Independent Studies and Capstones

Program in Audiology and Communication Sciences

2015

Teacher collaboration: Implications for transitions, student achievement, and inclusion

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TEACHER COLLABORATION: IMPLICATIONS FOR TRANSITIONS, STUDENT ACHIEVEMENT, AND INCLUSION

by

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An Independent Study
submitted in partial fulfillment of the
requirements for the degree of:

Master of Science in Deaf Education

Washington University School of Medicine
Program in Audiology and Communication Sciences

May 15, 2015

Approved by:
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Abstract: This literature review examines the relationship between teacher collaboration and student achievement. Collaborative strategies and methods used to improve student outcomes for children who are deaf or hard of hearing and implications for further research in the field of deaf education are discussed.

Acknowledgements

I would like to take this opportunity to thank my advisor and mentor, Karen Stein, for all of her guidance and commitment to this project. You have truly been an inspiration to me. I cannot thank you enough for being my mentor during my first practicum rotation and for this independent study project. Your insight, guidance, and knowledge have been invaluable to me. Thank you from the bottom of my heart!

I would also like to thank my family and friends for their support and love over the past two years. Thank you mom and dad for always supporting me. I could not have gone through this program without you! Thank you also to my niece and sister for pretending to be four-year-olds so that I could practice my language lessons! Thank you to my nephew Riley who is my biggest cheerleader. Lastly, thank you to my roommate and best friend, Katherine Herr. I feel like I truly became myself over the past two years and you were the biggest part of that journey. I love you all!

Finally, I would like to thank my classmates for their teamwork, moral support, and infinite laughs these past two years. I can truly say that I have made forever friendships during my time in PACS. I am so proud of each and every one of you and am honored to call you my colleagues.

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Introduction

According to Merriam-Webster Dictionary, collaboration is defined as working with another person, or group of people, to achieve a goal. Collaboration is essential for the success of businesses, restaurants, medical clinics, and schools alike. Without collaborative efforts, our ears would have never had the pleasure of hearing Walk this Way by RUN-DMC and Aerosmith, or the beautiful combination of woodwind, brass, string, and percussion instruments found in a symphony. Without the collaboration of Steve Jobs and Steve Wozniak, our lives would be absent of iPods, iPhones, and iPads. Collaborative efforts, when successful, have created some of the most life changing products of our time. In the field of education, the term 'collaboration' has morphed with educational reform and legislative mandates.

Prior to the 1970's, students with special needs were primarily refused enrollment in schools or poorly served in public institutions (Martin, Martin, & Terman, 1996). In 1975 however, Public Law 94-142 was passed, stating that all public schools accepting federal funds were required to educate students with disabilities, and furthermore, students with disabilities should be educated in the least restrictive environment (LRE) (Dettmer, Knackendoffel, & Thurston, 2013). Public Law (P.L.) 94-142 required a continuum of services be available for students with disabilities, with the goal of educating students with special needs in general education environments as much as possible (Dettmer et al., 2013). Within the continuum of services, a separate school for students with disabilities would be considered the most restrictive environment, and a general education classroom would be considered the least restrictive environment. The implementation of P.L. 94-142 and the concept of LRE changed the landscape of special education, causing many special education teachers and general education teachers to work alongside each other and share responsibilities for the first time.

Additionally, in 1986, Public Law 94-142 was amended to include and provide students ages 3-5 with free and appropriate education or FAPE (Dettmer et al., 2013). All students with disabilities, ages 3-21, were entitled to FAPE under this amendment. FAPE for preschool aged children meant the requirement of IFSPs (Individualized Family Service Plans) for students and families. Families were seen as key contributors for the development and attainment of the student's goals. Collaboration during this movement was fostered among professionals and families, the multidisciplinary team of professionals serving the child, as well as special education and general education teachers at the elementary school transition period. For special education teachers, the scope of collaborative efforts changed once more as collaboration became key to the child's success.

Following the amendment of P.L. 94-142 in 1986, a third amendment to the law was implemented and in 1990, the Individuals with Disabilities Education Act (IDEA) was instituted. In addition to the requirements of FAPE, collaboration with families, and least restrictive environment, IDEA stated that every child with a disability must be educated, regardless of the severity or the nature of the impairment. Full inclusion of students with all types of disabilities transformed school districts' allocation of personnel, resources, transportation, and teacher support in the classroom. The intention of advocates of IDEA was for special and general education to become one inclusive system (Dettmer et al., 2013). This new inclusive system produced a further increase in the number of students with disabilities being educated in mainstream settings, and served as a catalyst for collaboration.

