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An analysis of teaching methods for children who are deaf with multiple disabilities

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**AN ANALYSIS OF TEACHING METHODS FOR CHILDREN WHO ARE
DEAF WITH MULTIPLE DISABILITIES**

by

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

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Abstract: This study analyzes the placement, services, and teaching methods of students who are deaf with additional disabilities. Through this analysis, these students are compared to students with multiple disabilities, not including deafness.

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Introduction

The education of students who are deaf with multiple disabilities is an ever increasing topic in the field of deaf education. (For the purpose of this paper, “deaf” refers to all levels of hearing loss.) Based on research from Gallaudet Research Institute 2007-2008 Regional and National Summary, 40% of children with hearing loss have an additional disability (Gallaudet Research Institute, 2008). Additionally, and more specifically, 1 out of every 62 students receiving services for deafness is also receiving services for autism spectrum disorder (Gallaudet Research Institute, 2008). The state of Missouri only keeps record of the prevalence of the primary disability so the data of an additional disability is unavailable (personal communication, DESE Department of Data Collection for Special Education, March 13, 2012). These statistics show the importance of paying attention to these students and looking at the placement and instruction of these students in the classroom. Due to the presence of more than one disability, the placement of the student in a specific classroom is not simple. The education team needs to keep in mind the disabilities of the student and his/her academic ability. This helps determine the placement of the student and where the student will be successful. The placement options for these students are in deaf education programs, special education programs or, possibly, general education classrooms with support. Student success is also dependent on the instructional strategies implemented by the teacher. It is the job of the teacher to present the information to the students in the best way for him/her to learn. The instructional strategies that will be discussed in this paper for students who are deaf with multiple disabilities are the transdisciplinary model and the person-first teaching model. These models claim to provide students who are deaf with multiple disabilities with the instruction they need to be successful. The placement and the instructional strategies implemented by the teacher play a role in the academic success of the student. However, for the purpose of this paper, I am asking: is the placement of students who

are deaf with multiple disabilities the most important consideration in the child's educational success or is the teaching method used by the teacher/educator the most important consideration?

With this question in mind, it is also important to look at the placements and instructional strategies of students with multiple disabilities (not including deafness) and compare this information to what is known about students who are deaf with multiple disabilities.

Classroom Placements (for Students with Multiple Disabilities)

Before delving into the research on students with multiple disabilities including deafness, it is essential to explore the educational placements and instructional styles used for students with multiple disabilities (not including deafness). The Individualized Education Plan (IEP) determines students' placements in their educational environments based on their individual, educational needs. It is the job of the IEP team to consider the least restrictive environment when making this decision. The law of least restrictive environment requires the IEP team to place students with disabilities in a general education environment if at all possible (Wright, Wright, & O'Connor, 2010). The student can be placed in a private school for special education, a self-contained classroom within a general education school, or in an inclusive general education environment. The more severe the disability or the behavior of the student, the more likely it is that the student will be placed in a self-contained environment. However, if the student is high functioning in his/her cognitive ability and behavior, the student can be placed in an inclusive general education environment, in fact, this placement should be the first placement considered (Wright et al., 2010). It can be argued that private schools and self-contained classrooms provide students with multiple disabilities with the services and specialized instruction they need, thus making it the least restrictive environment. These environments provide students with smaller class sizes and more time for individualized instruction with the teacher, who is specialized in the specific areas of the students' disabilities. However, there is evidence of positive results for

students with multiple disabilities placed in an inclusive general education setting (Wolery & Schuster, 1997). Though an inclusive placement may not be appropriate for all students with multiple disabilities (due to cognitive ability, behavior, etc.), research shows that an inclusive setting can be very beneficial to these students (Wolery & Schuster, 1997). The justification given for students with multiple disabilities being placed in an inclusive setting is mostly centered around peer-interaction. Research shows that including students with multiple disabilities with general education peers will provide them with more social interaction, appropriate communication, and models for appropriate behavior (Hunt & Goetz, 1997; Wolery & Schuster, 1997). Students in the general education classroom can provide students with multiple disabilities models for appropriate and adaptive behavior. This is something that students with multiple disabilities in a private school for special education or self-contained classroom will not necessarily have access to throughout the day (Wolery & Schuster, 1997). Forman, Arthur-Kelly, Pascoe, and King (2004), compared the performance of students with severe or multiple disabilities in special education class environments and general education environments. They found that students in general education classes engaged and interacted 19% more than in the special education classes. Additionally, the study found that the students communicated with others in the general education classrooms 22% more than in the special education classes. This shows that the inclusive environment can be very beneficial to students with multiple disabilities, both in their learning and development if implemented appropriately (Foreman, Arthur-Kelly, & Pascoe, 2004).

