</td>
<td>6</td>
</tr>
<tr>
<td>CHAPTER 3 - Methodology</td>
<td>31</td>
</tr>
<tr>
<td>CHAPTER 4 - Results</td>
<td>40</td>
</tr>
<tr>
<td>CHAPTER 5 - Discussion</td>
<td>51</td>
</tr>
<tr>
<td>APPENDICIES</td>
<td></td>
</tr>
<tr>
<td>Appendix A - MECA instrument</td>
<td>58</td>
</tr>
<tr>
<td>Appendix B - CICA instrument</td>
<td>62</td>
</tr>
<tr>
<td>Appendix C - Principal Authorization Letters</td>
<td>68</td>
</tr>
<tr>
<td>Appendix D - School 1 and 2 Education Statistics</td>
<td>71</td>
</tr>
<tr>
<td>Appendix E - HIC Approval</td>
<td>74</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>81</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>86</td>
</tr>
<tr>
<td>AUTOBIOGRAPHICAL STATEMENT</td>
<td>77</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>41</td>
</tr>
<tr>
<td>Table 2</td>
<td>42</td>
</tr>
<tr>
<td>Table 3</td>
<td>43</td>
</tr>
<tr>
<td>Table 4</td>
<td>45</td>
</tr>
<tr>
<td>Table 5</td>
<td>46</td>
</tr>
<tr>
<td>Table 6</td>
<td>47</td>
</tr>
<tr>
<td>Table 7</td>
<td>48</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>GRAPH</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graph 1</td>
<td>44</td>
</tr>
</tbody>
</table>

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Chapter 1
A Measurement of Oral Communication Apprehension in Children

Background to the Problem

Communication apprehension (CA) can permeate every part of a student's life (e.g., work, school, and friendships) (Richmond & McCroskey, 1995). Communication apprehension is defined as extreme nervousness while communicating, or not wanting to communicate at all. It is typical for a person to be nervous when delivering a speech or even prior to the speech. Being nervous can sometimes help a presenter bring enthusiasm to a presentation. However, CA rises to the level of extreme nervousness (Rolls, 1998).

Often, a student who has CA is fearful of communicating and will go to great lengths to avoid speaking with others. If such a person is forced into the position of communicating, he or she may become "uncomfortable, tense, embarrassed, and shy" (Cooper, 1995, p. 244). Cooper (1995) claimed that CA is in fact a disability. In comparison with other inabilities to communicate efficiently (e.g., dyslexia, autism), "communication apprehension ranks first in terms of the number of people affected" (p. 244).

For individuals with CA, there are typically differences in terms of experiencing nervousness when a person is communicating with a friend versus public speaking where large numbers people are judging what the person is saying. Communicating to the public is clearly more demanding and can cause much stress, or even terrorize a person with CA.
Intervention strategies to mitigate the effects of CA are highly sought. There are various one-dimensional solutions offered which are discussed later (such as self-help books, and visualization cited in Richmond & McCroskey 1995. Additionally, skills training is cited in Fordham & Gabbin (1996) and Richmond and McCroskey (1995). However, research to provide answers to more complex questions of why CA happens, how it is presented, how it is best diagnosed, and the most effect intervention strategies are still unknown (Daly, 2000). Of course, no single research initiative can address all four of these questions.

Research Objectives and Questions

Specifically, the research objective is to find out by comparing test results how CA affects children, as measured by the Measurement of Elementary Communication Apprehension (MECA) and the Children’s Inventory for Communication Apprehension (CICA).

The objectives of my research are to review the literature on:

a. how CA interferes with a child’s learning
b. how CA affects a child’s behavior
c. how CA be detected early
d. current treatment modalities for CA
e. how CA may alter the choice of a job during the transition form childhood to adulthood
f. whether the potential for success (i.e., grades) for a child with CA is as great as that for a child without CA in the school environment
The research questions guiding my study are to:

1. Examine how children perform on the MECA and CICA when asked questions about talking in various contexts at school
2. Examine potential gender differences in terms of talking in various school situations

Significance of the study

Most previously conducted studies on CA failed to investigate participants other than college students or adults. This necessitates a study of children. Moreover, the MECA has not been revised since 1979, and hence, it may not reflect current thinking about CA. Therefore, a current study on its basic psychometric properties is clearly warranted. Furthermore, if the practicality of the self-report methodology is supported, measures then can be demonstrated and it would be possible to determine the prevalence and distribution of CA among children (Garrison & Garrison, 1979).

Limitations

Limitations of this study include the inability to know if the child accurately understands the questions on the test, as well as if the child is responding in a fashion consistent with how they truly feel.
Terminology

The following terms are defined below as to clarify their meaning in the field of communication research as well as in this study.

*Apprehensive communication* - students who attach a great deal of punishment to the act of communicating (Cooper, 1995; Keaten & Kelly, 2000).

*Audience-based communication* - a type of CA is relationship centered; a certain person or certain people produce the effect, which can happen in a group or one-on-one. This definition is very similar to Situational (Richmond & McCroskey, 1995).

*Avoidance communication* - a behavioral response that has to do with a person unintentionally or intentionally not communicating with others (Richmond & McCroskey, 1995).

*Communication apprehension* - extreme nervousness while communicating or not wanting to communicate at all (Rolls, 1998).

*Context-based CA* - a type of CA that relates to a person who is fearful or anxious about communicating based on the milieu (Richmond & McCroskey, 1995).

*Disruption communication* - a behavioral response that has to do with a person having breaks when they are speaking or unusual nonverbal behaviors (Richmond & McCroskey, 1995).

*Internal effects* - feelings of fright, discomfort, being unable to cope, being inadequate, and possibly being dumb (Richmond & McCroskey, 1995).

*Situational CA* - a type of CA that depends on a given single situation and is a response given to an environment (Richmond & McCroskey, 1995).
State apprehension CA- a type of CA that deals with nervousness felt before and possibly during a presentation (McCroskey, 1977).

Trait-like CA- a type of CA that can be changed if the individual chooses to do so (Behenke & Sawyer, 1999; Richmond & McCroskey, 1995).

Withdrawal communication- a behavioral response that has to do with a person taking themselves out of the communication situation by not answering questions or communicating minimally (Richmond & McCroskey, 1995).
Chapter Two

Review of the Literature

The following review of literature explores what researchers know about CA in terms of the types, causes, effects, treatment approaches, and possible gender differences. Such knowledge is necessary to fully understand where CA has been and where it is heading. This chapter is three fold. First, this review examines the differing types of CA and associated behaviors, the causes and effects of CA, and potential treatment approaches for CA. Gender differences are also examined to try to explain higher anxiety patterns in children with CA. Next, the literature examines curriculum issues. The review is focused on general conceptual frameworks of constructivists and the conceptual works of Kelley (1955) and Werner (1957). Third, the chapter concludes with a review of a theory of constructivism for communication followed by personal and social linguistics for communication.

Communication Apprehension

There are four types of CA identified in the literature. Communication apprehension is called trait-like because it can be changed if the individual chooses to do so (Behnke & Sawyer, 1999; Richmond & McCroskey, 1995). McCroskey (1977) suggested that people who suffer from trait/trait-like apprehension can be nervous in other types of situations involving communication, and may be shy as well (Keaten & Kelly, 2000). Richmond and McCroskey (1995) indicate that trait-like CA is an enduring part of communication and typically does not change unless there is some type of intercession or behavior modification.
Context-based CA relates to a person who is fearful or anxious about communicating based on the milieu (Richmond & McCroskey, 1995). For example, it is possible for the individual to fear group speaking, but not public speaking because they are in different contexts. The most common example of this type of fear is a fear of public speaking. This type of CA can generalize to situations like job interviews, for example. State apprehension deals with the nervousness felt before and possibly during a presentation, making it closely associated with context-based apprehension (McCroskey, 1977).

Audience-based CA is relationship-centered; a certain person, or certain people, produces the effect, which deals with a speaker’s reaction while communicating in a group or one-on-one over time. Moreover, which types of people cause more apprehension in the person with CA cannot be predicted; however, those people with high trait-like apprehension will have more apprehension with a larger group of people than those with low trait-like apprehension (Richmond & McCroskey, 1995).

Situational CA is a response to a given environment in a single situation, making it not personality based (Richmond & McCroskey, 1995). This type of CA can increase or decrease based on the atmosphere the person feels from the other people or groups of people as well. If a person has high trait-like CA, and high context-based CA, it would be expected that the person should experience high situational CA; however, such levels do not tell which situations produce CA (Richmond & McCroskey, 1995).
Models of Behavior Associated with Communication Apprehension

There are also variables that correlate with adult CA. People with a high tolerance for ambiguity are less likely to have a high level of CA (Richmond & McCroskey, 1995). The amount of self-control related to communication a person has depends on their degree of CA. A person with high CA can have less self-control (Richmond & McCroskey, 1995). Adventurous individuals and people who are emotionally mature tend to have low levels of CA. It was thought that introverts had a higher level of CA, but there seem to be as many extroverts as introverts with a degree of CA (Richmond & McCroskey, 1995). Generally speaking, people with a high level of CA tend to have low self-esteem (Richmond & McCroskey, 1995). The more innovative a person is, the higher tolerance an individual has for disagreement, and the more assertive a person, the more positively correlated they are with low CA (Richmond & McCroskey, 1995).

Keaten and Kelly (2000) also offered supporting and affirming information in relation to types of CA and how people progress through their six-component model of CA, also called reticence. The first component of their model is need. Since reticent individuals are sensitive to negative evaluation, they may avoid the communication process all together (Keaten & Kelly, 2000; Thomas, Walter, & Thomas, 1994). A likely statement from a reticent individual would be, "It is better to remain silent than to risk appearing foolish" (Keaten, Kelly, & Finch, 2000, p. 45). The second component in the model is perceived incompetence – which suggests that people who view themselves as incompetent with respect to verbal communication tend to avoid communication. The third is helplessness – a person feels that nothing he or she does can change how
they feel or see themselves which, in turn, produces anxiety about communicating (Keaten & Kelly, 2000; Thomas, Walter, & Thomas, 1994). The fourth component is anxiety. Because people with CA view themselves as incompetent or lacking self-confidence, this expectation of their failure leads to anxiety in verbal communication situations creating a self-fulfilling prophecy. The fifth component, devaluation, occurs because the apprehensive person understands the need to communicate, but they perceive themselves as helpless. Devaluation leads to cognitive dissonance and can result in the person with CA devaluing communicating in general, to deal with the problem. The last component is withdrawal. Withdrawal is when the apprehensive person’s beliefs, can put the person into situations that require limited speaking opportunities.