General education teachers were now serving students with a wide range of needs, and required the guidance of a variety of special education professionals for support. Collaboration is essential to inclusion because student achievement and progress hinges on the input of many

professionals. For example, special education teachers of students who are deaf or hard of hearing utilizing listening and spoken language collaborate with general education teachers in order to help them understand the needs of a student with hearing loss. In addition, teachers of the deaf may have to collaborate with audiologists, speech-language pathologists, occupational therapists, social workers, caregivers, and other professionals in order provide maximum opportunity for student progress. Teachers of the deaf should be able to communicate essential information about students who are deaf or hard of hearing to professionals such as the general education teacher.

General education teachers should understand how the student's hearing loss impacts his participation and functioning in the classroom. For example, what to do if the devices are not working, and when it is appropriate to utilize assistive listening devices in order to maximize student learning and participation. Teachers of the deaf should provide information to general education teachers about the effects of reverberation, background noise, and distance when communicating with students who are deaf or hard of hearing. Teachers of the deaf should also communicate information addressing type of hearing loss, device use, and skill level in order to provide the general education teacher with a portrait of the whole child.

According to research, up to three times more students who are deaf or hard of hearing are educated in mainstream settings than were 20 years ago (De Raeve & Lichtert, 2012). The U.S. Department of Education, National Center for Education Statistics (2013) states that 87% of students with hearing impairments, ages 6-21 years old, are educated in general education classrooms for at least some portion of the school day (National Center for Education Statistics, 2013). With more students who are deaf or hard of hearing in mainstream settings, expectations exist for teachers of the deaf to become effective collaborators with general education

instructors. Collaboration is imperative to the success of students who are deaf or hard of hearing. Teachers of the deaf collaborate with professionals that have knowledge about deaf education, but how does collaboration change when a teacher of the deaf works with someone that has limited knowledge about deafness? This independent study aims to investigate the following question: *How can effective collaborative strategies and methods be used to increase student outcomes and help close achievement gaps for students who are deaf or hard of hearing utilizing auditory-oral methods of communication?*

In addition to educational reform, legislative mandates, and law, there are several other factors that contribute to the rise of inclusion for students who are deaf or hard of hearing. In congruence with other populations of students with disabilities, children who were deaf or hard of hearing were historically educated in residential schools or at home. The second amendment to P.L. 94-142 paved the way for what is now common practice-early intervention. Early intervention includes the continuum of services provided to families before a child turns five. The goal of early intervention in deaf education is for a child (learning to listen and talk) to be commensurate with his hearing peers in terms of vocabulary, speech, and language before reaching school-age. When a child is 'caught up' (or his speech and language match his chronological age) before he enters kindergarten, the probability of success in his mainstream classroom is increased. Early intervention for students who are deaf or hard of hearing is made possible by newborn hearing screenings, as well as technology that allows students to access sound. The powerful combination of newborn hearing screenings, increased access to sound due to technology, and early intervention have created an opportunity for more students who are deaf or hard of hearing to participate in inclusive educational settings.

Universal newborn hearing screenings are performed soon after birth and can be measured via an automated Auditory Brainstem Response (ABR) test or an Otoacoustic Emissions examination (OAE). Newborn hearing screening programs have been implemented in all states since 2005, resulting in approximately 95% of newborns in the United States being screened for hearing loss before leaving the hospital (Joint Committee on Infant Hearing, 2007, p. 898-921). Universal newborn hearing screenings have caused cascading effects in the development of linguistic skills for children who are deaf or hard of hearing utilizing listening and spoken language. According to a study conducted by Christine Yoshinaga-Itano (2003) of the University of Colorado-Boulder, children who were identified with hearing loss prior to six months of age and participated in early intervention services had significantly better vocabulary, speech intelligibility, general language abilities, and syntax than late identified children (after six months). In addition to the above findings, Yoshinaga-Itano also found that the same target group of children had superior social-emotional development. Improvements in children's linguistic performance often leads to improvements in academic performance, causing this population of deaf and hard of hearing students to shift from needing specialized instruction, to incorporation into the mainstream at an earlier age (De Raeve & Lichtert, 2012).