Teaching Professionals (for Students with Multiple Disabilities)

Special education teachers are not the only teachers servicing these students, as is evidenced by the research on students with multiple disabilities in inclusive environments.

Special education professionals are trained to provide the necessary services and instructional methods to teach students with multiple disabilities. However, with the movement towards an inclusive setting for these students, general education teachers are also expected to be able to provide the instruction and services necessary for these students to be successful (Hunt & Goetz, 1997). Most general education training programs do not provide teachers with the information they need to teach these individuals. Therefore, much support from the special education staff and willingness by the general education teacher to meet the needs of these students is necessary. Peer-motivation and modeling will only be successful with the support of the classroom teacher. The classroom teacher needs to mold his/her instruction to meet the needs of these students with special needs while still meeting the needs of the rest of the class. In turn, the special education teacher serves as a resource and a support in the classroom (Hunt & Goetz, 1997). In some cases, the special education teacher and the general education teacher co-teach in the classroom. This is called class within a class. Communication between all providers is necessary for this type of setting to be successful. In a study by Hunt and Goetz (1997), general education teachers reported that,

An effective relationship (helpful) with [special education] support staff included (a) a shared framework and goals for including the students with disabilities in the general class routine; (b) the presence of another person on whom they could rely; and (c) teamwork, which provided them with technical, resource, evaluation, and moral support (Hunt & Goetz, 1997, p. 14).

Service Delivery Models (for Students with Multiple Disabilities)

The type and amount of services a student receives is dependent on the severity of the student's needs. For students with multiple disabilities these services are included in the Individualized Education Plan (IEP). These services may include: physical therapy, occupational therapy, behavior therapy, speech therapy, or therapy with a social worker. No matter what type

of program the student is placed in, these services should be addressed if there is a need.

However, these services might look different among programs. Students in a private-school or self-contained classroom may receive services using a pull-out model. The pull-out model consists of the therapist or professional pulling the student out of the classroom for a certain amount of time for one-on-one instruction. In an inclusive setting, where the student is integrated into the general education classroom throughout the entire day, these students may receive these services using a pull-out model or a push-in model. A push-in model consists of the service provider working with the student in the classroom during general education instruction.

Therefore, the teacher either sits next to the student to provide support during instruction or the teacher works with the student individually or in a small group in an area of the classroom while the general education teacher instructs the other students. This can take many forms depending on what is appropriate for the teachers and the students.

Instructional Strategies (for Students with Multiple Disabilities)

There are two main instructional strategies for students with multiple disabilities (not including deafness) that will be highlighted in this paper. The first instructional strategy is the systematic instruction approach. The systematic instruction approach is a very popular instructional approach for teaching students with multiple disabilities. This approach uses task analysis, prompting, and feedback to provide direct instruction to the student.

The skills required by a task analysis are ideally suited for teachers of individuals with PMD [Profound Multiple Disabilities]. Task analysis requires precise delineation of skills within a particular curriculum area, the division of those skills into component parts, and the sequencing of those skills from simple to complex (Horrocks & Morgan, 2011, p. 285).

In order to implement this approach with the students, teachers need to determine if the issue is a skill or a performance issue, pick the skill they want the student to acquire, decide how the

student will acquire the skill, teach the skill on a daily basis, and document the student's progress and make changes as needed (Browder, 2001). Prompting is used in systematic instruction to help elicit the correct response from the student. Prompts include physical gestures, verbal cues, modeling, and hand-over-hand support (Browder, 2001). Additionally these prompts can be used in a number of different ways depending on the student's needs. Time delay, increasing assistance, decreasing assistance, simultaneous prompting, and graduated guidance are all types of procedures for prompting students (Wolery & Schuster, 1997). As the student starts to show comprehension of the skill, it is the job of the teacher to lessen or fade the prompts to increase the student's independence and decrease the reliance on the teacher. For example, if a teacher is working on tooth brushing with the student, she will first break the task into steps, work on the steps individually and then together (slowly decreasing the prompts from hand-over-hand to nothing), then have the student work on brushing his teeth in his natural environment. Another aspect of systematic instruction is feedback from the teacher. It is important for students to understand if their responses are correct and incorrect. Then the teacher needs to provide feedback for the students regarding the students' comprehension of their responses. If the student provides an incorrect response, the teacher needs to provide the student with the correct response (and not draw attention to the incorrect response). However, if the student provides the correct response, the teacher needs to praise the student or provide him/her with a preferred reinforcer so the student knows his/her response was appropriate or correct. It is important for the praise to be specific to the lesson or skill so the student makes the connection (Browder, 2001). Finally, it is necessary in systematic instruction that the teacher also provides opportunities for the student to generalize the skill (use it in a variety of settings or with a variety of people). The teacher needs to practice the skill outside the classroom so the student understands other ways the skill can be

used (Browder, 2001). As shown in the example, it was necessary for the student to take the skill of brushing his teeth and use it in the natural environment and time (in the morning, at home).

