Experience and Attitudes of Teachers Towards
Stuttering Intervention, Education, and Resources

Dissertation

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By

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Abstract

Past research has indicated that teachers play a vital role in supporting the educational development of children who stutter (CWS). Teachers’ attitudes and beliefs regarding stuttering have been shown to influence CWS performance in the classroom. Therefore, teachers need to be appropriately trained and equipped to best serve CWS. Very few studies have focused on teacher training and interest in information regarding stuttering. This current study was designed to support and further the findings of Jenkins’ (2010) study in the hopes of better supporting the interest and needs of teachers to better support CWS. Both studies explored teachers a.) Training in stuttering; b.) Interest in receiving training or information related to stuttering; c.) Awareness of stuttering resources; and d.) Preferred delivery method of stuttering information. Participants included 215 primary and secondary teachers from a large Midwestern school district who completed an online survey regarding attitudes towards stuttering training and resources. Consistent with Jenkins’ (2010) findings, results indicated teachers had limited to no prior training regarding stuttering; however, the vast majority of teachers expressed interest in receiving stuttering training and resources, with the preferred method for delivery or training being direct contact with speech and language pathologists. Data analysis also found statistically significant relationships between grade level taught (primary and secondary) and stuttering training, as well as interest in certain types of information related to stuttering.
Dedication

This document is dedicated to the amazing, courageous, compassionate, accepting people who stutter that I had the privilege of meeting, while working on my dissertation research. Also to the people who stutter who I have not met, but feel like I know through reading personal accounts in books and articles. Thank you all so much for sharing this sometimes painful and private information. You have inspired me to help others and to not hide who I am. In this journey I have learned that my stutter does not define me, it is just one of the many things about me. I have a voice and I hope even if uncomfortable, I will not hide and continue to use my voice to educate people about stuttering; in addition to supporting and helping others who stutter.
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Chapter 1: Introduction

The public school system in the United States offers children approximately thirteen years of education; therefore, children spend a large portion of their formative years with their schoolteachers. Teachers in return play a vital role in the development of our nation’s youth. Part of this role must include sharing the responsibility for the educational development of students with impairments or disabilities. With approximately 1% of the world’s and United States’ population stuttering at any given time (Bloodstein & Bernstein Ratner, 2008; Proctor, Yairi, Duff, & Zhang, 2008), teachers in the United States are currently educating approximately 555,000 students who stutter in their classrooms.

The Individuals with Disabilities Education Improvement Act of 2004 (IDEA) is a United States federal law, which regulates how states provide early intervention, special education, and related services to students with disabilities. Under IDEA, CWS may be eligible and protected if they are in need of additional/different services to fully participate in the school setting. CWS usually fall under the eligibility category of a Speech and Language Impairment. Adherence to this law would ensure every student with a disability is granted full access to the general curriculum to support their optimal educational development and adequate preparation for future employment opportunities.

Although a teacher’s primary role is to educate, they are likely not aware how their beliefs or attitudes about stuttering can significantly impact or influence pupil
performance and classroom management (British Stammering Association, 2006; Lass et al., 1992; Stewart & Turnbull, 2007). While there is conflicting research, the majority of research has shown that educators are more likely to have negative perceptions or associate negative personality traits with people who stutter (Cooper & Cooper, 1996; Dorsey & Guenther, 2000; Horsely & Fitzgibbon, 1987; Lass et al., 1994; 1992; Rusting, Cook, Botteril, Hughes, & Kelman, 2001; Yeakle & Cooper, 1986). This is worrisome because the attitudes and actions of classmates can often be influenced by their teachers’ actions and attitudes towards children who stutter (CWS) (Marshall, Stojanovik & Ralph, 2002). This in return can have a negative impact on CWS as they navigate through a school culture where they are often viewed negatively or are misunderstood (Daniels, Gabel, & Hughes, 2012). A teacher’s negative perceptions could be related to the teacher’s lack of or limited experience and awareness about stuttering or people who stutter. Only recently has research examined teachers’ training in relation to stuttering. This recent research showed that teachers are limited in their experience and training with stuttering (Jenkins, 2010; Pachigar, Stansfield, & Goldbart, 2011).

Significance of the Study

If classroom teachers need to support the optimal educational development of children, including those who stutter, then the question which needs to be explored is whether teachers are prepared or trained to serve this population, or is further training warranted. Jenkins (2010) from the United Kingdom (UK) researched this question after seeing that research appeared to be lacking on whether teachers feel trained or knowledgeable about stuttering. Jenkins’ (2010) study also explored what type of information related to stuttering teachers would find helpful and how this information
might be best delivered. Jenkins’ (2010) research was also influenced by other research such as Critchton-Smith, Wright, and Stackhouse (2003), which indicated that a majority of UK speech pathologists (SLP) viewed teachers as having insufficient knowledge to manage their students who stutter and suggested a need for SLPs to work more closely with teachers. Stewart and Turnbull (2007) proposed that additional training is needed for teachers while Klompas and Ross (2004) indicated a need for teachers to be provided more information about stuttering through SLPs.

Although there is a vast amount of informational resources available to the public and teachers regarding stuttering through internet searches, websites, leaflets, books, articles, etc., according to the findings of a study by Crichton-Smith, Wright, and Stackhouse (2003) it appears teachers still lack awareness about people who stutter (Hearne, Packman, Onslow, & Quine, 2008). Jenkins (2010) indicated that although in the UK there are many information sources available, there is a lack of research examining teachers’ opinions regarding what information would be most helpful for teachers’ when working with CWS or what the most effective delivery method for this information would be. Jenkins’ 2010 study surveyed the attitudes of 72 mainstream United Kingdom schoolteachers. Results from that study revealed that teachers report their training with stuttering to be limited and only 60% of the responding teachers were aware of or used stuttering resources in the past. The majority of teachers in the Jenkins’ study expressed interest in receiving either stuttering training or resources, favoring direct contact with speech language pathologists as the means by which they would obtain information.
Purpose of the Study

The purpose of the current study is to explore the attitudes of teachers in a large Midwestern suburban school district in the United States towards training and awareness regarding stuttering, and interest in receiving stuttering resources which could later be used to better serve and educate CWS in our school systems. Both the current study and Jenkins 2010 study share a common purpose:

1.) Explore the training in stuttering undertaken by teachers including teacher trainings and professional development opportunities and teachers’ current awareness of stuttering materials.

2.) Gather information regarding teachers’ interest in the future content of stuttering resources and their preference for delivery of these resources.

This present study hopes to support the findings found in Jenkins’ (2010) study.

Research Questions

As a replication to Jenkins’ study and to help teachers better serve and educate children who stutter, the following research questions were investigated:

Research question 1. Are teachers limited in their training pertaining to stuttering?

Research question 2. Are teachers interested in receiving resources or information about stuttering and if so what would be the preferred delivery method to receive that information or training?

Research question 3. Are the responses of teachers in the present study similar to the responses of teachers in Jenkins’ study?
Research question 4. Are primary and secondary teachers similar in their past training related to stuttering, interest in future resources, preferred delivery of receiving information, and type of information they would have interest in receiving regarding stuttering?
Chapter 2: Literature Review

Individuals who stutter exist all over the world, and are of every socioeconomic group, religion, culture, language, and level of intelligence (Rustin et al., 2001). Research has found that about 5% of the population will stutter at some point during their life, with a lower prevalence of around 1% of the people stuttering at any given time (Bloodstein & Bernstein Ratner, 2007; Proctor et al., 2008). Within the United States, that statistic means that there are around three million people who stutter at a given time with approximately 555,000 of those being children educated by teachers in America’s classrooms. School for primary and secondary students is a complex environment where they are required to engage on a social and academic level, posing possible additional challenges to those who stutter as they attempt to navigate its complexities (Daniels et al., 2012). Research suggests that school age students who stutter will likely have many negative encounters or experiences as they go through school (Blood, Blood, Tellis, & Gabel, 2001; Daniels et al., 2012; Guitar, 2006; Ribbler, 2006).