Implementation of newborn hearing screening programs across the United States allows earlier identification and thus an opportunity to provide services to children at an earlier age. The early identification, early intervention dyad is the foundation for success in general education settings for students who are deaf or hard of hearing. According to the Academy of Pediatrics, when identification and intervention occur at six months of age or earlier, children who are deaf or hard of hearing perform 20 to 40 percentile points higher on school-related measures such as vocabulary, articulation, intelligibility, social adjustment, and behavior (Joint Committee on

Infant Hearing, 2007, p. 898-921). Research has also shown that toddlers who start in specialized preschools due to early intervention services are transitioning to the mainstream earlier than ever before (De Raeve & Lichtert, 2012).With this increase in enrollment in the general education setting, there is an increased focus on meeting the challenges of the mainstream setting for this population.

Additionally, research has shown that higher literacy and academic levels are associated with earlier device fittings. Individuals who are deaf or hard of hearing have access to devices such as: cochlear implants, programmable digital hearing aids, bone-anchored hearing aids, personal-worn FM/DM amplification systems, and classroom amplification systems. Prior to the advent of cochlear implants, children with profound hearing loss acquired language skills at approximately half the rate of peers with typical hearing (Boothroyd, Geers, & Moog, 1991). "The purpose of a cochlear implant is to access, stimulate, and grow auditory neural connections throughout the brain as the foundation for spoken language, literacy, and academics" (Cole & Flexer, 2011; Gordon, Papsin, & Harrison, 2004). According to a study completed by Punch and Hyde, students who received cochlear implants at earlier ages (by 24 months) had significant academic gains compared to children without cochlear implants (Punch & Hyde, 2010). However, studies by Punch and Hyde (2010), as well as Geers, Tobey, Moog, and colleagues have shown that although cochlear implantation had long-term positive impacts on auditory and verbal development, the majority of participants were not commensurate with their peers' academic levels when they reached elementary and high school age (Geers, Tobey, Moog, & Brenner, 2008). This data demonstrates the need for continued collaboration among professionals educating students who are deaf or hard of hearing in order to close academic, achievement, and communication gaps.

Factors that contribute to the success of students who are deaf or hard of hearing learning to listen and talk in mainstream settings include access to appropriate devices and audiologic care, high parental expectations, appropriate placement, social interactions with peers, student-teacher relationships and successful transitions (Batten, Oakes, & Alexander, 2013; Shaver, Marschark, Newman, & Marder, 2013; Wolters, Knoors, Cillessen, & Verhoeve, 2012; Hocutt, 1996). All of the above success factors are made possible by collaboration among professionals, caregivers and students. Transition has been identified as a factor which has a significant impact on student success in the mainstream. The focus of this investigation will be to identify collaborative strategies that teachers of the deaf can utilize, during sensitive periods such as transitions, in order to increase the well-being, academic success, and achievement of students who are deaf or hard of hearing.

Transitions include shifts from private to public institutions, transitions between grade levels, transitions between grade school and middle school, and transitions from middle school to high school. During transitional periods, the student's relationship with the teacher has been shown to be the most important predictor of well-being for students who are deaf or hard of hearing in elementary schools (Wolters et al., 2012). A new teacher must understand present levels, hearing loss, behavior traits, and other aspects of a student in order to build a strong positive relationship. This student-teacher relationship is built upon the information that the previous instructor provides to the new teacher. Therefore, collaboration among teachers is necessary for the student's overall well-being.

Teacher-student and student-teacher interactions have also been found to play a key role in driving learning (Wolters, et al., 2012). Effective communication among professionals is key in building strong teacher-student relationships and increasing student well-being, therefore,

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increasing academic progress for students. Historically, research has demonstrated that teacher collaboration is a factor in the success of inclusion of students with special needs. Teachers utilize a variety of methods to communicate and collaborate with other professionals serving their students. Recent research has indicated that effective teacher collaboration has a direct link to student achievement (Levine & Marcus, 2007).

Collaborative Theory, Strategies, and Suggestions

The term collaboration, in an educational sense, has many definitions. For the purpose of this literature review, collaboration will be defined as an interactive process in which professionals in general education and special education, related services, families of students, and students themselves work together to help the learner develop to his fullest (Dettmer et al., 2013). Throughout this interactive process, co-educators (all of the parties involved in the success of the student) "share their diversity of knowledge and expertise in order to define the needs of the student and then plan, implement, assess, follow through, and follow up on ways of helping learners develop to their fullest" (Dettmer et al., 2013). The postulation that student achievement may be improved by building strong relationships with others is supported by social capital theory.