There are also certain behaviors associated with a person who has CA. It is not surprising that in an environment that requires a high level of communication, CA students are apprehensive. Typically, students with high CA avoid small classes and look for larger ones so they do not have to participate as frequently (Richmond & McCroskey, 1995). It would then seem feasible that classes, which require an oral report or a speech, are also avoided and some students will even drop a class if it requires a lot of communication, even if it is a required course. This behavior is detrimental to the student’s success in relation to graduation. In typical dyadic settings in which a CA individual resides, a person willing to communicate generally takes on a more dominant leadership role, while the opposite person takes on a more submissive role (Richmond & McCroskey, 1995).
People with high and low CA have an equal desire for a social relationship (Richmond & McCroskey, 1995). However, the average talkative person reports having twice as many dates in a given period than a quiet person does (Richmond & McCroskey, 1995). Housing choices are also affected and are duly considered by a person with CA. They tend to choose a living environment that leaves little chance for contact, and the opposite is true for those who have little CA (Richmond & McCroskey, 1995).

Additional research has been done to determine the relationship between CA and learning style preference. Dwyer (1998) found a significant relationship between trait CA and learning style preference, in which high communication apprehensive (HCA) people reported a preference for an analytical approach to learning that relies on reflective observation and thoughtful evaluation of information, theories and expert opinion. Persons with high communication apprehension also have a preference for a hands-on approach to learning, relying on active, productive, guided experimentation and evaluation to integrate theory into practice (Dwyer, 1998). Dwyer also found that persons with low communication apprehension reported a preference for an active-experimentation approach to learning that relied on independent learning through personal involvement, trial and error, and risk taking. There was no relationship found between trait CA and an empathy-oriented approach to learning, which relies on personal relevance, discussions, brainstorming and collaborating with others.
Communication Apprehension and Learning Style Models to Explain Causes of CA

Although the specific causes of communication apprehension are not known, some researchers have attempted potential explanations. There are four explanations. (1) Genetic predisposition says that certain genetic components such as "sociability, physical appearance, body shape, and coordination and motor abilities may contribute to the development of communication apprehension" (Cooper, 1995, p. 244). It is thought that people are predisposed toward communication, the simple basic diatheses stress model. (2) Children could develop this problem if they do not have the necessary skills for social interaction and if this interaction does not develop at the rate of their peers (Cooper, 1995). (3) Modeling is also involved (Cooper, 1995). If a parent has communication apprehension, there is a good chance the child will develop it because they are exposed to the apprehension on a daily basis (Cooper, 1995). (4) The theory of reinforcement is used to describe apprehension (Cooper, 1995). If a child receives positive reinforcement, the child will find communicating rewarding, and the opposite is also true (Cooper, 1995). A child's home and school life may contribute greatly to communication apprehension.

In support of a hypothesis that anticipatory state anxiety is a function of CA, Beatty and Valencic (2000) found that (trait) public speaking apprehension predicted anticipatory state scores; however, a reduced demand for pre-performance planning skills did not affect anxiety experienced immediately preceding a performance. There was a small effect on performance condition, when planning skills were given a validity check for the definitions of high and low demand. For an inadequate skill perspective to be a relevant cause of CA the effects of demand on state anxiety should have paralleled
the manipulation effect; it did not. The manipulation effect was over nine times larger than the effect induced by planning demand, which suggests that inadequate skills planning producing anticipatory state anxiety may not be a predictor of CA.

Research has demonstrated a large impact of genetics on human communication with respect to causes of CA (e.g., McCroskey & Beatty, 2000). However, while genetics are important regarding the causes of CA, it is thought that a purely genetic model of CA is more parsimonious than a mixed model (Beatty, McCroskey, & Heisel, 1998). Moreover, it has been found that genetics are more important than the learning processes through which people evolve (McCroskey & Beatty, 2000). The importance of the neurological system proposes that, “inborn, neurobiological structures are responsible for communication behavior and associated processes” (McCroskey & Beatty, 2000, p. 2).

Genetic evidence also suggests that the hereditary biological composition of individuals imposes limits on the amendments that can occur and the breadth of environmental effects is not very ample (Beatty et al., 1998). In looking at the neurological system, a better understanding of the functional anatomy of the human brain will become evident and thus answer the question of where CA originates (McCroskey & Beatty, 2000). As a result, learning can be assessed, and an understanding of how certain learning conditions can directly affect human behavior can also be assessed.

One cause of trait-like CA appears to be hereditary, and children tend to be born with certain personality predispositions, such as sociability (Richmond & McCroskey, 1995). Just because an individual is predisposed does not mean he/she develops high
CA, this just means the person is susceptible. The basic diathesis stress model tells us that we need the predisposition and the activating event to cause something, CA in this case.

A second type of CA is situational or state CA. Some major causes of situational CA are: “novelty, formality, subordinate status, conspicuousness, unfamiliarity, dissimilarity, and degree of attention from others” (Richmond & McCroskey, 1995, p. 64). Novel situations, such as job interviews, tend to cause anxiety because individuals do not know how to react or communicate. Formal situations tend to increase levels of anxiety because there is little room for deviating from the norm. Possible inappropriate communication that may be needed in a certain situation may not be necessary in another, but the person may want to avoid communication all together. For example, subordinate status occurs when one person holds rank over another. Typically, this happens when a person has higher employment, social, or intellectual status over another individual. This status discrepancy tends to happen recurrently with public officials. When a person feels conspicuous, their level of anxiety increases. Being a new member to a class may make a person feel conspicuous; unfamiliarity with a person’s culture may make a CA person feel more anxiety. Dissimilarity would be seen as an extension of unfamiliarity. The effects of the environment, not those of genetics, should be seen as anomalies; temperament should be considered the dominant influence with respect to CA (Beatty, McCroskey, & Heisel, 1998).

According to Richmond & McCroskey (1995), there are three categories that show why people experience fear or anxiety about communicating. These three categories include: “excessive activation, inappropriate cognitive processing, and inadequate
communication skills" (p. 93). Excessive activation produces “trembling arms, hands and legs: shortness of breath, dry mouth, swallowing difficulty, tense muscles, and temporary memory loss” (Richmond & McCroskey, 1995, p. 94). Inappropriate cognitive processing involves the improper processing of information. One person can experience apprehension as excitement, while another can experience apprehension as terror. People can also develop inadequate communication skills. When referring to skills, it might be how one thinks versus how one’s skill level actually is, which influences the level of apprehension.

Other research based on a multi-factorial approach to explaining CA has been done by Condit (2000). Condit opined that there is room to study the etiology of individual differences in CA. There is also room to study the consideration of biological inputs as well. Condit argued that neither individual difference nor biological components provide a broad enough basis for a paradigm for the discipline of communication, which allows effectiveness in incorporating variables that operate in fundamentally different ways. For communication to make a contribution as a distinctive discipline, it needs to place importance on complex, interactive, dynamic phenomenon that it evaluates, which allows the continuation of developing paradigms and methods that function at and amalgamate multiple levels of analysis from the individual to the social to the biological (Condit, 2000).

Segrin and Flora (2000) argued that communication skills play an important role in determining how individuals will act in response to major life transitions and stressful life events. These skills, on their own, are pessimistically predictive of changes in depression, loneliness, and social anxiety over time. People with good communication
skills are less likely to be depressed, lonely, or socially anxious in the future as compared with those with poor social skills (Segrin and Flora, 2000). Moreover, Segrin & Flora (2000) found that social skills temper the relationship between the occurrence of stressful events/depression and stressful events/solitude.

This allows the conclusion to be made that people with predominantly sound social communication skills tend to be pliant to the ill effects of stressful life events. In other words, people who experience poor or moderate degrees of social skills appear susceptible to a deterioration of their state of depression or loneliness as a result of experiencing unconstructive life events.

The role of cerebral functioning lies in the cerebral cortex, where it has been confirmed that the “conscious mind” lies (McCroskey & Beatty, 2000, p. 3). This is the region of the brain that makes “self-awareness, understanding, and communication possible” (McCroskey & Beatty, 2000, p. 4). Because this region of the brain responds to input and change, it is thought that if children become aware of their CA they can still change it, even though it may be genetically produced (McCroskey & Beatty, 2000). So, genetically there is no barrier to the teaching of communication principles (McCroskey & Beatty, 2000).

However, CA involved in the emotional system (which is older so it is stronger) overcomes the logical learning, so high CA people do not benefit from learning techniques to deal with their CA (McCroskey & Beatty, 2000). This overwhelming amount of CA is called stage fright or drama anxiety (McCroskey & Beatty, 2000; Wright, 1999). Instead, if doctors or qualified individuals taught content (to give understanding/explanation rather than techniques), then they could get people to
understand which communication behaviors can lead to more effective communication (McCroskey & Beatty, 2000; Wright, 1999). However, it cannot be assured that people will use these behaviors, but in some cases, the knowledge might be able to reduce CA to a more manageable level through carefully administered behavioral therapies or mood altering drugs (McCroskey & Beatty, 2000; Wright, 1999).

**Overcoming CA**

It is important to identify that there can be a lot accomplished with a quality communication curriculum. Theory and principles can be taught, as well as teaching students to better understand others (McCroskey & Beatty, 2000). Furthermore, students can also be taught who they should be in relationships with and whom they should avoid (McCroskey & Beatty, 2000).

Communicatively apprehensive people can be taught how to identify their temperament, so they can find jobs that are best suited for them (McCroskey & Beatty, 2000). This will especially enable the genetically predisposed to find a suitable position and this will offer higher job satisfaction in the long run for people with high CA (McCroskey & Beatty, 2000).

**The Effects of Communication Apprehension**

There are differing views on possible effects of CA. There are internal affects, which are: "fright, discomfort, being unable to cope, being inadequate, and possibly feeling dumb" (Richmond & McCroskey, 1995, p. 62). There are also external effects as well. There are three common types of behavioral responses to CA: avoidance,
withdrawal and disruption. Avoidance has to do with a person unintentionally or intentionally not communicating with others (Richmond & McCroskey, 1995). Withdrawal is when a person takes himself/herself out of the communication situation by not answering questions or communicating minimally (Richmond & McCroskey, 1995). Finally, disruption occurs when the person has moments of silence when he/she is speaking or unusual nonverbal behaviors seize his/her attention (Richmond & McCroskey, 1995).

People with high communication apprehension select occupations that they “perceive require little communication; are offered jobs less frequently with lower salaries; are seen as less socially attractive; are rated lower on composure, competence, extroversion, and sociability; disclose significantly less; rate self-esteem and self-credibility lower; feel isolated and reclusive; and lack trust in others”. (Cooper, 1995, p. 246)

Other perceptions are that few confident communicators elect a job such as accounting as their major when compared to other business disciplines because of the amount of necessary communication with other individuals (Fordham & Gabbin, 1996). McKinney concluded that since communication-apprehensive group members typically participate less in group discussion, they are perceived as “(1) less effective in their interactions (2) less competent and (3) less likely to emerge as group leaders than non-apprehensive group members” (as cited in Cooper, 1995, p. 246).

Communication apprehension also affects students in distinctive ways. This student is “withdrawn; has a hard time expressing self; is quiet, reserved, dissatisfied, easily annoyed, and strongly affected by emotions; lacks leadership; is a follower; is
submissive; has a low task orientation and so on" (Cooper, 1995, p. 247). It is clear that students have to develop a set of basic skills, often without knowing what those skills might be (Wright, 1999). Students with communication apprehension from secondary school to college are usually less academically successful (Cooper, 1995). Conversely, the perception of the low communication-apprehensive student is different (Cooper, 1995). The person is perceived as "highly interactive, mature, independent, self-assured, competitive, talkative, open-minded, and so on" (Cooper, 1995, p. 247). There has also been reason to believe that demographic variables and psychological dispositions have noteworthy correlation to communication skills (Daly, 2000).