Attributes of Stuttering

Stuttering is characterized according to Guitar (2006) as “abnormally high frequency and/or duration of stoppages in forward flow of speech. These stoppages usually take the form of (1) repetitions of sounds, syllables, or one-syllable words, (2) prolongations of sounds, or (3) ‘blocks’ of airflow or voicing in speech” (p. 13). Guitar further explains that when a person stutters they know what they want to say but are
unable which leads them to usually react by blocks or prolongations in attempt to force the word out. Stuttering usually begins between the ages of two and five (Peters & Guitar, 1991), but roughly 80% of children who stutter eventually “outgrow” or recover from their dysfluency on their own without ever receiving therapy (Yairi & Ambrose, 1999). Due to this developmental progression of recovery, stuttering is commonly thought of as merely a “disorder of childhood.” However, almost all of those who continue to stutter into adolescence are unlikely to ever be “cured” of their stuttering (St. Louis, 2001).

In addition to developmental trends of stuttering, research indicates existing gender trends. Stuttering is highly more prevalent among males than females. By the age of ten, boys are five times more likely to stutter than girls (Bloodstein, 1995); however, the ratio is lower at the onset of stuttering, close to 2:1 (Seider, Gladstein, & Kidd, 1983). Also females have better recovery rates compared to male stutterers (Ambrose, Cox, & Yairi, 1997; Seider et al., 1983).

The little empirical research that exists examining the cultural view or behavioral aspect of stuttering, show that stuttering varies very little across cultures (Finn & Cordes, 1997). One study comparing the stuttering between Caucasian and African American children, found no significant group differences in overt or accessory stuttering behaviors and no major differences in their attitudes about speaking. Due to the lack of any found significant behavioral or attitudinal differences between African American and Caucasian children who stutter, one may infer that the assessment measures and therapy used for both could be similar (Olson, Steelman, & Montague, 1999).
Though the majority of research has shown little to no cultural differences in the view or behavioral expression of stuttering, a few studies have shown variation between select cultures. One particular study showed foreign-born participants, particularly those of Asian descent, as being more likely to view a speech disordered person as being able to improve their speech if willing to put worth the effort. This finding suggests that both first generation or foreign-born Asian students who stutter and their parents may place blame on the student who stutters for not trying hard enough to overcome their stutter or hold false hope of the likelihood of recovery (Bebout & Arthur, 1992). When working with minority students who stutter, therapists may find it valuable to discuss with their clients their view of stuttering and the importance and function of speech, as well as their culture’s belief on the role of speech and stuttering (Finn & Cordes, 1997).

**Etiology.**

Several etiologies of stuttering have been proposed by researchers; however, scientists have not discovered the exact cause of stuttering (Guitar, 2006). A strong genetic link in stuttering has been supported by studies done on twins and families (Andrews, Morris-Yates, Howie, & Martin, 1991; Guitar, 2006; Yairi & Ambrose, 2004). A few research studies have supported a single gene or genes as being carriers for stuttering. Ambrose, Cox, and Yairi (1993) have supported that the transition of stuttering is likely through a single gene, whereas, Shugart et al. (2004) support that a group of genes is responsible. Research also suggests that stuttering has a physiological base, most likely stemming from functional problems of the brain and nervous system due to muscle coordination and control problems that effect breathing, articulation, and voicing (Van Riper, 1982). Other research has shown those who stutter to have a higher probability of
being right hemisphere dominate for speech, whereas the majority of those who do not stutter are left hemisphere dominate using left for speech (De Nil, Kroll, Kapur, & Houle, 2000). Using the right hemisphere of the brain can be problematic because it processes information slower than the left hemisphere of the brain (St. Louis, 2001). Another theory is their left hemisphere is less developed than the right hemisphere (Geshwind & Galaburda, 1985) or both the right and left hemispheres are used in speech compared to non-stutterers whose left hemisphere is primarily used (Yairi & Ambrose, 2006).

Although a psychological cause to stuttering has rarely been documented, there have been some supporting cases. Feelings of insecurity and instability can develop, if a person views an event in their life as stressful or traumatic. Certain traumatic events can have psychological effects on a person, which can lead to the sudden appearance or worsening of stuttering (Peter & Guitar, 1991; Starkweather, 1987).

Developmental and environmental stressors could also lead to psychologically induced stuttering. Some support has been found indicating that overly critical and anxious parents could be more likely to have children who stutter (Peter & Guitar, 1991). This correlation is likely due in part to parents being an important and salient environmental factor in a child’s life. The majority of those who stutter develop stuttering during early childhood when their speech and language is rapidly developing (Bloodstein, 1987). During this childhood stage, several words are learned and spoken. Children in this stage of rapid language development may feel pressure to increase their vocabulary, possibly triggering the onset of stuttering (Peter & Guitar, 1991; Van Riper, 1973). This stress or psychologically induced onset of stuttering is more likely to act as a trigger rather than the sole cause in genetically pre-disposed people.
Accessory Behaviors.

By the time a person who stutters reaches adolescence, they will likely begin to or have acquired accessory behaviors. Accessory behaviors are strategies to mask one’s dysfluency and or assist in getting out a word they are struggling to say. Accessory behaviors to avoid stuttering may be used in a variety of setting and times, to postpone saying a “difficult word”, at the start of a word, to get through a repetition or block of a word or sound. The kinds of accessory behaviors are limited only by the imagination of the person who stutters; therefore, only the most common accessory behaviors will be further discussed (St. Louis, 2001).

The accessory behaviors acquired through years of stuttering can vary greatly from one stutterer to the next. Many stutterers develop avoidance or secondary behaviors, such as, substitutions like saying “shows” for “movies” or postponement devices like “um” and “you know” in attempt to delay or avoiding stuttering on a word (Guitar, 2006). As a way of minimizing their stuttering some may acquire particular learned physical behaviors or try to avoid certain speaking situations. The physical behaviors that one may require are facial tensions and concomitant movements. Other physical behaviors could be closing of the eyes, contortion of the face, foot stamping, among others. At one time these learned techniques were believed by the person who stutters to assist in getting out of a vocal repetition or reducing a “block” in producing a word or sound. Over time, these same behaviors can become automatic, appearing like a tic. Some people who stutter cope by trying to avoid situations they feel will increase the likelihood of them stuttering, examples include not socializing with new people, not answering the phone, or not dining in restaurants (St. Louis, 2001).
Word avoidance is another accessory behavior or strategy that over time people who stutter may adopt. When a person who stutters avoids words, they change or leave out a word completely that they feel might trigger dysfluency. The use of these accessory behaviors can lead to additional problems where the conversation may not make sense anymore to the listener or appear awkward, causing confusion. While there are common accessory behaviors used by people who stutter, stuttering appears and affects everyone differently and can change day to day (Rustin, et al, 2001).

**Emotional Impact of Stuttering**

It is important for school personnel to be aware when educating their CWS that stuttering has a pervasive impact on school age students’ lives emotionally, academically, and socially. Several personal accounts have reported feelings of helplessness, anxiety, fear, anger, shame, and guilt related to one’s stuttering (Bennett, 2006; Corcoran & Stewart, 1998; Klompas & Ross, 2004; St. Louis, 2001; Wingate, 1964). A theme of suffering characterized by helplessness, shame, fear, and avoidance emerged from a qualitative study of eight adults who stutter (Corcoran & Stewart, 1998). These personal accounts of those who stutter may help give school personnel a glimpse into the intimate lives or inner thoughts of people who stutter to help them have a better understanding of this population. One participant of this study recounted her extreme feeling of helplessness as:

I was just at the end of my rope, and I just couldn’t help but cry about it…I remember feeling suicidal back then and not having the courage to kill myself.

Another’s feeling of shame was stated as:
I thought that they [the listeners] would look down on me because I stuttered. Because it looks like voluntary behavior that I should be able to stop. Any four-year-old child can speak fluently. I wasn’t accepted as a mature person.

Fear was described by one participant as:

I hate introducing myself. I hate going to a meeting and some twit says, “O.K. we’re going around the table and everyone’s going to introduce themselves and tell you what they do.” That to me is the most frightening thing in the world. As soon as they say it, I know I won’t be able to say my name…The last time it happened, I just said: “I can’t do this.”