Social capital theory states that social relationships provide access to resources that can be transferred, borrowed, and modified to facilitate achievement of goals (Bourdieu, 1986; Putnam, 2000; Moolenaar, Sleegers, & Daly, 2012). In theory, teachers with many social relationships can access resources such as emotional support, educational materials, knowledge, and guidance from co-educators in their social networks (Moolenaar, Sleegers, et al., 2012). Increased social capital at the school level could result in achievement of instructional goals that

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would in turn increase student achievement (Moolenaar, Sleegers, et al., 2012). Positive outcomes can only be reached, however, when the patterns and quality of the social relationships that form the network are strong. Components that promote a strong social network are density and centralization (Moolenaar, Sleegers, et al., 2012).

Density of a network refers to how many connections one has compared to how many possible connections are in the network (Moolenaar, Sleegers, et al., 2012). A dense social network has many connections among individuals in the organization. In recent studies completed by Moolenaar, Daly, and Sleegers in 2010, data showed that the density of a teacher's social network was related to how much risk a teacher was willing to take in order to improve his/her school (Daly, 2010; Moolenaar, Daly, & Sleegers, 2012). Therefore, teacher self-confidence promoted by a high number of network connections, causes more positive changes in school environments.

An additional component of creating a strong social network is centralization. High centralization occurs when a few individuals send and receive the majority of the relationships, while the rest of the individuals in the network only have a few relationships (Moolenaar, Sleegers, et al., 2012). High centralization indicates that the flow of information is controlled by key players in the organization (Moolenaar, Sleegers, et al., 2012). Lower centralization of social networks promotes adaptability to change and higher density (Moolenaar, Sleegers, et al., 2012). A result of high density and medium to low centrality in social networks is the creation of a climate that recognizes the efforts of group learning (Moolenaar, Sleegers, et al., 2012).

Collective efficacy, according to Bandura, "represents a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given

levels of attainment" (Bandura, 1997, p. 447-478). Teachers with high collective efficacy believe that the faculty as a whole can plan and implement strategies that will result in positive effects on students (Moolenaar, Sleegers, et al., 2012). When collective efficacy is high, teachers tend to work harder and prosocial behavior is promoted in a school (Moolenaar, Sleegers, et al., 2012). Teachers with high social capital as well as high collective efficacy maintain and foster collaborative relationships. In order to maintain and foster collaborative relationships, teachers of the deaf need to recognize differences in professional perspectives, effectively problem solve, communicate information about students who are deaf or hard of hearing effectively, and utilize technology.

According to research, recognizing and accepting differences in professional perspectives are traits that successful general education teachers who educate students with special needs possess (Olson, Chalmers, & Hoover, 1997). Accepting and respecting differences in professional perspectives is especially important during transitional periods. During transitional periods, teachers are meeting professionals for the first time. In order to build positive relationships with other professionals, teachers need to be respectful and accepting of differing methodologies of teaching, teaching styles, as well as behavior management styles. Utilizing the differences in teaching perspectives, in order to incorporate new techniques into teaching, can result in collaboration that has a positive impact on student outcomes. Incorporating techniques from differing teaching perspectives is important to the field of deaf education because all students learn and respond to behavior management techniques in different ways. When professional perspectives are respected, effective problem solving can occur.

Problem solving is rooted in trust and respect for differing perspectives, methodologies, and teaching styles (Moolenaar, Sleegers, et al., 2012). According to Dettmer and colleagues, "a

problem solving process that encourages high levels of communication and collaboration will allow educators to share their expertise related to the problem" (Dettmer et al., 2013). Dettmer and colleagues suggest an eight step problem solving model for teachers:

1. Gather data, guided by the expressed or observed need

2. Identify and define the problem

3. Generate possible actions toward a solution

4. Critique proposed actions

5. Select the best option

6. Develop a plan

7. Implement the elements of the determined plan

8. Follow through and follow up to evaluate the outcomes

(Dettmer et al., p. 122, 2013)

Dettmer (2013) and colleagues' problem solving model promotes collaboration by encouraging all stakeholders to participate. During transitional periods, problem solving abilities are crucial when making decisions about placement and appropriate services. Teachers of the deaf should encourage all co-educators to provide data when making educational decisions. A robust compilation of data will allow the teacher of the deaf to make suggestions from a whole child perspective. After identifying the problem, teachers of the deaf should encourage suggestions from all co-educators about possible actions toward a solution. Utilizing a problem solving model facilitates development of appropriate documentation, implementation of, and follow-through of the team's efforts. The above process may be modified during transitional periods depending on the circumstance and the amount of time before transition occurs.