Teachers can also have CA and have a negative impact on the apprehensive child or adult. Teachers who have this apprehension may teach lower grades because lower grades are less threatening to them (Cooper, 1995). Teachers with this apprehension prefer instructional systems that reduce the amount of "student-teacher and student-student communication" (Cooper, 1995 p. 248). Research data has shown that highly apprehensive teachers affect the development of communication apprehension in their students (Cooper, 1995).

There are several ways to identify the highly communicative apprehensive student. One step to identifying a highly apprehensive student is by testing the student. The Shyness Scale (Daly & McCroskey, 1984) or the Measurement of Elementary Children's Communication Apprehension (MECA) (Garrison & Garrison, 1979) could be administered to a student (Cooper, 1995). It is very important to note, however, that not every student who seems shy is communication apprehensive (Cooper, 1995), thus, giving another reason to examine the Children's Inventory for Communication...
Apprehension.

As more information becomes available directly relating to temperament, personality, and communicative behaviors, teachers will be able to provide instruction to students who have strong temperamental or personality orientations (McCroskey & Beatty, 2000). Thus, instead of an outright changing of a person’s personality, people dealing with the apprehensive individuals can accommodate their own and others’ orientations and behaviors (McCroskey & Beatty, 2000).

Comadena and Prusank (1998) examined the relationship between CA and academic achievement (AA). Three tests of academic achievement were done in mathematics, language and reading. Of the three tests, students high in CA demonstrated the lowest levels of learning. On the mathematics test, students low in CA had achievement scores that were 23% higher than students high in CA. Students low and moderate in CA were not significantly different in their levels of academic achievement. It appears that debilitating levels of CA are established early in life (1998).

Treatment Approaches in Communication Apprehension

The ability to generate extended discussion is a distinctive mark of intellectual excellence (Daly, 2000). Of course, quiet people can be intelligent. The general perception held by many, however, is that intelligence equals the ability to discuss and share ideas. The question, then, becomes how the apprehensive person succeeds with this difficulty. There are many different treatment approaches that help CA.
A mode of therapy given by Dwyer (2000) discussed a multidimensional approach to treating CA. The multi-modal therapy involves assessment of symptoms at seven personality dimensions and then how those dimensions fit the treatment to the specific personality dimensions, which are thought to be involved in the problem (Dwyer, 2000). The researchers use the acronym BASIC I.D. to describe the seven interactive personality dimensions (Dwyer, 2000). Each of the dimensions can be involved in anxiety. For example, B is behavior; A is affect; S is sensation; I is imagery; C is cognition; I is interpersonal relationships, and D is drugs and biological functions (Dwyer, 2000). Dwyer's multi-modal approach is not limited to the counseling setting; it is also used in college classes to help students analyze their own problems and self select their own treatments (Dwyer, 2000). Using the multidimensional model, students are instructed that all seven dimensions of their personalities can be involved in CA (Dwyer, 2000). There are certain CA reduction techniques that have been reported and evaluated in the communication literature that match the BASIC I.D. dimensions (Dwyer, 2000).

In Dwyer's study, 331 undergraduates enrolled in 64 sections of a Fundamentals of Public Speaking course, which was observed over 10 semesters at a large Midwestern University (Dwyer, 2000). All students reported high trait CA and high CA in the public speaking context, based on norms established in communication literature (Dwyer, 2000). The researcher found that this model for treating CA was highly successful in treating public speaking, interpersonal conversations, group discussions, and meetings context (Dwyer, 2000). The multidimensional approach had a greater impact in skills training through public speaking courses (Dwyer, 2000). It is always
desirable to control variables from an experimental design perspective, making the self-selective treatment sections of a public speaking course very realistic in a university setting (Dwyer, 2000).

There have been self-help books published and available to the general public to assist people in overcoming their apprehension, but many approaches adopted from such resources have not been demonstrated to be very effective (Richmond & McCroskey, 1995). An exception, however, is systematic desensitization. There are two components of systematic desensitization. The first teaches the client procedures for deep muscle relaxation, and the second involves visualization of communication situations (Richmond & McCroskey, 1995). The idea is to get clients through many relaxed trials so they can gain the confidence needed to go into the real situations where CA appears. Systematic desensitization is very effective and over "90 percent of people who receive this treatment reduce their levels of apprehension" (Richmond & McCroskey, 1995, p. 100).

Visualization is another major type of behavioral treatment. A student can use visualization to picture the day of the presentation. The student pictures the day starting with energy and confidence and ending with success. The student, in essence, visualizes his or her success and eventually attains it (Richmond & McCroskey, 1995). Visualization is used basically as a confidence builder; however, Richmond & McCroskey (1995) claimed that students with severe apprehension may not benefit as much using this technique. Other researchers suggest visualization and desensitization therapies focusing on the anxiety immediately when the assignment is received and just before speaking to help overcome CA (Behnke & Sawyer, 1998).
In contrast, results ascertained by Ayres, Hopf, & Edwards (1999) found that visualization is relatively helpful in relation to reducing CA. People who are able to control the images they generate report less CA, experience a lower proportion of negative thoughts, and appear to be less inhibited and agitated after exposure to performance visualization than people who report being less able to control the images they generate. Similarly, those who possess vivid imaging abilities report less CA, and a lower proportion of negative thoughts, and exhibit less agitation after exposure to performance visualization than those who possess less of an ability for vivid imaging. These results suggest screening people for both vividness and control before exposing people to performance visualization.

Cognitive restructuring, also known as rational-emotive therapy treatment, involves changing false thoughts, was made popular by Ellis (in Richmond & McCroskey, 1995). The assumption here is that if the irrational thoughts are eliminated, then the apprehension the individual is feeling will be reduced. Research indicates that cognitive restructuring is effective for reducing self-reported apprehension about communication (Richmond & McCroskey, 1995). Such research also indicated that moderate effects achieved by treatment represent parameters within which environment can manipulate CA (Beatty et al., 1998).

Skills training is another form of treatment discussed in this review. Programs vary from college courses on communications skills, to a few hours of training, which have been proven to be most salient with respect to building more confident communicators (Fordham & Gabbin, 1996; Richmond & McCroskey, 1995). Such courses lead to lower-than-average students with apprehension participating in
communication activities because they see less apprehensive students wanting to build their already respectable skills and thus enhancing their communication skills, which builds confidence and lowers the more apprehensive student's CA levels (Fordham & Gabbin, 1996).

Fordham and Gabbin (1996) also found that the communication-skills component in curriculum alone is not completely successful in alleviating CA in those students whose apprehension is above normal, which supports a multi-factorial model for treating CA. Forcing students to take these classes is not helpful for the student and can even add apprehension to the student. So, two factors need to be present for the student to be helped by this type of treatment. The first is the willing cooperation of the student and the second is for skills training to have a defined target for improvement (Richmond & McCroskey, 1995). Large-scale anxiety treatment programs employing broad-band measures of trait anxiety tend to fail to account for major differences among individuals, such as those that pertain to the event that may have caused the specific anxiety syndrome (Behnke & Sawyer, 1998).

Proctor, Douglas, Garera-Izquierdo, & Wartman (1994) were trying to answer the question, "How should a communication instructor encourage an apprehensive student to seek assistance?", and suggest another form of treatment. Proctor, Douglas, Garera-Izquierdo, & Wartman (1994) found that students who had a high level of CA are less likely to attend college (Munroe & Borzi, 1988), and are more likely to drop out after their first year (Ericson & Gardner, 1992). Communication apprehension leads to avoidance. McCroskey and colleagues report students with high-CA, tend to avoid authority figures who could help them, while these authority figures are also the ones
who are urged to “be persistent in attempts to get highly apprehensive students to come in for help” (Booth-Butterfield, & Payne, as cited in McCroskey, 1989, p. 106). The irony is that the people who would profit most from professional assistance may be least likely to appreciate being approached (Proctor, Douglas, Garera-Izquierdo, & Wartman, 1994). For the above students, an after-class consultation may provoke as much anxiety as giving an actual speech, especially when the instructor asks the student to receive outside help (Proctor et al., 1994).

Four recurring themes emerged when students were asked to identify their reason for apprehension (Proctor et al., 1994). Fears of evaluation and criticism, mistakes and failure, attention and isolation, and unfamiliar audiences tended to be named when students were asked about their apprehension; however, there were no particular fear themes that stood out above the rest. Some students felt that their apprehension was lessening as the semester went on while others felt the opposite. According to these students, an audience would find negative judgments no matter who they were. There was an initial response to being encouraged to use the lab.

Although all of the interviewees knew that they had public speaking difficulties, most responded negatively to an instructor telling them to use the Speech Lab (Proctor et al., 1994). For some, the suggestion was discomforting, while for others it was the cause of much resistance because students wanted to help themselves. The predominant emotional reaction to suggestion from an instructor was embarrassment and others spoke of anger and defiance. Most agreed that whether they would go to the lab or not depended on the way the instructor approached them (Proctor et al., 1994).
Ideal ways to encourage a speech lab visit were discussed. The students agreed that the instructors should encourage the students to use the lab in a private and personal manner, identify positives before negatives, be specific rather than general, and note that others are also encouraged to visit the lab (Proctor et al., 1994). Follow-up comments from students revealed again that the way the instructor approached the student was a predictor of whether the student would heed the advice (Proctor, et al., 1994). Beyond the money they received to attend, the students were curious to meet and interact with other students with the same problem, thus increasing their confidence (Proctor et al., 1994). It does seem that if each instructor approaches a student with genuine concern and tact, the student may actually seek the necessary help.

An additional type of treatment by Kelly and Keaten (2000) showed support for the treatment of CA via the communibiological paradigm. Such a paradigm suggests that all human psychological experience, being cognitive or affective depends on some kind of brain activity/synthesis. Thus, making a neurobiology of temperament, in addition to the presence of traits and individual differences that people have had since childhood important, which can be explained by the environment in which they live (Beatty, McCroskey & Heisel, 1998)? The researchers postulated that even if people inherit a neurotic introverted temperament characterized by lower thresholds of behavioral inhibition system that activates anxiety, existing treatments appear to be capable of treating the core stimuli. It is necessary for communication departments to institute special courses designed for the treatment of communication anxiety (Kelly & Keaten, 2000). However, more research is needed to find the best treatment.

According to Kelly and Keaten (2000), if the communibiological perspective is used, a
special course has the best potential for alleviating anxiety among students with a disposition to anxiety.

Keaten, Kelly, & Finch (2000) suggested that reticent individuals can learn that they are not helpless. These individuals can learn that they possess the ability to improve their communication skills, which leads to improved relationships and greater success in achieving the goals they set for themselves. With an increased sense of control over their communicative ability, individuals may be able to elucidate a possible reduction in anxiety. It is also important to note that there has been as much beneficial as contrary evidence found with respect to preparation. Preparation has shown to be ineffective in managing apprehension, and had a negative effect on performance as well (Thomas, Walter, & Thomas, 1994).