Another stated how avoidance significantly put limits on their life:

If you thought about it, I’m sure you [could think of] a million things you could have done every day if you hadn’t stuttered. The telephone calls you could have made. The times you could have gone out. You know, there’s a million of them.

Research suggests one’s lack of control over the fluency of their speech may result in feelings of helplessness, eventually lead to feelings to self-doubt. This self-doubt over time can manifest to an overall loss of self-esteem (Daly, Simon, & Burnett-Stolnack, 1995). Parents, students, and teachers have reported that loss of self-confidence and self-esteem is the main problem for those who stutter (Rustin et al., 2001). Additionally, the majority of research exploring the relationship between stuttering and self-esteem has shown stuttering to have adverse effects on an individual’s self-esteem (Bajina, 1995; Crichton-Smith, 2002; Klompas & Ross, 2004; Luper & Mulder, 1964; Shames & Rubin, 1986; Starkweather, Ridener-Gottwald, & Halfond, 1990; Van Riper, 1982).

It would be beneficial for teachers to know if school age children of all ages are impacted by their stuttering or if there are any known differences on the impact stuttering has on children as they age. The developmental trend in attitudes towards speech felt by those who stutter compared with those who do not stutter was examined by De Nil and Brutten (1991). Results showed that children who stutter (CWS) have significantly more
negative attitudes about their speech compared to those who do not stutter. This significant difference in negative attitudes is present in all of the age groups from younger children to adult. Results also revealed that negative attitudes of CWS toward their own speech became progressively more negative as they grew older. According to results of this study, adolescents who stutter have less self-efficacy towards speaking than young children.

**Impact on Social Relationships**

Since the school environment for students is one of both academic and social engagements, it is important for school personnel to be aware of how stuttering may impact their students who stutter. Sadly, research has shown that stuttering does significantly impact people’s social relationships and confidence. People who stutter have reported worrying about what others think of them during times of dysfluency, especially when first meeting someone, and worrying that their stuttering may affect the kinds of social relations can expect to have (St. Louis, 2001). When people lack confidence in their ability to communicate, they may become anxious and withdraw socially. For this reason it is not surprising that those who stutter may find it difficult to make friends and enter into social or romantic relationships (Blood et al., 2001).

As children begin to interact more with peers, they become more confident in their ability to make friends and their social skills become refined. Stuttering may cause young children to miss the opportunity to develop confidence with their peers (Mooney & Smith, 1995). This feeling of a lack of confidence felt by some stutters may not be unfounded; data show that primary school age children perceive their peers who stutter more negatively than those who do not stutter (Langevin & Hager, 2004). Data suggest
that those who stutter are more likely to expect negative social evaluations compared to those who do not stutter (Messenger, Onslow, Packman, & Menzies, 2004). Not just children and youth, but adults who stutter have reported experiencing significantly more emotional tension in social situations and engaging in significantly less social interaction than their fluent peers (Kraaimaat, Vannryckeghem, Van Dam-Baggen, 2002). The difficulties experienced by stutterers with social relations is also supported by a large study with 324 participating children who stutter from Mooney and Smith (1995), showing that 84% of CWS reported difficulties in friendship forming, with 31% reporting that they “very often/always” found it hard to make friends. In light of these findings, it is not surprising that a leading researcher on stuttering, Van Riper (1982) stated “stuttering is not merely a speech impediment; it is an impediment in social living” (p.2).

**Bullying**

Teachers not only have the role of educating but also the role of providing supportive and safe environments for all students, including those who stutter (Panico, Daniels, & Clafin, 2011). Studies that included personal interviews and survey reports found that PWS reported a high incidence of bullying and teasing in schools (Blood & Blood, 2004; Blood, Boyle, Blood, & Nalesnik, 2010; Davis, Howell, & Cooke, 2002; Hugh-Jones & Smith, 1999; Langevin et al. 2000; Mooney & Smith, 1995; St. Louis, 2001; Yaruss, Murphy, Quesal & Reardon, 2004). This suggests that the school system and or teachers may unknowingly be failing to provide CWS a safe learning environment. Some may make the argument that many students who are teased in school are also fluent speakers. However, research has shown that teasing and bulling is more prevalent for CWS than for their peers (Blood & Blood, 2004; Yaruss et al., 2004), with CWS
experiences bullying four times more than their peers (Blood & Blood, 2004). A study of 403 children by Davis et al. (2002) found that CWS are at a higher risk of being victims of bullying and having a lower social status when compared to their fluent classmates. Bullying and social status of CWS compared to their fluent peers was also explored in a study which included 403 students from 16 different classrooms across England with each class having one CWS. The results of this study indicated that in comparison to their peers, CWS were more likely to be bullied and less likely to be viewed as popular (Davis et al., 2002). Mooney and Smith (1995) investigated the prevalence and effect of bullying on people who stutter (n=1400, with 30% return rate), finding 82% of the participants reported being bullied during their school years, with 93% indicating the bullying was due to their dysfluency. These accounts of CWS being bullied are higher than the 15% to 20% of average school-aged students who will experience some form of bullying (Olweus, 1993; Ross et al., 1996; Smith & Sharp 1994). Another study indicated that nearly 60% of CWS are frequently bullied, which is significantly more prevalent than any bullying experienced by their peers (Langevin et al. 2000). Turnbull (2006) suggests that CWS unfortunately can be easily identified targets for bulling or teasing. Davis et al. (2002) found that their classmates also viewed CWS more vulnerable to bullying than non-stuttering peers. Another study found that PWS often felt unable to verbally defend themselves or report teasing, fearing more ridicule (Mooney & Smith, 1995). Even more troublesome, a study on the effects and severity of bullying experiences based on 276 PWS by Hugh-Jones and Smith (1999) indicated that the bullying not only had short-term consequences on the personal lives of stutters but also long-term effects.
Unfortunately, bullying and teasing from peers related to one’s stutter has been shown to have lasting effects on the self-esteem and self-confidence of CWS. Bullying has had long-term effects lasting well into adulthood for many PWS (Mooney & Smith, 1995; St. Louis, 2001). Only 4% of respondents from Langevin et al. (2000) study reported that the bullying did not have any negative effects on them, with 65% reporting it affected them personally in the form of shyness, anxiety, difficulty forming friendships, and lowered self-esteem and confidence. Physical bullying, threats, and rumor spreading were common types of teasing, with name-calling being the most reported by respondents of the study. One researcher suggested that teachers’ attitudes or beliefs related to stuttering may actually have an influence on how bullying is managed (Hugh-Jones & Smith, 1999), which is one reason why it is important for teachers to have knowledge or training related to stuttering (Pachigar et al., 2011).

**Impact on Academics**

Stuttering not only affects a child emotionally but teachers may not be aware that stuttering can have an impact on a child’s academics. Data has shown that 65% of stutters felt the period or time of their life that was most affected due to their dysfluency was during their ‘school days’ (Hugh-Jones & Smith, 1999). Some have reported that their dysfluency causes them to view themselves as less intelligent, which hinders or hindered their participation in school. Participation may be hindered due to the additional stress caused by the highly verbal environment of schools, for example, answering the register/roll call, asking questions, presenting, and reading aloud (Blood et al., 2001; Mooney & Smith, 1995). Foreign language classes are perceived as being especially difficult for a student who stutter due to the amount of class participation and use of
unfamiliar words (Bloodstein, 1972). Certain individuals who stutter may try to avoid speaking situations or refuse to talk altogether to escape the verbal demands and fears of embarrassment (Klompas & Ross, 2004; St. Louis, 2001).