Thus the students move in a specific order to gain full comprehension of the skill: acquisition of the skill, fluency of the skill, maintenance of the skill, generalization of the skill.

Another instructional practice for students with multiple disabilities (not including deafness) is functional skill instruction. Researchers have found that teaching functional skill development to students with disabilities can be very successful (Browder & Cooper-Duffy, 2003). Students with multiple disabilities may have difficulty learning the daily living skills necessary for them to be independent. It is the job of the teacher to teach these skills to the student. One of the areas of functional skills taught the most is home and personal living skills. Home and personal living skills include toileting, showering, cleaning, dressing, eating, cooking, and sex education. Through teaching home and personal living skills, the teacher is increasing the students' independence and, in turn, decreasing the students' dependence on their parents or caregivers (Browder, 2001). These skills are not learned incidentally so it is the job of the teacher to teach them explicitly. Research shows that individuals with significant or multiple disabilities have the capacity to learn these personal living skills (Browder & Cooper-Duffy, 2003). Other areas of functional skills where students with multiple disabilities need explicit instruction are communication and social skills. To teach communication skills teachers need to explicitly teach the "form," content," and "function" of communication and generalizing that information into interactions with different people (Browder & Ware, 2001). Additionally, regarding social skills, teachers need to explicitly teach social initiation, social responsiveness, duration of interaction, and turn taking (Browder & Ware, 2001). For example, a teacher might need to work on greetings/small talk with the student which includes appropriately approaching the person,

saying hello, waiting for a response, providing an additional comment such as “How are you?”, waiting again for a response, and then knowing when to end the interaction and walk away. Students with multiple disabilities often struggle in these areas so the teacher must explicitly teach these skills for the students to be successful in school and work. As earlier discussed, many students with multiple disabilities are being included in an inclusive setting. The benefit of this placement is to allow students with multiple disabilities to have access to peer communication and modeling. In order for this to be beneficial for the students, they need to learn essential communication and social skills (Wolery & Schuster, 1997).

Community skills are also an important functional skill for students with multiple disabilities. Teaching community skills prepares students to be part of a community and understand what that means. Instruction in community skills often includes explicitly teaching in the specific community settings, such as banks, stores, and restaurants (Browder & Cooper, 2001). The skills listed above are all skills taught outside of the general curriculum classroom but they still meet the learning standards set for the general curriculum. It is still important for students with multiple disabilities to have reading and math skills but it is important to make these skills functional for the students. The students work on math and reading in the community settings to help make the information more useful to them and help them generalize the information in different settings. Through generalization of the math and reading skills into the community, students can become more independent and self-sufficient. Reading should include functional sight words (restrooms, food labels, days, months, etc.) and the ability to read for functional use such as reading a menu, grocery list, calendar, directions, and newspapers (Browder, 2001). While math skills should include paying for goods, tipping at restaurants, making correct change, and filling out a time card.

Classroom Placements (for Students Who Are Deaf with Multiple Disabilities)

After exploring students with multiple disabilities not including deafness, it is now important to look at the target population, students with multiple disabilities including deafness. Programs should consider the impact of the hearing loss on students' educational needs when placing students who are deaf with multiple disabilities. The type of disability and the severity of the students' needs should be determined in order to know the best placement for the individual. This is not always easy, though. Other disabilities demonstrate many of the same characteristics as hearing loss in the beginning. These characteristics include difficulties in language and communication, socialization, and sensory needs. Because of the overlap of these characteristics, it can take many years to determine the specific disability or disabilities the student has, even if hearing loss is known (Jones & Jones, 2003). Additionally, appropriate placement for these students is limited which makes placing students who are deaf with multiple disabilities very difficult. The difficulty in placing these students lies in the ability to find a placement that meets all the needs of the individual students. In most cases, programs concentrate on one particular disability. Therefore, programs lack the ability to service all the needs a student might have. Though the program will do its best to accommodate each individual student, they may not be servicing the child in the most appropriate way (Jones & Jones, 2003). Many programs will try to determine the "primary" disability of the student, the disability that most affects performance, and establish the appropriate placement based on the "primary" disability (Jones & Jones, 2003). This causes more complications for the IEP team when trying to determine the appropriate placement for the individual. Self-contained programs for special education have opened their doors to these students who are deaf with other disabilities but these programs may not know how to best accommodate deafness. These programs, for the most part, do not have the support

in the classroom and the training from the teachers necessary to accommodate and service these students in the best possible way. In turn, private deaf education programs have welcomed these students, though are unable to accommodate the other disabilities the child might have (Ewing & Jones, 2003). Any professionals who are working with students who are deaf, regardless of the placement, are going to better serve their needs if they have an understanding of deafness and the impact on language. “A paramount concern is that professionals should be taught to understand deafness and the implications of deafness for development of a more effective and productive relationship with the child” (Guardino, 2008, p. 60). Additionally, students who are deaf with multiple disabilities run the risk of having less exposure to the important aspects of Deaf culture, such as American Sign Language and interaction with other deaf individuals. This limits the amount of social interaction and opportunities these students would have in the Deaf culture (Jones & Jones, 2003).