Gender Differences

A study done by Behnke and Sawyer (1999) investigated gender differences in anticipatory state anxiety and narrowband trait anxiety patterns. The results of this study indicated there are significant gender-based pattern differences, with higher anxiety patterns by female speakers. In a study by Dwyer (1998), it was found that when looking over responses that were separated by sex, women who reported higher CA overall tended to prefer the analytical evaluator, which was an approach to learning that relied on reflective observation and thoughtful evaluation of information, theories and expert opinion. The women also identified with the hands-on experimenter learning style, which entailed guided active, productive and guided experimentation and evaluation into integrative theory/practice. Women who reported lower CA tended to
prefer independent learning through personal involvement, trial and error, and risk-taking. When the responses of the participants were separated with respect to sex, relationships clearly held true for the women, but did not for the men.

Elias (1999) demonstrated a more elaborate explanation for the differences between the sexes with respect to CA. Writing and oral CA were tested. Female accounting students exhibited less writing apprehension, but more oral CA, than males. However, researchers have argued that when compared to males, females are treated differently in the classroom and are called upon less frequently, which could lead to their higher oral apprehension (McCroskey, 1984). Elias also found that females are better prepared to engage in writing communication skills programs than males, but less prepared for oral communication programs. Elias suggested that more positive feedback be given to male students in composition and to female students in their oral presentations and interaction.

Conceptual Framework of Constructivists

Constructivist researchers in communication explain how people can produce and perceive communication. Moreover, constructivist research purports that interpersonal construct system development is surely associated with person-centered communication skills, which give the ability to adapt and understand messages to the social and personal needs of the listener (Burleson, 1989). Constructivists would most likely agree with Vygotsky’s (1978) social constructivism, meaning, the linguistic atmosphere the child is brought up in serves to contour the child’s development.
The authors of most communication studies subscribe to the works of Kelly and Werner (1957). The theories developed by Kelley and Werner are united in the theory of constructivism to better understand the notion of research in communication (Waltman, 2002). To give an accurate comparison of the two theorists, Kelly's (1955) theory of personal constructs and Werner’s (1957) comparative-orgasmic theory of development are compared (Waltman, 2002). Kelly (1955) defined personal constructs as bipolar proportions of conclusion, meaning, individuals decide their view of another person by observing their behavior and then making a judgment based on their personal existing constructs. This gives the ability for judgment so people can decide if they are similar or different from one another (Waltman, 2002).

Some individuals do not develop these constructs at the same rate. Regarding individual differences, some people are more developed and grow at a different rate than others. Werner (1957) articulated the process of this social development. The development continues from a state of relative simplicity to a state of increasing differentiation, articulation, and hierarchic integration (Werner, 1957). The maximum attention that a person can give to another regarding thoughts, feelings, etc., is directly proportionate to the cognitive structures that allow the person to recognize those thoughts, feelings, etc. This could also be a relevant obstacle to a person fulfilling their communication goals.

Waltman (2002) provided a theory of constructivism for communication. Those interpersonal constructs that focus as a cognitive lens can be useful for carrying out a variety of social-cognitive tasks, like perspective taking and even developing interpersonal impressions (Waltman, 2002). Interpersonal constructs come from many
differing forms of socialization, such as interacting with peers, parents, and teachers (Waltman, 2002).

There are also personal and social linguistics for communication. The spoken word can carry a large amount of instruction. Garrison and Garrison (1979) wanted to establish a social environment that could make learning possible. However, communication apprehension (CA) seems to affect the development of basic speech skills and social learning environment. Speech and learning affects are clearly evident in college students or adults (Garrison & Garrison, 1979). It is also important to note that verbalization is important at certain grades, especially, seventh grade and below. There has been a lack of research at this level regarding CA impeding the full ability of the child, which has gone undiagnosed most times, preventing the child from learning effectively.

Summary

After reviewing the types, causes, effects, possible genetic assumptions, and treatment approaches of CA in adults, it is clear that much remains undiscovered about these types of findings. Suggestions for curriculum are also few and far between. Many more restrictions are present when trying to test children versus adults, such as consent requirements or working through ethical review boards, just to name a couple. Such complications coupled with time restraints of researchers trying to complete a study, creates barriers in the research with respect to children and CA. The majority of what we know regarding CA references adults and how they react with CA.
It is interesting to question whether the associations that can cause CA may hold true for adults and similarly children. The MECA was created in 1979 and is the only test used to measure CA in children, even today. Creating another valid test for children can only provide more reliable CA data, and can provide a venue for alternative testing.
Chapter 3

Methodology

An alternative survey will be designed and administered along with its original counterpart to children in the first and second grades. Data will consist of scores on both surveys, which will be administered to each student.

The researcher will review the two instruments: The Measurement of Elementary Communication Apprehension (MECA) (Appendix A) and, the Children’s Inventory for Communication Apprehension (CICA) (Appendix B). The context of this study, the ethical considerations, the data collection and research design is described. Lastly, the reliability and validity are discussed, as well as the data analysis.

Review of Instruments

The Measurement of Elementary Communication Apprehension (MECA) is used in this study to facilitate understanding of communication apprehension in children. The CICA is a newly designed instrument by the author to parallel the MECA, taking into consideration content validity, appropriateness of instrument for age of children being tested, level of required motor skills, and/or spatial appropriateness for the age of children tested. My goal, like that of Garrison and Garrison is to develop an instrument to measure elementary students’ communication apprehension.

Garrison and Garrison answered two focus questions in their study: 1) Is oral CA a viable construct among children? and 2) How is oral CA distributed among children? These questions led them to a more comprehensive question: What are the effects of
CA on children? In order to answer these questions, the overall research question became: Whether or not an adequate measure of oral CA could be developed for children (Garrison & Garrison, 1979)?

In order to achieve validity in the construction of the MECA, Garrison & Garrison used non-probability and probability sampling techniques. A sampling ratio of 1:5 was used by an elementary school, meaning one student out of every five was selected. In addition, Garrison and Garrison also selected elementary, middle, and senior high schools in which they used a Likert response scale from 1 – 5.

To learn whether oral CA is a viable construct among children two independent tests of internal reliability, factor analysis, and Pearson product-moment correlations were done. To learn, how oral CA is distributed among children? Garrison and Garrison obtained frequency distributions for MECA scores. Both of the hypotheses above were tested in a two-factor, sex by age analysis of variance.

The MECA study done by Garrison and Garrison concluded that CA is consistently more prevalent in female rather than male college students. However, research through early years consistently found girls to exceed boys in verbal performance (Garrison & Garrison, 1979). Girls say their first word sooner, are more articulate sooner, use longer sentences and are more fluent. For these reasons, the authors propose that girls of preschool and early school years, as opposed to college-aged females, have significantly lower CA than boys of the same age (Garrison & Garrison, 1979).
In 1979, the MECA was found to be highly and consistently internally reliable on different populations using two internal reliability estimates and the MECA showed strong validity over two populations. In addition, the researchers believed they had an accurate measure of CA, but that some revisions may be desired, such as changes in the response illustrations or a clearer explanation of how to use them (Garrison & Garrison, 1979). Subsequently, the researchers created a more applicable measure of CA for children (Garrison & Garrison, 1979).

To measure CA in children, Garrison & Garrison (1979) created twenty Likert-type statements using faces with expressions changing from smiling to frowning. Examples of questions included in the instrument are: “How do you feel when you talk to teachers or your principal?” and “How do you feel when you talk in front of an audience?” The children would then read the statement/question, look at the top of the page (the smiley face) to choose how they felt regarding the question, and then matched their feeling (the smiley face) to the number below the face. Finally, the student would transfer that number to the line next to the question.

**CICA Questionnaire**

The Children’s Inventory for Communication Apprehension (CICA) will use the five smiley faces of the Likert scale employed by the MECA. However, the smiley faces will not correspond with numbers. The smiley faces will be displayed under each question, so that the child can read the question, look at the faces, and then circle her/his feeling/choice. Using the faces below each question prevents the child from recording the wrong feeling, via the wrong number, to a question; there are no numbers
for the child to transfer. Questions on the CICA will parallel the MECA but will be moderately changed to reflect pertinent/relevant questions on CA. A high score, like the MECA, will suggest the dislike for public speaking, which signals a higher rating of Communication Apprehension.

Validity of the CICA will be determined in two ways. First, several teachers and communication experts will determine face validity, suggesting whether the instrument looks like it will test CA. Most items will be constructed by modifying the established test, the MECA. Construct validity will also be addressed as the CICA is being compared to an established reliable test, the MECA. This research will incorporate Waltman’s observations of communication studies, mentioned in chapter two.

The CICA will parallel the MECA quite closely in terms of inter-item reliability. The CICA, too, consists of a 12-item questionnaire for children. The key differences between the CICA and the MECA are that this researcher will attempt to write all questions for a low level of comprehension, e.g., Kindergarten. Moreover, the CICA has smiley faces for ease of use, and is administered to the student orally.

Finally, the CICA will highly correlate to another measure of CA, the MECA. The two tests may also be used for pre and post-test comparisons.
Research Design

The design of the study is as follows:

<table>
<thead>
<tr>
<th>School A</th>
<th>Grade</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MECA</td>
<td>CICA</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>CICA</td>
<td>MECA</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School B</th>
<th>Grade</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>CICA</td>
<td>MECA</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>MECA</td>
<td>CICA</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

One randomly-selected student from each grade, following the design above, will answer two questions regarding the CICA. The first question is as follows: "What was asked on question 5?", and the second question, "What was your response to question 5 again?" the student may not look at his/her previous answer to assure that the possibly apprehensive student understood and answered the question as she/he truly felt.
Population

A convenience sample will be selected from two first and two second grade classes in two middle class, Midwestern school districts. In one district, one school will be of predominate Caucasian makeup and the other school will be of predominate African American composition. The students will be allowed to participate only if their parents sign a consent form and students give oral assent. The students’ ages will range from 5 to 7 years of age. A sampling frame will not be used since the relevant information for this study consists of grade level, age, and gender.

Sample

To estimate how far the sample results are likely to deviate from the population values, probability sampling will be utilized. Ary, Jacobs, and Razavieh (2002) suggested that probability sampling is most likely to give a representative sample of the population being tested. Random sampling will not be applied; rather, males and females will be pre-elected from first and second grade classes in pre-selected schools. Such a choice is called cluster sampling, in that a group is chosen and not an individual in which the group naturally occurs (Ary, Jacobs, & Razavieh, 2002). Because age and gender of the students are random, the researcher does not bias the sample selected.