Anxiety and fear associated with school can have visible negative effects on their attitudes toward school and their academic performance (Bray & Kehle, 1996), such as lower grades and less class participation than their fluent peers. The anxiety level of CWS can increase due to their fear of embarrassment and verbal stress from class presentations and speeches (St. Louis, 2001). A study by Klompas & Ross (2004) found the majority of their participants felt their stuttering negatively affected their academic performance, particularly oral presentations, due to a lack of teacher’s understanding of stuttering, and teasing by classmates. It is extremely troublesome that although the level of intelligence of an average student who stutters falls within the average range, CWS have been found to be more likely to be held back and have poorer grades compared to students who do not stutter (Blood et al., 2001). This could be related to their difficulties verbally communicating to the teacher what they know; which in return may cause a teacher to think that CWS do not understand the material and give the student a lower grade (Blood et al., 2001). Based on the information above, it would likely be very beneficial for CWS’s educational development, for school personnel such as, teachers, administrators, counselors, school psychologists, etc. to be aware that most students who stutter are of average intelligence and teachers may need to seek alternative ways of assessing knowledge of CWS that puts less emphasis on verbal responses.
**Employment**

Teachers not only play an important role in supporting the optimal educational development of children who stutter for the here and now, but also are supposed to help adequately prepare both their fluent and dysfluent students for future employment opportunities. Teachers have a role in preparing students for the future. Therefore, it would be valuable for teachers to know that as CWS approach the age of employment, they often become more aware and preoccupied with how their dysfluency may affect their future employment. Research indicates that self-consciousness about one’s stuttering commonly had an effect on an individual’s career choice (Swan, 1993). People who stutter (PWS) may be less likely to or much more apprehensive about entering into a career that requires frequent verbal ability. This apprehension and view of stuttering as being a hindrance to employability may often lead to a lower level of educational attainment for those who stutter, or may lead to their choosing a major that does not stress verbal communication skills (St. Louis, 2001). The majority of participants from Crichton-Smith 2002 study felt their dysfluency affected their choice of occupation and or increased their dissatisfaction with their careers. In contrast, one study done by Klompas and Ross (2004) showed many of their participants who stuttered did not perceive their stuttering to adversely affect their ability to obtain work, choice of occupation, nor relationships with co-workers and managers. The majority of the participants in this study however reported that they felt their stuttering adversely impacted their chance for promotion and their work performance.
Negative Stereotypes

The perceptions teachers and others have towards PWS is likely to have an impact on how PWS view themselves. PWS often internalize, viewing as truth, the stereotypes they feel people have towards those who stutter (Smart, 2001). PWS unfortunately live in an environment where, as research has indicated, the general public often stigmatizes or stereotypes them due to their stutter (Blood, Blood, Tellis, & Gabel, 2003). School-aged students have been shown to have significantly higher negative perceptions towards PWS than towards their fluent peers (Franck, Jackson, Pimentel, & Greenwood, 2003). This same study reported school-aged students making negative comments about stuttering or laughing as they viewed a video clip of a man stuttering as he read a poem.

The majority of research unfortunately has indicated that educators as well are likely to have negative perceptions or associate negative personality traits with people who stutter (Cooper & Cooper, 1996; Dorsey & Guenther, 2000; Horsely & Fitzgibbon, 1987; Lass et al., 1994; 1992; Rustin et al., 2001; Yeakle & Cooper, 1986). These researchers have indicated that educators attribute characteristics to PWS, such as, “anxious”, ‘shy’, ‘withdrawn’, ‘self-conscious’, ‘tense’, ‘less competent’, ‘hesitant’, and ‘insecure’. However, though very limited, two recent studies reported teachers having less negative attitudes towards people who stutter than previous studies. Irani, Gabel, Hughes, Swartz, and Palasik (2008) found that many teachers in their study reported positive attitudes both towards fluent speakers and those who stutter. Another recent study indicated that although teachers were still reporting polarized beliefs regarding the relationship between stuttering and intelligence, the majority of teachers did not report the common view of CWS as being shy or quiet (Pachigar et al., 2011). All the teachers
in this study also believed that environmental factors had a major influence on CWS, with the majority of teachers indicating a desire to better help and support CWS in the classroom. Though it is promising to see these two studies reporting less negative attitudes towards CWS, one cannot disregard the large amount of research finding that school personnel associate negative attributes or hold negative perceptions of CWS. Reasoning for teachers’ negative perceptions about stuttering could be related to teachers’ lack of or limited experience and awareness about stuttering or people who stutter; however, future research would need to explore this more. These misperceptions of CWS by teachers does not fit with the nonjudgmental environment teachers are supposed to strive to have for all students including those who stutter (Panico et al., 2011).

Rationale for Current Study

Previous literature indicates that while the majority of research shows that many teachers may hold preconceived ideas and bias towards students who stutter, it is possible that this thinking comes from teachers who are unprepared or not knowledgeable about how stuttering may impact their students. The need and benefit of teacher training is supported by Yeakle and Cooper’s (1986) research which found that teachers who were more knowledgeable about stuttering or who had coursework in speech disorders had better perceptions of a person who stutters than those who did not. However, there is very limited research on whether primary and secondary teachers feel prepared to work with students who stutter. Also teachers’ knowledge and training have not been widely researched. Recently, Pachigar et al (2011) found that only 3 out of the 58 teachers in their study reported having any training on stuttering. A study by Jenkins (2010) is the
only study that has asked teachers not only if they are unknowledgeable about stuttering resources or have had past training, but if they have interest in receiving future training and resources. Teacher training and knowledge about resources related to stuttering as explored by Jenkins (2010) is critical research and has indicated that CWS are often being taught in a school environment where they are viewed negatively and misunderstood by their own teachers. These teachers may lack training or knowledge to better support and address the special needs of this population. Students who stutter are reporting a less beneficial overall school experience compared to their fluent peers (Daniel et al., 2012). This current research is needed to further explore, through the replication of Jenkins original study (2010), if there is a desire from teachers for training or information related to stuttering and if so what type of information and delivery is preferred. Previous literature indicates that being a student who stutters can have a lasting negative social, academic, and emotional influence; therefore, it is vital for teachers to be adequately trained or knowledgeable about students who stutter.
Chapter 3: Methods

Participants

The participants of this study were elementary, middle and high school general education teachers from a large suburban district in the Midwest. This district serves a culturally and economically diverse student population spanning a 52-square-mile area. The school district’s student population was approximately: 69% White, 3% Hispanic, 19% African American, 2% Asian/Pacific Islander, 0.19 % American Indian/Alaskan. The district’s racial demographics were very comparable and representative of the average school in the state of the Ohio: 78% white, 3% Hispanic, 19% African American, 2% Asian/Pacific Islander (National Education Center for Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education", 2009-2010). The only difference between the district and the state data was that the selected district had 9% fewer Whites than Ohio’s average. This discrepancy may be due to the district having the additional racial category of multi-racial (7%), which was not included on the state of Ohio category option.

The district serves approximately 15,000 students and is comprised of 20 schools: 13 elementary, 4 middle, and 3 high schools. Out of those schools, faculty from 12 elementary, 4 middle, and 3 high schools participated in this study. The overall participant response rate for this study was 38% with 215 out of 560 teachers completing the online survey. Nineteen out of the twenty schools from the district participated. While
many of the teachers at the nonparticipating school were willing to participate in this study, the contact person for this particular elementary school reported that she had forgotten to send out the survey to the elementary teaching staff. The rate of responding schools from Midwestern district was 95%.

Of the total 215 classroom teachers who responded, 47% were from elementary schools (n=102), 18% from middle schools (n=38), and 35% from high schools (n=75). One hundred and thirty-nine surveys were not included in this count and excluded from analysis because they were completed by school personnel who were not the target group of this study, general education teachers, rather other school personnel such as custodians, administrators, counselors, or technology specialists.

**Materials**

The eight-question survey was derived from the questionnaire used in the study by Jenkins (2010). Jenkins gave permission for the use and replication of her questionnaire, as well as modifications as needed of the original questionnaire for use in this study. There were only minor modifications made to the original questionnaire. One of the modifications was the rephrasing of a few of the questions, though maintaining the meaning. The second modification was the addition of a demographic question asking the participant to indicate what type of educator or service provider they were for the school district, such as, general education teacher, intervention specialist, related service provider, or other. The importance of this question was to ensure that only the responses from the general education teachers, the target population of this study, were analyzed. The demographic section asked the schoolteachers to answer questions regarding their number of years of teaching, what type of educator or service provider they were, age
group of students they teach, and if they have taught or were currently teaching a student who stutters.