According to a study by Semmel and colleagues, student success is determined by several factors, including the general education teachers' real and perceived lack of knowledge about students with disabilities (Semmel, Abernathy, Bultera, & Lesar, 1991). In order to combat this barrier to student success, teachers of the deaf should communicate information about students who are deaf or hard of hearing in a non-threatening way that will be heard and accepted. Communicating information such as skill levels, hearing loss, devices, assistive listening technology is imperative to the success of the student. Teachers of the deaf should also communicate information such as student learning style and successful behavior management techniques that work for a student. Communication of the above information may be presented utilizing a variety of methods. Face to face meetings and phone conferences are common methods of communication among co-educators. Considering the variety of co-educators and professionals that serve students who are deaf or hard of hearing, utilizing technology is an effective strategy for combatting the barrier of perceived lack of knowledge.

Technology has revolutionized the way professionals in all fields communicate with one another. Educators have the opportunity to communicate via email, blogs, text message, video, and many other technological avenues. Utilizing technology can facilitate the process of collaboration with co-educators. Dettmer and colleagues identified five categories of utilizing technology for collaboration among educators:

1. Gathering and Sharing Information

2. Communicating with co-educators in schools, homes, and communities

3. Developing resources for curriculum and instruction

4. Organizing and managing data

5. Networking with co-educators and support services

(Dettmer et al., p. 27, 2013)

The first two categories of technology; gathering and sharing information and communicating with co-educators in schools, homes, and communities are most relevant to my study.

Gathering and sharing information is imperative to the success of transitions for students who are deaf or hard of hearing. Traditionally, a paper file travels with a student from the previous placement to the new placement, containing important information for the new teachers. During a transitional period it may be difficult to get paper copies of a file to a new school so that the staff can access it ahead of time. Technology can provide a more user-friendly option. Storing and sharing information via the internet, or the cloud, is one solution to this issue. Google for Education is a free and secure app suite that allows teachers to collect and share data, collaborate in documents, presentations, and spreadsheets, and work together to provide an appropriate program. Google for Education allows educators to share information with professionals and co-educators that are not in the network. Google for Education provides for timely access to existing information. In terms of curricula and progress, the ScootPad is an app that allows teachers and other professionals to track student data using Common Core Standards for grades K-8. Teachers can share reports with caregivers, administrators, and other teachers. This app provides comprehensive academic perspectives on student progress. ScootPad is a successful avenue for gathering and sharing information easily, as well as communicating with others in the school, in the home, and in the community.

Accurate and timely communication and collaboration plays a major role in the success of students who are deaf or hard of hearing; especially as they transition from placement to

placement. Technological applications are useful in communicating efficiently, quickly, and more frequently. Remind101 is an app that allows teachers to communicate with students and caregivers via text message, email, or push notification on the app. Remind101 does not share phone numbers with parents, caregivers, or other professionals; making this app private and secure. During transitional periods, teachers can communicate with professionals, caregivers, and additional co-educators via Remind101. Teachers can use it to share documents, send messages, and make announcements. Another app, ThreeRing, allows educators to create paperless portfolios for their students. Portfolios can be shared with professionals and caregivers, and the app includes a sidebar where comments can be added and shared.

Conclusion

Collaboration among professionals, caregivers, and students has a major impact on the success of students who are deaf or hard of hearing. Throughout the history of special education, collaboration has become increasingly important in terms of inclusion and the success of students with special needs in the mainstream setting. Today there are more children who are deaf or hard of hearing being served in mainstream settings than ever before. This increase is a result of the implementation of universal newborn hearing screenings, early intervention, and technological advances in devices such as hearing aids and cochlear implants. Collaborative efforts are perhaps the most imperative during transitional periods for students who are deaf or hard of hearing because the amount of information that needs to be communicated in order for the student to be successful is copious. Although research studies have provided results on the benefits of collaboration for student achievement in mainstream settings, there have not been studies addressing the effects of collaboration on student achievement specifically for children

who are deaf or hard of hearing. It is an issue that warrants study, as these students are typically being served by a range of professionals, making collaboration essential to their success.

According to social capital theory, strong social networks can provide opportunities for transfer of information, collaboration, and sharing of ideas. Educators gain the most information from their social networks when they are accepting of different educational and instructional perspectives, are able to problem solve with others, communicate information effectively, and utilize technology. Technological platforms assist educators in collecting and sharing data as well as providing an effective and efficient platform for communicating with caregivers, professionals, and others involved in their educational program. When strong social networks combine with an open culture, problem solving, and frequent communication including use of technology, students who are deaf or hard of hearing are more likely to succeed.

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