The schools chosen in the Midwestern areas differ in ethnicity. The first school, School 1 will be of a predominately Caucasian makeup in Bay County. School 2 also in the Midwestern area will be predominately African American in Saginaw County. Please note below the makeup of each respective school and other additional interesting statistics included. School demographics can be found in Appendix D.
Instruments

The MECA is a survey consisting of 12 questions (Appendix A) scored on a 5-item Likert scale with corresponding numbers that are assigned to five facial images ranging from a smiley face to a frown. The child transfers the number that represents her/his response to the designated question line. The MECA will be given to the students to read and to provide their answers/numbers.

The CICA is also a survey consisting of 12 questions as well (Appendix B). This survey does not have corresponding numbers assigned to the smiley faces as in the MECA. Rather, the CICA places the smiley faces under each question to allow the child to easily pick the face that is more closely related to the way she/he feels in certain instances as she/he reads the question. This method of letting the child circle, fill-in or mark in some way, the faces, also keeps the child’s interest as she/he goes through and answers the questions much more easily. The researcher will code the responses to score the answers the child has provided. Unlike the MECA, the teacher will read the questions on the CICA to the students, asking them to follow along.

Procedures

Students will be given a survey depending on the design order for the school/grade and asked to follow the researcher’s directions. Predominately, the researcher gave the surveys; however, in a couple of instances where time was a factor a teacher of the specific grade gave the surveys. When the design calls for the MECA to be used, it will be given to students who will simply fill it out, and turn it back in to the researcher.
Then, students will be given the CICA (the revised test) when the design allows and told to follow along while the researcher reads each question and answer. It is not time consuming to administer the CICA and it can be given to an entire classroom of students in roughly 20 minutes using an overhead projector. The child circles her/his response. Although there are corresponding numbers/response codes that exist for the evaluators of the exam, the children only see the faces and do not see the numbers. Coloring in the faces or marking them in some way allows for creativity on the child’s part, thus making the test much more engaging. Such an introspective method of screening is the best means of isolation for children (Garrison & Garrison, 1979). The researcher will tell the children that the researcher just wants to know what the children think, and that there is no right or wrong answer.

Data Analysis

Pearson Product Moment Correlations, using SPSS, between the MECA and CICA will assess the association of the two instruments. Cronbach alpha, a measure of internal consistency, will be computed for both surveys to determine their reliability. Gender, age, grade, and school will also be correlated. Descriptive statistics on the MECA and CICA will be computed.

The analysis will examine the effects of administering one instrument prior to the second. The non-impact of order of administration of instruments may also be assessed via design considerations. Labeling the MECA (A) and the CICA (B), in School A, an A-B B-A order was followed, and in School B, a B-A A-B order was followed. Ideally, there should be no impact of having the MECA administered prior to
the CICA for the same students, or the reverse. A table will be constructed indicating the comparisons based on order of administration. The A-B vs. B-A design is as follows, school A, the predominately Caucasian school, received the MECA in grade one on the first round and grade two received the CICA on the first round. During the second round (approximately 2 weeks later), School A grade one and two received the reverse of the instrument they originally took (second round, grade one CICA, and grade two MECA). School B, a predominately African American school, in the first round for grade one received the CICA and Grade two the MECA. In the second round School B received the reverse just like School A above (second round, grade one the MECA and grade two the CICA).

A factor analysis on the CICA will provide an item-by-item impact of each of the twelve CICA items on the overall measure of CA. The reliability estimate will be reassessed based on retention or elimination of each item.

Ethical Considerations

The Human Investigations Committee (HIC) at Wayne State University reviewed/approved the assessment devices and methods used to collect data (Appendix E) for this study, as well as the Informed Consent process and documentation. The approval letters from each principal have also been attached in Appendix C. The school demographics are also included in Appendix D.
Chapter 4

Results

The data coding scheme overall for Cronbach’s alpha scores (to get a general index of reliability), and the correction of Cronbach’s alpha reliability estimates using the Spearman Brown formula (to correct for the fewer test items on the CICA), are reported for the Measurement of Elementary Communication Apprehension (MECA) and the Children’s Inventory for Communication Apprehension (CICA) below. Means (arithmetic average of all test scores), and standard deviations (conceptually, the SD expresses the amount the typical subject’s score differs from the mean) are also reported for the scales.

The data were coded as follows: School 1 = Caucasian, School 2 = African American, MECA = Instrument A, and CICA = Instrument B. The median age is 83 months. Table 1 below shows the distribution of subjects across age, grade and school settings. The total subjects for the Caucasian school was 45. The total number of students for the African American school was 40. In Grade 1 across both schools the total number of students was 43 and in Grade 2 across both schools, the total number of students was 42. The total number of students surveyed was 85.
Table 1

Distribution of Subjects Across Grade and School Settings

<table>
<thead>
<tr>
<th></th>
<th>School 1 (Caucasian)</th>
<th>School 2 (African American)</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>24</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>Grade 2</td>
<td>21</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>Totals</td>
<td>45</td>
<td>40</td>
<td>85</td>
</tr>
</tbody>
</table>

Table 2, presents reliability estimates for both the MECA and the CICA, with separate reliability estimates calculated for both A-B and B-A administration orders. The data are presented separately for males and females as not to obscure any possible gender test administration interaction. The groups have been split into age ranges as well (≥ 83 months) vs. older (≤84 months). Data are, however, collapsed across school type and grade/age level. As can be seen, reliability estimates for each test are comparable across test administration orders for both male and female school children.
Table 2

Reliability Estimates for Both A-B and B-A Test Administration Orders for Female and Male Subject Groups

<table>
<thead>
<tr>
<th></th>
<th>Female, N = 44</th>
<th>Male, N = 41</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. r</td>
<td>.90, Mean = 48.18, SD = 17.55</td>
<td>A. r = .77, Mean = 45.39, SD = 12.28</td>
</tr>
<tr>
<td>B. r</td>
<td>.74, Mean = 23.75, SD = 7.29</td>
<td>B. r = .72, Mean = 23.46, SD = 7.18</td>
</tr>
<tr>
<td>SB (B)</td>
<td>.83</td>
<td>SB (B) = .81</td>
</tr>
</tbody>
</table>

A = MECA
B = CICA
r = Cronbach alpha

Table 3 presents reliability estimates for both the MECA and CICA by students that are in Grade 1 and Grade 2, separately. Data are; however, collapsed across schools and gender. As can be seen, age does appear to slightly influence reliability, with older children producing higher reliability estimates than younger children. The results show that the instruments are similar in reliability MECA r = .86 (Mean = 46.84, SD = 15.21), and CICA r = .82 (Mean = 23.61, SD = 7.19, SB (B) = .82).
Table 3
Reliability Estimates of Younger (67 months -83 months) vs. Older (84 months to 111 
months) Children for Both Instruments

<table>
<thead>
<tr>
<th>Age 1</th>
<th>Age 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.  r = .74, Mean = 47.05, SD = 12.03</td>
<td>A. r = .92, Mean = 46.62, SD = 18.05</td>
</tr>
<tr>
<td>B.  r = .60, Mean = 22.61, SD = 6.06</td>
<td>B. r = .79, Mean = 24.64, SD = 8.14</td>
</tr>
<tr>
<td>SB (B) = .71</td>
<td>SB (B) = .86</td>
</tr>
</tbody>
</table>

Median Age = 83 months. (Min = 67 months, Max = 111 months.)
Age 1 = Younger (67 months -83 months)
Age 2 = Older (84 months to 111 months)
N(1) = 43
N(2) = 42

A = MECA
B=CICA
r = Cronbach alpha

In Graph 1 below, the scores on the MECA and CICA were approximately the 
same during Time 1 and Time 2 (the differing times of administration and when one test  
was administered before another), meaning the children who took the MECA chose  
similar answers at Time 1 and Time 2. Students as well taking the CICA at Time 1 and  
Time 2 chose even more similar answers.
Table 4 and 5 contain information regarding whether or not the order of administration of the two tests adversely affects the overall results. Looking at the table below it is clear that the answer for Grade 2 is: no. However, Grade 1 increased from .77 to .89 on the CICA, which is quite a large difference suggesting that order matters for Grade 1. The CICA has much greater reliability when administered first (CICA first .89, CICA second .77).
Table 4
Cronbach Alpha Coefficients for *MECA* and Spearman Brown coefficients for *CICA*

<table>
<thead>
<tr>
<th></th>
<th>School 1, Caucasian</th>
<th>School 2, African American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>MECA</em></td>
<td><em>CICA</em></td>
</tr>
<tr>
<td>Grade 1</td>
<td>A-B Design</td>
<td>.84</td>
</tr>
<tr>
<td>Grade 2</td>
<td>B-A Design</td>
<td>.88</td>
</tr>
</tbody>
</table>

A=MECA  
B=CICA
Table 5
A Comparison of Caucasian School and African American School vs. Grade 1 and 2 with Regard to Order of Instrument Administration

<table>
<thead>
<tr>
<th></th>
<th>Caucasian School Grade 1 A-B</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. ( r = .84 ), Mean = 28.42, SD = 11.64, N = 24</td>
<td>B. ( r = .67 ), Mean = 22.17, SD = 7.08, N = 24</td>
<td>SB(B) = .77</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Caucasian School Grade 2 B-A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. ( r = .72 ), Mean = 24.95, SD = 6.02, N = 21</td>
<td>A. ( r = .88 ), Mean = 47.10, SD = 13.76, N = 21</td>
<td>SB(B) = .81</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>African American School Grade 1 B-A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. ( r = .83 ), Mean = 22.47, SD = 8.14, N = 19</td>
<td>A. ( r = .85 ), Mean = 42.68, SD = 14.12, N = 19</td>
<td>SB(B) = .89</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>African American School Grade 2 A-B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. ( r = .81 ), Mean = 50.05, SD = 13.47, N = 21</td>
<td>B. ( r = .73 ), Mean = 24.95, SD = 7.50, N = 21</td>
<td>SB(B) = .82</td>
<td></td>
</tr>
</tbody>
</table>

A = MECA
B = CICA

To determine if the deleting of an item would affect the reliability scale of the CICA, an inspection of the alpha upon item-by-item deletion procedure (Table 6 and 7) was performed. The procedure indicated that the scale would not be improved via deletion of any items. All of the items should be retained in the scale. The item analysis results for the CICA are in tables six and seven.
Table: 6
Reliability Analysis Scale of the CICA

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. C1</td>
<td>1.5529</td>
<td>.9941</td>
<td>85.0</td>
</tr>
<tr>
<td>2. C2</td>
<td>1.4118</td>
<td>.7286</td>
<td>85.0</td>
</tr>
<tr>
<td>3. C3</td>
<td>2.2235</td>
<td>1.3307</td>
<td>85.0</td>
</tr>
<tr>
<td>4. C4</td>
<td>1.9529</td>
<td>1.2431</td>
<td>85.0</td>
</tr>
<tr>
<td>5. C5</td>
<td>1.5529</td>
<td>1.0060</td>
<td>85.0</td>
</tr>
<tr>
<td>6. C6</td>
<td>2.1412</td>
<td>1.2550</td>
<td>85.0</td>
</tr>
<tr>
<td>7. C7</td>
<td>2.1882</td>
<td>1.4184</td>
<td>85.0</td>
</tr>
<tr>
<td>8. C8</td>
<td>2.4000</td>
<td>1.4736</td>
<td>85.0</td>
</tr>
<tr>
<td>9. C9</td>
<td>1.4000</td>
<td>.7270</td>
<td>85.0</td>
</tr>
<tr>
<td>10. C10</td>
<td>2.7176</td>
<td>1.4688</td>
<td>85.0</td>
</tr>
<tr>
<td>11. C11</td>
<td>1.7294</td>
<td>1.1484</td>
<td>85.0</td>
</tr>
<tr>
<td>12. C12</td>
<td>2.3412</td>
<td>1.3052</td>
<td>85.0</td>
</tr>
</tbody>
</table>