Four additional questions were asked to explore the teachers’ opinions regarding stuttering training and their knowledge and interest in resources related to stuttering. The four questions were closed-ended where the participant would click the appropriate box or boxes to indicate their response(s) from a list of possible options. Three of the four questions were the following: 1) Have you received any training regarding stuttering during your career; 2) Please click below any resources you have used or are aware of to help students who stutter; and 3) What information about stuttering would you find useful or be of interest. The last of the four questions requested the teachers who were interested in receiving further information about stuttering to rank their preference of delivery method for receiving further information/resources about stuttering. The survey which was uploaded and made accessible online through the web server Survey Monkey (www.surveymonkey.com) appears in Appendix A.

Data analysis generally followed the method used in Jenkins’ (2010) exploratory study. The Jenkins (2010) study did not explore the data statistically or focus on whether there were differences in the responses between primary school teachers and secondary school teachers; however, in Jenkins (2010) it was reported that the responses from primary and secondary school teachers appear similar. For our study, the data from the surveys were imported into an Excel worksheet and then into SPSS. Frequency counts and percentages were calculated and contingency table analyses were performed to compare proportions between primary and secondary teachers. In particular, Fisher’s Exact test was used to examine the significance of associations between the two groups.
and their responses to questions with binary responses, which included questions regarding past training regarding stuttering and type of information about stuttering they would have interest in receiving. More general chi-square tests for contingency tables were used to compare proportions of responses for questions with more than two possible responses such as, between the group of primary and secondary teachers and their preferred delivery method of receiving information related to stuttering. All statistical tests were considered to be significant if the p-value was less than .05.

**Procedure**

Approval was first obtained from the Institutional Review Board (IRB) at The Ohio State University. After receiving IRB approval, the Superintendent, Chief Academic Officer, and Head of Human Relations of the school district were contacted in order to obtain permission to contact members of their teaching staff to request participation in this survey study. All three granted their permission for the distribution of the survey to the teaching staff via district email. An online survey link was sent by each participating school’s principal or secretary via their building’s email network to the teaching staff. The survey was available for teachers to respond to in June of 2011. The email sent out to teaching staff contained a brief description of the study, information regarding their rights as a participant, instructions on how to access the online survey, and the researcher’s contact information. The teachers were told their participation was voluntary, anonymous, and they could discontinue their participation in the study at any time without consequences. Therefore, those who completed the online survey gave their passive consent to participate in the study. After completing the survey, participants could chose whether or not they wanted to enter their email or address for a chance to
win a $100 Amazon.com gift card. If they choose to enter for a chance to win the gift card, the information could not be linked to their responses to the survey; therefore keeping their anonymity.
Chapter 4: Results

The statistical analyses for the data of the study were performed using Microsoft Excel or SPSS Statistics Version 21. The data collected via the online survey were downloaded into an Excel worksheet from the web server Survey Monkey (www.surveymonkey.com). Descriptive statistics were used to illustrate general characteristics of the research participants and their responses to the survey questions through frequency counts and percentages within the quantitative data. One of the four research questions used contingency table analysis, specifically Chi-squared tests, to compare survey responses between primary and secondary teachers. The results of the data analyses from the research questions are displayed in tables and further presented below.

Teaching Experience

Respondents were asked how many years they had been teaching in addition to their experience working with or teaching CWS (Table 1). The highest percentage of respondents taught from 11-20 years (n=72). The second highest percentage of respondents reported teaching more than 20 years, then teaching from 5-10 years, with the lowest amount reporting teaching less than 5 years.
### Table 1. Years of Teaching Experience

<table>
<thead>
<tr>
<th>Years of Teaching Experience</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>26</td>
<td>12.2</td>
</tr>
<tr>
<td>5-10 years</td>
<td>50</td>
<td>23.4</td>
</tr>
<tr>
<td>11-20 years</td>
<td>72</td>
<td>33.6</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>68</td>
<td>38.8</td>
</tr>
</tbody>
</table>

**Teacher Training Regarding Stuttering**

This research explored whether teachers were limited in their training pertaining to stuttering. Of these 210 teachers who responded, the vast majority reported that during their career they had not received training of any kind regarding stuttering at a frequency of 90.5% (n=190). Leaving only 5.2% of respondents (n=11) receiving past in-service training/informal discussions with a Speech Therapist or another professional and 4.7% of teacher (n=10) receiving past training as part of their teacher training.

**Teachers’ Awareness of Resources to Support Children who Stutter**

The survey asked teachers to select any resource they are currently aware of to support CWS. Analysis of data showed that 128 (59%) respondents were aware of a resource or resources related to stuttering, with 88 (41%) having no prior knowledge of any resources to help students who stutter. Of those respondents, advice sought from Speech-Language Pathologists was the most often reported resource (46%; n=100). The second most commonly reported resource was advice from other professionals, such as a counselor, teacher or school psychologist (28%; n=60). Websites for advice/information
about stuttering were the third most commonly reported resource of which teachers were aware (19%; n=42). The lesser known resources reported by respondents to support CWS are the following: books related to stuttering (13%; n=28), information leaflets (7%; n=15), and videos related to stuttering (.9%; n=2).

**Preferred Content**

The study explored not just whether respondents are interested in receiving future information about stuttering, but what kinds of information or resources would they want to receive. All but 11 of the respondents reported interest in receiving some type of future information about stuttering, with over half reporting an interest in all information. The majority of respondents’ (88.3%; n=189) preference was for the content of the resource material to contain strategies to support student(s) who stutter in the classroom. The following are other types of content in which respondents reported interest in or would find useful in descending order of interest: ways to increase confidence in student(s) who stutter, general facts regarding stuttering, ideas to increase other student’s understanding of stuttering, and activities/games to promote fluency. Table 2 further illustrates what different kinds of information or resources respondents had interest in receiving to better support students who stuttering.

<table>
<thead>
<tr>
<th>Resource(s)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies to support students who stutter in the classroom</td>
<td>189</td>
<td>88.3</td>
</tr>
<tr>
<td>Ways to increase confidence in students who stutter</td>
<td>165</td>
<td>77.1</td>
</tr>
<tr>
<td>General facts regarding stuttering</td>
<td>139</td>
<td>65</td>
</tr>
<tr>
<td>Ideas to increase other students’ understanding of stuttering</td>
<td>118</td>
<td>55.1</td>
</tr>
<tr>
<td>Activities/games to promote fluency</td>
<td>98</td>
<td>45.8</td>
</tr>
<tr>
<td>No interest</td>
<td>11</td>
<td>5</td>
</tr>
</tbody>
</table>
Preferred Delivery of Information

Of the respondents who expressed interest in receiving further information about stuttering, the majority (n=119; 65%) expressed their most preferred method of receiving information regarding stuttering is on a one to one basis with a Speech Language Pathologist regarding a specific student. Websites, where one could go for advice and activities related to stuttering, was the preferred delivery of information by 43 (23.2%) respondents. The least preferred method to receive stuttering information was through information leaflets, which was preferred by 31 (17.5%) of the remaining respondents.

Primary and Secondary Teacher Comparisons

The current research explored whether there was a statistical relationship between the respondent’s grade level taught (primary and secondary), and their past training related to stuttering, preferred delivery of receiving information, and type of information about stuttering they would have interest in receiving. Fisher’s exact tests were used to examine the significance of associations between the two groups and their responses to questions with binary responses. General Chi-squared tests were used for questions with more than two response options.

Fisher's exact test was performed to evaluate whether a statistical relationship exists between grade level taught and past training. A statistically significant relationship was found between grade level taught and whether they had or had not received any past training (p=.001), with 19.6% primary school teachers reporting past training while only 5.35% of secondary teachers reported ever receiving any past training related to stuttering.
A Chi-Squared test was used to explore possible associations between the group of primary and secondary teachers and their preferred delivery method of receiving information related to stuttering, which included one on one with SLPs, information leaflets, and websites. However, no differences were found between level of grade taught with regard to their preferred method of delivery ($\chi^2 (2) = 3.563, p = .175$). Both groups preferred the delivery of information to come from SLPs.

As shown in Table 3, no difference was found between level of grade taught (primary/secondary teacher) and interest in receiving information regarding general stuttering facts ($p = 0.1$) or interest in receiving strategies to support CWS in the classroom ($p = 0.305$) based on Fisher Exact Test. For the remaining three types of stuttering information one may or may not be interested in receiving, there were statistically significant differences found between level of teaching. There were differences between primary and secondary teachers with regard to their interest in ideas to increase other students’ understanding of stuttering ($p = .028$), with a higher proportion of primary teachers having interest compared to secondary teachers. There was also a statistically significant difference between grade level taught with regard to their interest in learning ways to increase confidence ($p = .0015$), with a higher proportion of primary teachers having interest in improving confidence in CWS than secondary teachers. Lastly, a statistically significant difference was found between level of teaching with regard to their interest in learning activities or games to promote fluency ($p < .001$), with most primary teachers (65.7%) indicating interest in activities and fluency promoting games while most secondary teachers (73.5%) did not indicate having interest in learning activities or fluency games.
Table 3. Fisher Exact Tests Results for Comparison Analyses between Grade Level Taught and Interest in Types of Stuttering Information

<table>
<thead>
<tr>
<th>Delivery Content</th>
<th>Grade level taught</th>
<th>Total no. of teachers (N=215)</th>
<th>Sig (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary Teachers (n=102)</td>
<td>Secondary Teachers (n=113)</td>
</tr>
<tr>
<td>1 Ways to increase confidence in CWS</td>
<td>86 (84.3%)</td>
<td>79 (69.9%)</td>
<td>.015*</td>
</tr>
<tr>
<td>2 Activities/games to promote fluency</td>
<td>67 (65.7%)</td>
<td>30 (26%)</td>
<td>.000**</td>
</tr>
<tr>
<td>3 Strategies to support CWS in classroom</td>
<td>92 (90.2%)</td>
<td>95 (85%)</td>
<td>.305</td>
</tr>
<tr>
<td>4 General facts related to stuttering</td>
<td>65 (63.7%)</td>
<td>73 (64.6%)</td>
<td>.1</td>
</tr>
<tr>
<td>5 Ideas to increase other students’ understanding of stuttering</td>
<td>64 (62.7%)</td>
<td>53 (46.9%)</td>
<td>.028*</td>
</tr>
</tbody>
</table>

Note: N=total no. of participants; n = no. of participants in groups
* Significant at p <0.05, two-tailed. ** significant at p <0.01, two tailed

In summary the results explored possible associations between primary and secondary teachers and their preferred delivery method of receiving information related to stuttering and also interest in different types of stuttering information. These results above indicated that there were no differences found between level of grade taught with regard to their preferred method of delivery with both preferring information to come from SLPs. Results did indicate that there were statistical significant difference in interest shown for three of five types of stuttering information in relationship to primary and secondary teachers with primary teachers showing more interest in learning ways to increase confidence in CWS, learning activities to promote fluency, and increase peers understanding of stuttering.
Chapter 5: Discussion

This current study was designed to support and further the findings in Jenkins’ (2010) study in the hopes of better supporting the needs and interest of teachers, leading to CWS being taught by educators who are more informed and better prepared to meet their needs. Both studies explored the training pertaining to stuttering undertaken by teachers and explored teachers’ interest in receiving training or information related to stuttering. For respondents who reported interest in future stuttering information, both studies’ data explored what kind of information or resources would these teachers find beneficial and how would they prefer to receive this information.

Research Question One: Are Teachers Limited in their Training Pertaining to Stuttering?

The first purpose shared by this study and Jenkins’ (2010) study was to explore the training related to stuttering undertaken by teachers. The results showed that the teachers are lacking in training pertaining to stuttering, with the vast majority reporting never receiving training of any kind during their career. This would support research indicating that teachers are not adequately trained in regards to stuttering (Jenkins, 2010; Pachigar et al., 2011). The reported lack of training related to stuttering is troubling when the majority of teachers in this study also report they teach or had previously taught a CWS.
Not only are teachers lacking in training related to stuttering, they are also lacking in their awareness of stuttering resources available to them. Analysis of data showed that 59% of teachers were aware of at least one or more resource related to stuttering, which means that there were still 41% of teachers who reported having no prior knowledge of any resources to help students who stutter. Fewer than half of the teachers reported being aware that SLPs were a resource that could help CWS, even though SLPs should be trained to treat and educate people with communication disorders, such as stuttering.

Turnbull (2006) shared she went into schools in the hopes of educating teachers about stuttering. In addition she wanted teachers to be confident in putting in place appropriate strategies to help CWS. She found that, like the data from this current study, almost half of the teachers were not aware of any resources or persons to help CWS. Only a few of the teachers aware that there were information leaflets about stuttering, videos related to stuttering, websites for advice or information on stuttering, or books related to stuttering. This research suggests that students in primary and secondary school who stutter are likely being taught by classroom teachers who lack the training and knowledge of available resources to best support and address the needs of this population of students. This is supported further by a group of adolescents and young adults who stutter, who reported feeling that their teachers need to be more knowledgeable about stuttering and should receive training about stuttering (Hearne et al., 2008).

A study by Yeakle and Cooper (1986) found that teachers who had experience with CWS or training in speech disorders improved their perceptions of PWS. This finding supports the importance and need to educate teachers about stuttering and increase their overall awareness of stuttering resources that are available. Many
organizations, particularly self-help organizations for stuttering, are currently investing money and effort to increase awareness and to educate the public about stuttering in the hopes to reduce stereotyping, stigmatism, and support PWS (Reichel, Yaruss, & Boyd Ludker, 2009; St. Louis, 2001). Currently, research is lacking in the effectiveness of these attempts at public awareness.

It is troublesome that CWS are spending a large portion of their formative years being taught by school teachers who lack training and knowledge of resources to support the needs of CWS. Students who stutter are often viewed negatively or are misunderstood in school systems (Daniels, Gabel, & Hughes, 2012). Teacher knowledge about stuttering and accurate perceptions of CWS is important since attitudes and actions of students can be influenced by their teacher’s actions and attitudes towards CWS (Marshall, Stojanovik & Ralph, 2002). PWS lives are impacted emotionally, socially, and academically, with the majority of stutters reporting that their ‘school days’ was the period of time in their life most affected by their stuttering (Hugh-Jones & Smith, 1999). CWS report feeling that being a person who stutters had a negative impact on their academic performance due to lack of teacher’s understanding and teasing by classmates (Klompas & Ross, 2004). Students who stutter may be at an academic disadvantage in addition to experiencing social and psychological stress such as avoidance of speaking situations, difficulty making friends, and anxiety triggered by reading and being called on in class. Teachers need to be aware of these negative academic effects that stuttering can have on their students so whenever appropriate they can assist in reducing the anxiety CWS experience in class.
Teachers’ large role in the educational development of the nation’s youth includes sharing the responsibility of the development of all students with impairments or disabilities. Though this research proposes a need for teachers to be better trained and knowledgeable in the communication disorder, stuttering, due to data showing lack of teacher training and knowledge of resources to support CWS in their classroom, this may be related or indicative of a larger issue. Not only do general education teachers have little to no training working with CWS, general education teachers may also be lacking or receiving no training in regards to the needs of other special needs populations, such as, Autism or Anxiety Disorders. It is possible then that general education teachers not only need further training in regards to stuttering but with special needs population as a whole. However, teacher training in relation to special needs populations as a whole is out of the scope of this study, but future research could look into this possible relationship.

Research Question Two: Are Teachers Interested in Receiving Resources or Information about Stuttering, if so what would the Preferred Delivery Method be to Receive this Information?