Statistics for 
<table>
<thead>
<tr>
<th>SCALE</th>
<th>Mean</th>
<th>Variance</th>
<th>Std. Dev.</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCALE</td>
<td>23.6118</td>
<td>51.7165</td>
<td>7.1914</td>
<td>12</td>
</tr>
</tbody>
</table>

N items = 12
R = .82
Table 7
If an Item was Deleted from the CICA

<table>
<thead>
<tr>
<th>Total Items</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item Total Correlation</th>
<th>Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>22.0588</td>
<td>46.7941</td>
<td>.2893</td>
<td>.7162</td>
</tr>
<tr>
<td>C3</td>
<td>21.3882</td>
<td>40.2403</td>
<td>.5749</td>
<td>.6751</td>
</tr>
<tr>
<td>C4</td>
<td>21.6588</td>
<td>45.8941</td>
<td>.2539</td>
<td>.7221</td>
</tr>
<tr>
<td>C5</td>
<td>22.0588</td>
<td>46.6751</td>
<td>.2931</td>
<td>.7158</td>
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<tr>
<td>C6</td>
<td>21.4706</td>
<td>42.3473</td>
<td>.4772</td>
<td>.6912</td>
</tr>
<tr>
<td>C7</td>
<td>21.4235</td>
<td>40.9613</td>
<td>.4816</td>
<td>.6891</td>
</tr>
<tr>
<td>C8</td>
<td>21.2118</td>
<td>42.5975</td>
<td>.3612</td>
<td>.7090</td>
</tr>
<tr>
<td>C9</td>
<td>22.2118</td>
<td>49.6689</td>
<td>.1482</td>
<td>.7283</td>
</tr>
<tr>
<td>C10</td>
<td>20.8941</td>
<td>39.8577</td>
<td>.5231</td>
<td>.6817</td>
</tr>
<tr>
<td>C11</td>
<td>21.8824</td>
<td>46.7003</td>
<td>.2356</td>
<td>.7232</td>
</tr>
<tr>
<td>C12</td>
<td>21.2706</td>
<td>43.5807</td>
<td>.3732</td>
<td>.7060</td>
</tr>
</tbody>
</table>

N of Cases = 85.0
N of Items = 12
Alpha = .7257

To explore for biases in both instruments, between schools, grades, and younger children, and older children, an Independent Samples T-test was conducted. In the Caucasian school, grade 1, Instrument A (mean = 28.42, sd = 11.64) and Instrument B of the same school (mean = 22.17, sd = 7.08), t = -.002, df = 43, p = .998 indicated no statistical significance. For Grade 2 in the Caucasian school, Instrument B (mean = 24.95, sd = 6.02) and on Instrument A (mean = 47.10, sd = 13.76), t = -.002, df = 43, p = .998 indicated no significance. For the African American school grade 1 Instrument B (mean = 22.47, sd = 8.14), and the African American school grade 1 Instrument A
(mean = 42.68, sd = 14.12), t = -1.002, df = 38, p = .322 there was also no significance. The African American school grade 2 Instrument A (mean = 50.05, sd 13.47) and the African American School grade 2 Instrument B (mean = 24.95, sd = 7.50), t = -1.002, df = 38, p = .322 also was not significant, indicating no evidence of biases.

On the MECA, an independent t-test on the MECA with gender as the independent variable, revealed there was no significant statistical difference between females (mean = 48.18, sd = 17.55) and males (mean = 45.39, sd = 12.28), t = .84, df = 83, p = .40. Similarly, there was no significant statistical difference between females (mean = 23.75, sd = 7.29) and males (mean = 23.46, sd = 7.18) on the CICA, t = .183, df = 83, p = .86.

The independent t-test was also done to see if there was a possible difference between Age 1 (min. = 67 months) and age 2 (max. = 111 months). For Age 1 on the MECA (mean = 47.05, sd = 12.03) t = .129, df = 83, p = .898, and CICA (mean= 22.61, sd = 6.06) t = 1.312, df = 83, p = .898. Also for Age 2 on the MECA (mean = 46.62, sd =18.05) t = .129, df = 83, p = .898, and CICA (mean=24.64, sd = 8.14) t = 1.312, df = 83, p = .898 there was no significant statistical difference.

Additionally, construct validity was addressed by comparing the CICA to another valid measure of CA, the MECA. Face validity was also addressed in which the principals of each school assessed the CICA by reviewing the questions and the scale to affirm that the test appeared to test what it purported. Furthermore, the agreement from the children taking the two instruments also affirmed the validity of the CICA. To support the children’s comprehension of the questions regarding CA, two questions
were asked of one student per grade. The questions were: 1.) What does the sentence in number five mean? and 2.) What was your answer to number five again? The original question number five in the CICA reads: 5.) I like meeting someone new and talking to them for the first time?

The answers given to the two questions above are as follows:

For the Caucasian school, a first grade boy answered question one by saying: “Not knowing them”. That boy picked “very happy, I like it a lot” on his first choice and “no feeling, I don’t care” on his second pick of number five. The next student in the Caucasian school, a girl in grade one answered question one by saying: “Meeting someone new you have never talked to…it asks how you feel about doing that.” This girl student picked “very happy, I like it a lot” as her first and second answer.

For the African American school, a first grade girl answered question five by saying: “A little shy, but only if I don’t know the person” and on the second question the student picked the same answer before and after stating: “very happy, I like it a lot”. In the African American school a second grade boy answered what question number five meant by stating: “Happy to meet someone new”. This same student when asked question two, picked the same answer before and after, “very happy, I like it a lot”.

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Conclusion

Most previously conducted studies on Communication Apprehension (CA) have failed to investigate participants other than college students or adults, which has necessitated my existing study of children. Moreover, the Measurement of Elementary Communication Apprehension (MECA) has not been revised since 1979, and hence, it may not reflect current thinking about CA. The Children's Inventory for Communication Apprehension (CICA) has taken current thinking about CA into consideration. Specifically, the research objectives for this study are to find out how two schools (Caucasian and African American) compared on the MECA and CICA, and how the two instruments psychometrically match up to each other when reporting CA. Also interesting may be gender differences. This study is necessary to help explain CA. This will be explained in the upcoming discussion.

The CICA proved to be generally reliable for males and females in the age ranges of 67 months to 83 months (Age 1) and 84 months to 111 months (Age 2). The median age was 83 months. However, when the CICA was given in age range 2 (Age 2) it proved to be significantly more reliable (r = .86) than when given to Age 1 (r = .71). There could be several reasons for the occurrence of higher reliability at Age 2. A few of the hypotheses may be: 1) It may be said that when children are older they can understand the questions better, making them more personal, and thus allowing for more consistent answering of questions overall. 2) the instrument may be less reliable for children first grade and under because of their greater fluctuations in attention, greater variability in group settings with children trying to copy their neighbors, and even
comprehending the test items. 3) this instrument may not be less reliable at all. CA in a first grader may be fluctuating so much at that grade level, that sometimes children in first grade feel confident in themselves and sometimes they do not (it simply depends upon when the test was administered) and 4) teacher influence at that level plays great importance on how much the teacher tells the student to follow directions and to even pay attention, so regarding the overall sample, there may have been less teachers in Age 1 making their students attend to the task at hand than in Age 2. Overall, the results show that the instruments are similar in reliability (MECA $r = .86$ and CICA $r = .82$). There were only four point's difference between the MECA and CICA, although the MECA has 20 questions and the CICA has 12 questions. On the whole, this instrument is a good additional choice or stand alone device when testing for CA with an age range of 67 months to 111 months.

The CICA has slightly higher reliability regarding males. The MECA has somewhat better internal consistency regarding females. Both instruments score similarly to each other regarding reliability. In Graph 1, the scores on the MECA and CICA were close on reliability of choosing similar answers on the Likert scale during Time 1 and Time 2. This means that the children who took the MECA chose similar answers when taking the MECA and the CICA. The shorter length of the CICA may be more useful for younger children to adjust for shorter attention spans. The its Standard Deviation score (7.19) on the CICA is much lower than the MECA (15.21), making the CICA a more desirable test for younger children and gives more confidence that a score a specific student received was a truer measure of what the students actually felt about CA or is within a normal range of responses for this survey.
Tables four and five in the results section have addressed whether or not the order of administration adversely affects the instruments. The answer was found to be, yes. In Grade 2, there was not much variation in reliability between which test was administered first (Grade 2, B-A Design, Caucasian School, .81 CICA and .88 MECA and Grade 2, A-B Design, African American School, .81 MECA and .82 CICA). However, in Grade 1 in the African American School when the CICA was administered first there was a significantly higher reliability score (.77 when the CICA was administered second to .89 when the CICA was administered first).

There could be several hypotheses for the order of administration. For example, there are many other possible explanations: 1) children may have been paying more attention on the first test no matter which was given first or 2) the students are so confused and tired from taking the first survey that by the time they get to the second survey they write in anything to get done quicker or 3) the change in outcomes could be due to the students recalling questions and responses from the CICA. The CICA provides visual responses which could promote student retention. It should be noted that the largest scoring difference was seven points between the two tests being administered first or second. This may mean that during a pre-test/post-test session it would work to use the two tests in conjunction because the child being tested would only have to take one test per session, possibly eliminating the attention and tired problems mentioned above. Possible reasons for a second test could be: the child did not understand the MECA or if there were ambiguous answers after reviewing the MECA as the first administration and then the CICA would add more data for clarity, under the above circumstances.
The CICA has proven to be reliable regarding the questions that appear on the actual survey. To determine if the deletion of an item would adversely affect the CICA scale, an inspection of the alpha upon item-by-item procedure was completed and (Table 6 and 7 in the results section) it indicated that the scale would not be improved via deletion of any items. To positively reiterate, all of the items should be retained in the scale. This suggests that the CICA has purported to test CA as was intended and is a strong measure. Taking out any one question would lower the reliability of the instrument.

To check to see if there may be biases in both instruments, between schools/grades, and younger children vs. older children, an independent samples t test was conducted. The independent samples t-test indicated no evidence of biases. Such a result can only make the CICA even more reaffirming to test females and males, as well as diverse groups of students.