Almost every teacher in this study expressed being interested in receiving training or resources to support CWS. With the data showing most teachers in a school district, both in the UK (Jenkins 2010) and the USA, expressing a desire for more information about CWS, it is important to ask how teachers would prefer to receive this information. Data from this study indicates that teachers strongly prefer to receive additional information about stuttering on a one to one basis from speech pathologists. A moderate amount of teachers reported preferring to receive information from a website which has advice and activities for CWS.
Another very positive outcome reflected in this study was the wide range of interest teachers expressed in different types of information related to stuttering. The vast majority of teachers were attracted to learning strategies to support students who stutter. Other stuttering resources which appealed to the majority of teachers were ideas to increase the self-confidence in CWS, learning general stuttering facts, and ideas to increase peers’ understanding of stuttering. Improving confidence in CWS and increasing peers’ understanding of stuttering, would likely be beneficial for CWS to address and help better cope with teasing and bullying which is commonly reported in the school setting for this population (Blood & Blood, 2004; Blood et al., 2010; Davis et al., 2002; Hugh-Jones & Smith, 1999; Langevin et al. 2000; Mooney & Smith, 1995; St. Louis, 2001; Yaruss et al., 2004).

**Research Question Three: Are the Responses of Teachers in the Present Study Similar to the Responses of Teachers in the Original Jenkins’ (2010) Study?**

The results from this current study in regards to teacher training in stuttering, awareness of resources to support CWS, and teachers’ interest in future resources was similar and supported those surveyed by Jenkins (2010). The vast majority of teachers (90%) in this study reported receiving no training at any point in their education or career related to stuttering; almost the exact response frequency as in Jenkins’ study (89%). Which means only approximately 10% of teachers in both this study and Jenkins study received any kind of training related to stuttering. In Jenkins’ (2010) study, 40% of teachers had no prior knowledge of any resources to support CWS, very similar as the 41% in this current study. As in the positive outcome shown in Jenkins’ (2010) study (94%), a vast number of teachers (95%) in this study expressed interest in receiving
further information about stuttering and resources to support CWS. In regards to preferred delivery of information, 65% of respondents from both Jenkins’ (2010) and the current study preferred to receive information related to stuttering from SLPs.

Research Question 4: Are Primary and Secondary Teachers Similar in their Past Training Experience Regarding Stuttering, Interest in Future Resources, Preferred Delivery of Information, and Type of Information in Stuttering They would have Interest in Receiving?

This research question above was asked in order to build or improve upon Jenkins (2010) study. Though Jenkins did not focus or test for any significant differences between primary school teachers and secondary school teachers, Jenkins (2010) reported that the responses from primary and secondary school teachers appear similar between the two groups. However, Jenkins (2010) also noted that future research should explore any statistically significant differences between primary and secondary teachers because their interest in resources and delivery of information could have an impact on future resource development and delivery of information for these two groups of teachers.

The current research explored whether there were any statistical relationships between the grade level taught (primary and secondary) and their past training related to stuttering, preferred delivery of information, and type of information they would have interest in receiving. An analysis of data found statistically significant relationships between grade level taught and whether or not they received past training and also on a few of the reported teachers’ interest with certain types of information related to stuttering.
The results showed the proportion of primary and secondary teachers was statistically significant in their response to past training, with elementary school teachers reporting more training regarding stuttering, such as training/consultation with SLPs/other professionals than secondary teachers. This difference could be related to primary teachers having more exposure to CWS due to the higher percentage of younger students who stutter compared to older students. CWS, as they move into secondary school, are also more likely to choose to no longer continue speech therapy; therefore, the SLPs in secondary schools are likely to have less contact with these older CWS’.

Research has shown that adolescents who stutter are reportedly more likely to miss therapy sessions, drop out of therapy or be uncooperative while in a therapy session, along with “downplaying” the impact of stuttering on their life (Daly, Simon, & Burnett-Stolnack, 1995).

A significant difference was found between primary and secondary teachers with regards to their interest in ways to increase confidence in CWS and also ideas to increase other students' understanding of stuttering. Primary school teachers were more likely than secondary teachers to have an interest in receiving both ideas to increase confidence in CWS and ideas to increase their peers’ understanding of stutter. Primary school teachers may find useful strategies to increase confidence in CWS more useful than secondary teachers because primary teachers may view early intervention as important and beneficial. Also primary teachers may feel it is important to work on confidence in their younger students. If they view their younger students’ perceptions and minds as more impressionable, they may be more focused on promoting understanding of people’s differences, like stuttering. In contrast, teachers in upper grades may feel that other
student's attitudes, beliefs, and perceptions are less likely to change compared to younger children; therefore, secondary teachers may put more focus on what they may feel as teachers they can change, such as, teaching the curriculum. There was also a significant difference between grade level taught with regard to their interest in activities/games to promote fluency. Past research has shown that unlike teachers for younger grades, teachers of higher grades may not feel that implementing interventions is part of their job and report less interest in implementing classroom interventions such as, their reported lower interest in learning activities to promote fluency. This lack of interest from secondary teachers in implementing interventions has been linked to lack of knowledge in developing interventions, view of interventions as giving the student unfair advantage, and perceived lack of time related to workload with a high number of students, lack of planning time, short amount of time spent with each student during school day, and amount of paperwork (Myers & Kline, 2001).

Summary

School-age children spend a significant portion of their formative years in school settings, which puts teachers in a unique position to teach, direct, and have positive impact on the education and growth of our society’s children. Based on research it appears CWS may be at an academic disadvantage due to reports that their being a person who stutters negatively impacts them academically in a variety of ways. For example, though the average intellectual ability of CWS falls well within the average range, the same as their fluent peers, they often receive lower grades and are more likely to be held back a school grade (Blood et al., 2001). Other research has shown that the majority of
CWS felt their teachers had a lack of understanding of stuttering, were teased by classmates, and felt their academic performance suffered (Klompas & Ross, 2004). Providing teachers accurate information about stuttering can play an important role in the way teachers view and interact with CWS. This is important because CWS may not receive the assistance from their teachers to address their unique needs.

This current study supported recent research (Jenkins, 2010) that the vast majority of teachers are lacking in training related to stuttering. Despite there being multiple sources of stuttering information and resources focused towards teachers available, only a little more than half of responding teachers of this study were aware that they existed. Teachers’ most commonly known resource to support CWS is SLPs. However, this study has some encouraging and positive findings; namely that almost all of the teachers who participated reported interest in future information on stuttering and desired additional access to resources to help support CWS. As in Jenkins’ (2010) study, teachers in this study were also interested in receiving a wide range of information from general facts about stuttering to ways to increase the self-confidence of CWS. Though the majority of primary and secondary teachers reported interest in learning general facts regarding stuttering, their highest interest is receiving strategies to support students who stutter in the classroom. Knowing teachers’ preference of learning different kinds of stuttering information is beneficial knowledge when planning or developing future training whether it be, teacher training in college course(s) or later professional development opportunities. Additionally, it is important to note for the future development of training and distribution of beneficial resources to interested groups of teachers, that primary teachers reported higher proportion of interest in activities and games to promote fluency,
ways to increase confidence in CWS, and ideas to increase other students’ understanding of stuttering. Therefore, when implementing future teacher training for these two groups of teachers these resources would likely be better accepted and put into practice by teachers of the younger primary grades than the teachers of the older secondary grades.

Though primary teachers in comparison to secondary teachers indicate higher interest in learning about certain types of stuttering information, such as, activities to build confidence and promoting greater peer understanding, this is not to say that knowledge in these areas is not important or beneficial for secondary teachers as well. Furthermore, research has indicated that secondary students who stutter are actually the student population which may have the greatest need in improving self-confidence and greater peer understanding of stuttering. Parents, students, and teachers have reported that loss of self-confidence and self-esteem is the main problem for those who stutter (Rustin et al., 2001). Due to the period of Adolescence being a time of increasing value placed on “fitting in” and peer relationships, it is not surprising that stuttering can negatively impact adolescents’ lives socially. Additionally the manifestation of lower self-esteem over years of stuttering, may infer that CWS would likely experience more adverse negative reactions related to their stuttering as they develop and age. Lower self-esteem for CWS is more prevalent for students in secondary grades than primary grades. This may be because their self-esteem is less likely to be negatively affected until adolescence when they place higher value on social feedback and are more aware of the difference between their fluency and that of their peers (Yovetich, Leschild, Flight, 2000). On a positive note, self-esteem and confidence of a stutterer can be improved by reinforcement. Kenneth (2001) reported that professionals can use reinforcement when working with
CWS by emphasizing their strengths, praising and encouraging them, and by teaching to self-reinforce (Kenneth, 2001).