Face validity and construct validity were addressed as the principals of each school assessed the CICA by reviewing the questions and the overall scale to affirm that indeed the test certainly looks to be testing CA. Many of those evaluating the instruments, said that the shorter CICA is much easier to use and that young students are more able to pay attention to the entire test because of their shorter attention spans. Students also added to the face validity because when asked if the test looks like it will help to decide how they feel about something, the students saw the faces, and responded, “Yes”. Construct validity was addressed by comparing the CICA to an existing measure, the MECA, which has been used as a reliable test to measure CA.
The CICA has proven to be reliable when testing children in first and second grade. Regarding younger children vs. older children taking the two instruments, the Independent Samples T-test was also done to see if there was a possible difference between age 1 (min. = 67 months) and age 2 (max. = 111 months). For Age 1 on the MECA and Age 1 on the CICA there was no statistical difference. Age 2 on the MECA and Age 2 on the CICA also indicated no significant statistical difference. This means that the MECA and the CICA are similar for testing Age 1 and Age 2, and are appropriate for children’s age ranges (min. = 67 months) (max. = 111 months).

To address a limitation of the study in chapter one, there was a concern regarding the inability to know for sure if the student understood the question as well as if the student answer consistently as they normally would in real life regarding similar questions about CA. Regarding the inability to know if the student understood the question, after the CICA was finished one student from each school and each classroom was chosen to answer two questions: 1.) What does the sentence in number 5 mean? and 2.) What was your answer to number five again? After the results were in, three out of the four students picked the same answer that they had previously chosen when they first took the CICA in class. In each instance regarding what the sentence meant, four out of four students answered that they understood the question and brought in their own meaning to answer it.

The second limitation of the study questioned how we can tell if a student is responding on the test in the same way they would under circumstances regarding CA. To address this concern, prior to starting the survey students were told that their answers were not being graded, that no one would read them except the researcher,
and their truthful answers would be appreciated.

To generally discuss future studies on CA, it would be wise to consider Condit (2000). Condit believes that to make communication a contributively distinctive discipline, importance needs to be placed on complex, interactive, dynamic phenomenon that is evaluated. This will allow for the continuation of paradigms and methods that function at multiple levels of analysis from the individual to the biological to help people with CA. Quality curriculums need to be written to improve CA early on in a child’s school career. Courses that teach students how to understand communication behaviors can also help with CA (McCroskey & Beatty, 2000; Wright, 1999).

Specifically, future studies on CA should pay particular attention to the sex, grade, context, ethnicity and the comprehension level of the child when setting up programs and treatment for children with CA. Early intervention may prevent the increased rate of apprehension at the higher grades. Curriculums that address group work and speeches, given the correct environment for facilitation of these ideals, may help those extremely nervous students with CA. Communication should be addressed from K-12 and not be intermittent throughout a child’s school career.

In chapter two, Dwyer (1998) explained CA, giving four reasons for it occurring. His reasons included: genetics, general speaking skills, modeling from an adult, and finally, positive reinforcement when the person is speaking. If speaking skills, positive adult modeling, and positive reinforcement from teachers and parents are not performed or learned correctly as soon as the child is born, such behaviors could prevent a child from learning at a very young age. This could be one of the explanations given when Susie or Johnny cannot learn a specific subject or are not doing well in school taken

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overall. A diagnosis of CA at a young age is necessary and helpful to the future of our children.
My School:

I am ______ years old.
I am in ______ grade.
I am a ______ Boy or Girl.

ID NO.
1. How do you feel when you talk to teachers or your principal?
2. How do you feel about talking to someone you don’t know very well?
3. How do you feel when you hold something and talk about it?
4. How do you feel about talking to people who are not close friends?
5. How do you feel about talking when you have a new teacher?
6. How do you feel about talking a lot when you are on a bus?
7. How do you feel when you are picked to be a leader of a group?
8. How do you feel about talking a lot in class?
9. How do you feel when you talk in front of an audience?
10. How do you feel about talking to other people?
11. How do you feel about trying to meet someone new?
12. How do you feel after you get up to talk in front of the class?
13. How do you feel when you know you have to give a speech?
14. How would you feel about giving a speech on television?
15. How do you feel talking when you are in a small group?
16. How do you feel when you have to talk in a group?
17. How do you feel when the teacher calls on you?
18. How do you feel about talking to all of the people who sit close to you?
19. How do you feel when the teacher wants you to talk in class?
20. How do you feel when you talk in front of a large group of people?
Date: Mon, 29 Mar 2004 11:18:48 -0500
From: Karen Harris <kh5@email.umd.edu>  and T.K. Jensen Book
Subject: Re: Thank you so much.
To: STEPHANIE KROL <ek3431@wayne.edu>

Thank you so much for your interest in my work and for the additional discussions. I found them quite helpful and I hope you enjoyed the additional details.

I will make sure to keep the other factors in mind when considering the results. I wanted to thank you for your assistance and the feedback on my dissertation. I appreciate the time you took to read and provide comments. I will read through everything...

Thanks again for your time and all the work you have done.

Best,
Carol
Stephanie
My School is: ____________________________

I am ___________ years old.

I am in _______ grade.

I am a __________ Boy or Girl.

ID NO.
Children’s Inventory for Communication Apprehension (CICA)

1. How do you feel about talking to other kids during recess?
   - Very happy
   - Happy
   - No feeling
   - Unhappy
   - Very unhappy

2. How do you feel when you are picked to be a class leader?
   - Very happy
   - Happy
   - No feeling
   - Unhappy
   - Very unhappy

3. How do you feel when the teacher asks you to talk in class?
   - Very happy
   - Happy
   - No feeling
   - Unhappy
   - Very unhappy
4. **Talking to other people is fun?**

<table>
<thead>
<tr>
<th>Very happy</th>
<th>Happy</th>
<th>No feeling</th>
<th>Unhappy</th>
<th>Very unhappy</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like it a lot</td>
<td>I like it</td>
<td>I don't care</td>
<td>Don't like it</td>
<td>Don't like it</td>
</tr>
</tbody>
</table>

5. **I like meeting someone new and talking to them for the first time?**

<table>
<thead>
<tr>
<th>Very happy</th>
<th>Happy</th>
<th>No feeling</th>
<th>Unhappy</th>
<th>Very unhappy</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like it a lot</td>
<td>I like it</td>
<td>I don't care</td>
<td>Don't like it</td>
<td>Don't like it</td>
</tr>
</tbody>
</table>

6. **When you talking front of the class how do you feel when you are done?**

<table>
<thead>
<tr>
<th>Very happy</th>
<th>Happy</th>
<th>No feeling</th>
<th>Unhappy</th>
<th>Very unhappy</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like it a lot</td>
<td>I like it</td>
<td>I don't care</td>
<td>Don't like it</td>
<td>Don't like it</td>
</tr>
</tbody>
</table>

7. **How do you feel when you are asked to read aloud in class?**

<table>
<thead>
<tr>
<th>Very happy</th>
<th>Happy</th>
<th>No feeling</th>
<th>Unhappy</th>
<th>Very unhappy</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like it a lot</td>
<td>I like it</td>
<td>I don't care</td>
<td>Don't like it</td>
<td>Don't like it</td>
</tr>
</tbody>
</table>
8. How do you feel about giving a speech in front of a video camera?

Very happy
I like it a lot

Happy
I like it

No feeling
I don't care

Unhappy
Don't like it

Very unhappy
Don't like it

9. How do you feel when you are asked to be the leader of a small group in class?

Very happy
I like it a lot

Happy
I like it

No feeling
I don't care

Unhappy
Don't like it

Very unhappy
Don't like it

10. How do you feel about talking in front of a large group of people?

Very happy
I like it a lot

Happy
I like it

No feeling
I don't care

Unhappy
Don't like it

Very unhappy
Don't like it

11. How do you feel about talking to your friends in class?

Very happy
I like it a lot

Happy
I like it

No feeling
I don't care

Unhappy
Don't like it

Very unhappy
Don't like it

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How do you feel when you talk in front of people in a gym?

- Very happy
- Happy
- No feeling
- Unhappy
- Very unhappy

I like it a lot
I like it
I don’t care
Don’t like it
Don’t like it
Appendix C
To: To Whom It May Concern

From: Mary Post
Principal, Linsday Elementary School

Re: Stephanie Kroh

Stephanie Kroh has my permission to survey our 1st and 2nd graders over a period of four to five weeks. If you have any questions or concerns, please contact me at 684-9692.
MEMO

Date: March 31, 2004
To: Human Investigations Committee
    Wayne State University
From: Carol Selby
    Principal, Heavenrich Elementary School
Re: Student Surveys

Stephanie Kroll has my permission to conduct the two rounds of her dissertation surveys to our first and second graders, at Heavenrich Elementary School. We look forward to assisting her pursuit of her doctoral degree.
Appendix D
School 1:

School Characteristics

Grade Span: (grades KG - 5)

<table>
<thead>
<tr>
<th>KG</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Type: Regular school

Locale/Code: Mid-size Central City / 2

Status: Currently operational

Total Students: 347

Classroom Teachers (FTE): 19.7

Student/Teacher Ratio: 17.6

Charter: no  Magnet: no  Title I School: yes  Title I School-Wide Program: yes

Enrollment Characteristics

Enrollment by Grade:

<table>
<thead>
<tr>
<th>KG</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Ungraded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>49</td>
<td>45</td>
<td>61</td>
<td>75</td>
<td>62</td>
<td>55</td>
</tr>
</tbody>
</table>

Enrollment by Race/Ethnicity:

<table>
<thead>
<tr>
<th>Amer Ind/Alaskan</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>5</td>
<td>6</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>

Enrollment by Gender:

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>177</td>
<td>170</td>
</tr>
</tbody>
</table>

Free lunch eligible: 141  Reduced-price lunch eligible: 45  Migrant Students: N/A

Note: Details may not add to totals.

Source: CCD public school data for the 2001-2002 school year

Note: "N/A" means the data are not available or not applicable.
School 2:

National Center for Education Statistics
Institute of Education Sciences

School Characteristics

Grade Span: (grades PK - 5)

<table>
<thead>
<tr>
<th>PK</th>
<th>KG</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Total Students: 456
Classroom Teachers (FTE): 24.0
Student/Teacher Ratio: 19.0

Type: Regular school
Locale/Code: Mid-size Central City / 2
Status: Currently operational
Charter: no Magnet: no Title I School: yes Title I School-Wide Program: yes

Enrollment Characteristics

Enrollment by Grade:

<table>
<thead>
<tr>
<th></th>
<th>PK</th>
<th>KG</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Ungraded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>27</td>
<td>65</td>
<td>59</td>
<td>65</td>
<td>72</td>
<td>93</td>
<td>75</td>
<td>0</td>
</tr>
</tbody>
</table>

Enrollment by Race/Ethnicity:

<table>
<thead>
<tr>
<th></th>
<th>Amer Ind/Alaskan</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>0</td>
<td>0</td>
<td>441</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Enrollment by Gender:

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>244</td>
<td>212</td>
<td>0</td>
</tr>
</tbody>
</table>

Free lunch eligible: 380  Reduced-price lunch eligible: 23  Migrant Students: N/A

Note: Details may not add to totals.