The majority of both primary and secondary teachers report the strongest preference for the information delivery to come from SLPs. This is important information for the training of future SLPs and current SLPs working within the school system. SLPs may not be aware that teachers desire to receive information about stuttering from them, particularly when the teachers have a student in their class who stutters. Without knowing this information, SLPs could be missing out on an opportunity to educate many teachers about stuttering, in return not filling the deficit that teachers have in their knowledge about stuttering and better ways to support CWS in their classrooms. Other school personnel, such as, counselors and school psychologists, who are trained and knowledgeable about students with disabilities and their academic and emotional development could assist SLPs in the training of teachers. To truly succeed at this aim, school personnel should never lose sight of the fact that they have the opportunity to empower CWS by addressing their unique needs and striving to support their optimal educational development.

It has been thirty-six years since PL 94-142, the Education of All Handicapped Children Act of 1975; a landmark legislation for public education access for all children, without regard of having a disability. This legislation mandated public schools to find ways to meet the needs and abilities of all children. Since this landmark act there has been many changes and improvements in special education services. Due in large part to the increased emphasis placed on accountability and standard based reforms, as well as transformations within special education itself, the focus has evolved from that of access
to outcomes (McDonnell & McLaughlin, 1997). PL 94-142 has lead colleges’ to change their training of teachers, so teacher could effectively work with a broader range of children and ability levels (Keogh, 2007). It has led to significant changes in the typical teacher’s job description and schools’ overall educational policies.

Subsequent legislation (namely IDEA 2004) has placed similar accountability demands of teacher education. Thus every student receiving special education services has an Individual Education Plan (IEP) to address their specific needs, goals, or modifications and adaptations, which may be provided to the student. The IEP also takes into account how their disability impacts the student’s academic performance. CWS could gain eligibility for special education services, and therefore receive an IEP, as a student under the disability category of a Speech and Language Impairment.

Schools can be help lawfully accountable to student who stutters even if they not receive or qualify for special education services by means of protected from the American Disabilities Act (ADA). The Americans with Disabilities Act has been a civil right law since 1990. The ADA protects individuals with a disability from discrimination in all public areas, such as, public schools, jobs, and even private places like private schools that are made available to the general public (The Americans with Disabilities Act, n.d.). This law services to ensure people of disability are provided with the same opportunities as others. While the ADA is divided into five sections or titles, for the purpose of this study’s focus being students who stuttering, only Title II and Title III will be discussed. Title II prohibits discrimination by “public entities” like public schools and Title III prohibits discrimination on the basis of disability in the private sector of public
accommodations like private schools. Based on this, public and private schools must make accommodations within reason in order to serve people with disabilities. Both public and private sectors are required by law to take necessary steps “to communicate effectively with customers with vision, hearing, and speech disabilities” The Americans with Disabilities Act, n.d.).

In spite of all of the improvements in rights of people with disabilities and special education over the years however, the question still bears asking: are today’s educators where they need to be in terms of being appropriately equipped to support the unique needs of PWS and adequately prepare them for future employment opportunities? Based on findings of this study it appears that teachers are lacking in their training and awareness of resources to support children who stutter which could have negative academic and social impacts on CWS in the school system. It is beneficial for educators to know that not only does research indicate the importance of supporting students who stutter in the classroom in order to provide an optimal learning experience, but modification or accommodations to their education may also be mandated by either civil or special education law.

Limitations and Future Research

A limitation of this study was the population size. While the Midwestern school district was large with the racial demographics comparable to the state of Ohio school norms, the addition of more school districts in this study could have provided a more representative sample of teachers' views.

Another limitation was the short time frame teachers in this study had to respond if they wanted to participate and complete the survey for this study. The response rate
likely would have been higher giving a better representative sample if the district’s teachers had a longer time to respond to this survey. The teaching staff had approximately four days to open their district email, which had the online survey link with information regarding the study.

Though this study made the assumption that future training in stuttering would improve the perception and attitudes of teachers thereby benefiting the education of CWS, this study did not seek to test this hypothesis. In regards to providing training or information to teachers, future research could examine whether or not the perceptions, stereotypes, or attitudes held by teachers towards people who stutter show any statistically significant change after providing training and informational resources regarding stuttering.

While this study explored teachers’ interest in different kinds of resources or information related to stuttering, the data from this question cannot extrapolate whether any of the resources would actually prove to be beneficial to teachers once received. The study also cannot report if any particular resource or type of information would serve as more or less helpful compared to others for receiving teachers. Future research is needed to explore if certain types of stuttering information is rated by teachers as more effective than others. One way this could be further explored is through providing different types of stuttering content or resources to teachers then have each resource rated for effectiveness. This could be done through providing teachers different types of stuttering content during a school district’s in-service session. Then the different content sessions could be compared by way of teachers’ ratings forms completed at the end of the in-
service session. This information would assist training developers in providing the most effective and beneficial stuttering resources and information to teachers.
References


Appendix A: Experience and Attitudes of Teachers Towards Stuttering Intervention, Education, and Resources Questionnaire

1. Please state how many years you have been teaching
   - [ ] 0 - 4 years
   - [ ] 5 - 10 years
   - [ ] 11 - 20 years
   - [ ] more than 20 years

2. Please state the age group of children you are currently involved with
   - [ ] Elementary School
   - [ ] Middle School
   - [ ] High School

3. What type of Educator or Service Provider are you currently in this school district
   - [ ] General Education Teacher
   - [ ] Speech and Language Pathologist
   - [ ] Related Service Provider (OT/APE/PT)
   - [ ] Intervention Specialist
   - [ ] Physical Education, Art, or Music Teacher
   - [ ] ESL teacher
   - [ ] Reading Specialist
   - [ ] Other, please specify

4. Have or do you teach a student(s) who is a stutterer?
   - [ ] Yes, currently
   - [ ] Yes, in the past
   - [ ] No
5. Have you received any training regarding stuttering during your career?

☐ Yes, as part of my teacher training
☐ Yes, in-service training from Speech Therapist/Other Professional
☐ No
☐ Other training – please specify below

6. Please click below any resources YOU CURRENTLY ARE AWARE OF to help students who stutter.

☐ None
☐ Advice/activities from a Speech and Language Therapist
☐ Websites for advice/information about stuttering
☐ Videos from National stuttering associations
☐ Information leaflets to help students who stutter
☐ Advice from another Professional e.g. Counsellor, other Teacher
☐ Books related to stuttering
☐ Other – please specify

7. In the future would you be interested in receiving further information about stuttering? If yes please rank preferred method from 1-3 (1 MOST PREFERRED method to 3 BEING LEAST PREFERRED method of receiving information) Only one response is allowed per column)

<table>
<thead>
<tr>
<th>Method</th>
<th>1-MOST PREFERRED method</th>
<th>2-SOMETIMES PREFERRED method</th>
<th>3-LEAST PREFERRED method</th>
</tr>
</thead>
<tbody>
<tr>
<td>A website with stuttering advice and activities</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>On a one to one basis from a Speech and Language Therapist related to</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
a specific child

Information leaflets aimed towards teachers/a training session from speech pathologist/other professional

8. What information about stuttering would you find useful? Please click all of those that would be of interest.

☐ Ways to increase confidence in student(s) who stutter
☐ Activities/games to promote fluency
☐ Strategies to support student(s) who stutter in the classroom.
☐ Ideas to increase other student’s understanding of stuttering
☐ General facts re: stutter

Questionnaire modified from - Attitudes of Teachers/H Jenkins/2010