Source: CCD public school data for the 2001-2002 school year
Appendix E
NOTICE OF EXPEDITED APPROVAL

TO:        Stephan Kisz.
            (Children and Instruction)
            9207 Mack Avenue
            Saginaw, MI 48638

FROM:  Ellen Barton, Ph.D.
            Chair, Behavioral Institutional Review Board (B3)

DATE:  November 13, 2003

RE:  HIC#: 108503B3E  Expiration Date: November 12, 2004
      Study Title: A Study of Oral Communication Apprehension in Children
      Sponsor: No funding requested

The above-referenced Protocol, Information Sheet, Informed Consent, and Letter to Parents, were APPROVED following Expedited
review (Category 7m) by the Chair for the Wayne State University Institutional Review Board (B3) for the period of November 13.

MARK YOUR CALENDAR
Deadline for Re-Review: Monday, October 4, 2004
To be reviewed and reported at the next convened B3 IRB meeting

This approval does not replace any departmental or other approvals that may be required.

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility

to obtain review and continued approval before the expiration date. You may not continue any research activity beyond the
expiration date without HIC approval.

• If you wish to have your protocol approved for continuation after the above approval period, please submit a
    completed Continuation Form at least six weeks before the expiration date. It may take up to six weeks from the time
    of submission to the time of approval to process your continuation request.

• Failure to receive approval for continuation before the expiration date will result in the automatic suspension
    of the approval of this protocol on the expiration date. Information collected following suspension is
    unapproved research and can never be reported or published as research data.

• If you do not wish continued approval, please submit a completed Closure Form when the study is terminated.

• All changes or amendments to your protocol or consent form require review and approval by the Human Investigation
    Committee (HIC) BEFORE implementation.

• You are also required to submit a written description of any adverse reactions or unexpected events on the
    appropriate form (Adverse Reaction and Unexpected Event Form) within the specified time frame.

*Based on the Expedited Review List, revised November, 1998
C. Shlomo Sawilowsky, Ph.D., 351 Education Building
Information Sheet

A Study of Communication Apprehension

Principal Investigator: Stephanie Krol

Introduction and Purpose:

This letter is being sent home today to inform you that a local person, Stephanie Krol, is trying to finish her doctoral dissertation in education at Wayne State University and she has asked if our kids could take two surveys to help her out. I have agreed and feel that her research could possibly help our school in the future. She is studying Communication Apprehension (CA). This, simply put, is a fear of public speaking. When children do not learn to effectively communicate and publicly speak, it can lead to lower grades and maybe even a future missed job promotion.

Procedure:

I am asking that the children fill out my surveys following along on an overhead in their classroom.

Benefits:

The possible benefits to the children taking part in this study are experience in filling out a real survey, and possibly the results will lead us to areas of our curriculum that may need more focus on communication. Also, a benefit will be the contribution of knowledge to the field of education on communication apprehension and children. Survey completion and direction following skills within a group setting will also be a benefit.

Risks:

The potential risks to the participants are not greater than risks associated with routine surveys on educational issues in curriculum. There may also be risks involved in taking part in this study, which are not known to researchers at this time.

Alternatives:

Voluntary Participation/Withdrawal:

Your child taking part in this study is voluntary. You may choose for your child not to take part in this study, or if you decide to let your child take part, you may later change your mind and withdraw your child from the study.
Costs:

There are no associated costs to the students, or parents.

Compensation:

In the unlikely event that your child become injured as a result of taking part in this study, treatment will be offered to them, or they will be given information about where to receive medical care; but I nor my insurance company will be responsible for the costs. No reimbursement, compensation or free medical care is offered by Wayne State University or the primary investigator.

Confidentiality:

All information collected about your child during the course of this study will be kept confidential to the extent permitted by law. Students will be identified in the research records by a code number. Information, which identifies me personally, will not be recorded without written permission; however, my records may be reviewed by the study sponsor, its agents, the Wayne State University Human Investigation Committee, and appropriate federal agencies. Information from this study may be published; your child's identity will be kept confidential in any publications. Students will be identified by id number, grade, sex, and age. No names or birthdays will be taken from the children on the survey. A letter will be provided to the parents, plus an informational sheet with elements of consent as stated above. A copy of the instrument will be placed in the office of each school in case a parent would like to view it.

Questions:

If I have any questions in the future or in the case of a research related injury or illness, you may contact your principal or me at 989-799-9565. If you have any questions about your child's rights as a research subject, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628.
Consent to Participate in a Research Trial:

For your child to voluntarily agree to take part in this study, you must sign on the line below. If you choose for your child to take part in this study, you may withdraw them at any time. You are not giving up any of your child’s legal rights by signing this form. Your signature below indicates that you have read, or had read to you, this entire consent form, including the risks and benefits, and have had all your questions answered. You will be given a copy of this consent form.
Letter To Parents:

Dear Parents,

This letter is being sent home today to inform you that a local person, Stephanie Krof, is trying to finish her doctoral dissertation in education and she has asked if our kids could take two surveys to help her out. I have agreed and feel that her research could possibly help our school in the future. She is studying Communication Apprehension (CA). This, simply put, is a fear of public speaking. When children do not learn to effectively communicate and publicly speak it can lead to lower grades and maybe even a future missed job promotion.

Please detach the form at the bottom of this sheet and mark, “Participate” if you would like your child to participate in her study. If you would not like your child to participate for some reason please mark, “Do Not Participate”. Those children not participating will be moved to a fun room in which they are given a fun activity until the other students are done with the survey.

A copy of both surveys will be on display in our office if any of you would like to view them!

Sincerely,

Principal

--- Participate --- Do Not Participate

----------------------------------------------- Your Child’s Name

----------------------------------------------- Your Child’s Teacher

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Information Sheet:

To be used by teacher or as an introduction before the study.

Hi girls and boys, my name is Miss Stephanie and I am here today to ask you for your help. I need you all to fill out two surveys for me (see if they all know what a survey is, if not explain). We are going to do it together, and it will be quick and fun. Your answers are not wrong or right, I just want to know what you think, and you are not being graded. So, I am going to pass out the surveys now, please everyone sit quietly and wait so we call all follow the directions together...
References


ABSTRACT

A STUDY OF ORAL COMMUNICATION APPREHENSION IN CHILDREN

by

Stephanie Jersevic

December, 2004

Advisor: Dr. Shlomo Sawilowsky
Major: Curriculum and Instruction
Degree: Doctor of Education

Communication apprehension (CA) can be a devastating problem for children. Communication apprehension is characterized by extreme nervousness while communicating. This dissertation reviews the literature on how CA interferes with a child’s learning, how CA affects a child’s behavior, how CA can be detected early, current treatment modalities for CA, how CA may alter a child’s later occupation, the potentiality for school success for a child with CA vs. a child without CA and possible gender effects in talking in various school situations. Furthermore, original research described herein compares the existing Measurement of Elementary Communication Apprehension (MECA) and a new instrument called the Children’s Inventory for Communication Apprehension (CICA), which has been created by the researcher as an alternate means to test for CA. Most studies of CA have failed to investigate participants other than college students or adults, thus the need for this study.

Data for this study were collected in two schools. School A is a Midwestern, predominately Caucasian school and School B is a Midwestern, predominately African American school. Both the MECA and the CICA were administered to early elementary school students in each school. In School A, an A-B B-A order of test administration was followed and in School B a B-A A-B order was followed. At time one, School A students were administered the MECA in 1st grade and the CICA in 2nd grade. At time one, School B students received the CICA in 1st grade, and 2nd grade received the MECA. At time two, School A received the CICA in 1st grade and the MECA in 2nd grade. At time two, School B received the MECA for 1st grade and the CICA for 2nd grade. The interval between time one and two was approximately two weeks for each school.

Descriptive statistics for both instruments were calculated to clarify characteristics of CA in the children studied. Data were further analyzed via a Pearson Product Moment Correlation (calculated with SPSS) to expose the relationship between the two instruments cited above. Cronbach’s alpha was computed for both surveys to determine their homogeneity. Gender, age, grade, and school relationships with CA were also explored by correlation analyses. Effects of order of administration were also
An item-by-item analysis was also done for the CICA to determine if retaining each survey question was necessary for the reliability of the CICA. An independent samples t-test was also calculated for the CICA with gender as the independent variable.

Results revealed the CICA to have comparable reliability to the MECA. Neither age nor gender significantly affected the reliability of the MECA or CICA. Order of test administration did not have a significant effect on test scores. Chronbach’s alpha results failed to suggest that test reliability could be improved by a deletion of any one item. No statistically significant difference between females and males was revealed by t-test analysis.

Both instruments are of comparable reliability, supporting the psychometric acceptability of the CICA. Importantly, the CICA attains this level of reliability with fewer test items than the MECA. Furthermore, the CICA is free of age and gender effects on reliability. Because the order of administration of the MECA and CICA does not have any effect on test scores, the tests may be used in conjunction with one another as a means to more fully test for CA. Because the item-by-item reliability analysis revealed that the CICA did not improve through item deletion, such a result suggests that each item tested a similar characteristic, presumably CA in children.
AUTOBIOGRAPHICAL STATEMENT

STEPHANIE JERSEVIC

Education
- Doctorate of Education in Curriculum and Instruction, Wayne State University (WSU), Detroit, Michigan (expected graduation: Fall semester, 2004)
- Master of Organizational Leadership and Administration, Saginaw Valley State University (SVSU), University Center, Michigan (May 2001)
- Bachelor of Arts, Saginaw Valley State University, University Center, Michigan (May 2000) Major: Psychology, Double Minor: Communication and Applied Writing

Research Experience
- Psychology Senior Research, co-author of “Establishing Materials for Research in Gender Scenes” and “Searching for Gender Effects within the Bizarreness Effect” (1998-2000)
- Research Assistant, established materials for dissertation titled "Light Effects on Reading" by recommendation of Dr. Matt Margres (1999)

Teaching Experience
- University Instructor, Davenport University (Saginaw and Bay City Campuses), Saginaw/Bay City, Michigan (2002)
- Graduate Assistant, College of Education at Saginaw Valley State University, University Center, Michigan (2000-2001)
- Mentor, Writing Center at Saginaw Valley State University, University Center, Michigan (1999-2000)
- Instructor, Learning Success Center, Saginaw, Michigan (1999-1999)
- Teaching Assistant at SVSU for Psychology 300 –Statistics (1997)

Current Job (previous jobs have not been listed due to spatial constraints)
Membership Specialist (Bay and Arenac Counties), The Girl Scouts of Mitten Bay, Saginaw, Michigan (2002-current)

Memberships

Computer Skills
Microsoft Word 97/2000, Microsoft Access, Microsoft Excel, Microsoft PowerPoint, Microsoft FrontPage, Microsoft Streets and Maps, QuickBooks, Word Perfect 8/9, Corel, SAS, SPSS, Netscape Navigator/Composer, Windows 95/98, Adobe Photoshop, HP Desk Scan and utilities, Adobe Acrobat, ACT, Omega. I have also assisted with desktop publishing and web site design.

Honors and Awards
- SVSU President’s List (Winter 1999); SVSU Dean’s List (Fall 1997, Winter 1998, Fall 1999)