Teaching Professionals (for Students Who Are Deaf with Multiple Disabilities)

In addition to the placement of students who are deaf with multiple disabilities, it is important to look at the professionals who are teaching these individuals. Similar to the setbacks with the programs for these students, the teachers of students who are deaf with multiple disabilities have difficulty working with these students as well. Preparation programs for teachers of deaf education rarely include in depth information on students with other disabilities. Borders and Bock (2012) conducted a study in which they evaluated 42 teacher preparation programs for deaf/hard of hearing students. Preliminary analysis indicated that 26% of programs offer a course in behavior management, 30% offer a course in additional disabilities, and 69% offer a course in academic or behavioral interventions outside of deaf education. They found that 26% of the programs did not offer any of the three course types, while 16% of the programs offer

all three. If only one of the courses was offered, it was found to be a course in academic or behavioral interventions outside of deaf education (Borders & Bock, 2012). This data shows that these teachers are not professionally prepared or educated to teach students with disabilities other than hearing impairment or to manage their behavior. This lack of information and training leaves teachers ill prepared to teach these students when they enter the classroom. In another study by Borders and Bock (2012), they conducted a survey of teachers of the deaf and their familiarity of evidenced-based practices, mentioned in the National Standards Report (2009). Overall, nearly 50% of teachers of the deaf were unfamiliar with many of the practices, including special interests, stimulus familiarity, errorless learning, discrete trial training, behavioral toilet training, shaping, generalization training, peer initiation training, and joint attention training. The teachers who were familiar with the interventions said that they thought the antecedent interventions would be effective for their students but the behavior interventions and others, such as joint attention, would not be highly effective (Borders & Bock, 2012). This demonstrates a lack of knowledge in evidenced-based practices and their effects on students with disabilities. Teachers of deaf education are not only ill-prepared to teach these students with other disabilities, they are also untrained to work with students whose disabilities include a physical impairment. Training and specific services are needed to work with these students and service them appropriately. On the other side of the spectrum, if these students cannot be serviced in a deaf education program, by teachers of the deaf, they will be serviced in a special education program. The special education program will be provided by special education teachers who lack an expertise or training in hearing loss and are therefore may not provide for those particular needs. Though special education teachers often learn about a wide variety of disabilities in their educational programs, hearing loss is not a top priority due to the fact that it is a low incidence

disability. In fact, the Missouri teacher certification for mild/moderate cross-categorical disabilities does not include a certification in deaf and hearing impaired (Department of Elementary and Secondary Education, n.d.). The beginning courses for this certification, such as Introduction to Special Education, often provide a brief overview of all the disabilities leaving the pre-teachers' knowledge of deafness/hearing loss to be minimal. This small amount of information does not leave these teachers prepared to provide for the needs of students with hearing loss (Jones & Jones, 2003).

Service Delivery Models (for Students Who Are Deaf with Multiple Disabilities)

Students who are deaf with multiple disabilities receive services depending on their individual needs and the affect their hearing loss has on their speech and language. Depending on the placement of the student, these services look very different. Private, oral-deaf education programs have trained professionals such as speech pathologists and audiologists on-site to service the students, such as The Moog Center for Deaf Education, Central Institute for the Deaf, Smith, and Mama Lere School at Vanderbilt. However, for students who are deaf with multiple disabilities, other service providers may be necessary to meet the needs of the whole student, such as social workers, occupational therapists, physical therapists, and behavior therapists. If the school/program does not have these service providers available on-site, they have the option to bring them into the school to provide the services for the student (though private schools are not required to provide these services), which means these providers might only be available for the short period of time they are on-site working with the student (Betsy Moog Brooks, personal communication, February 17, 2012). On the other hand, students who are deaf with multiple disabilities in a special education setting may have social workers, occupational therapists, physical therapists, behavior therapists, and speech pathologists on-site and available at all times

but may not have on-site access to an audiologist. If an issue occurs with the student's devices, no one is available to service the student's devices (Elizabeth Gruendler, personal communication, February 17, 2012). Therefore, both settings result in a limitation of services and do not provide the individual with on-site services that are available at any given time, if necessary. This means a certain level of collaboration between providers is essential for an individual who is deaf with multiple disabilities to be successful in all areas of functioning.

Instructional Strategies (for Students Who Are Deaf with Multiple Disabilities)

The first instructional model for students with multiple disabilities including deafness is the transdisciplinary model. The transdisciplinary model takes on a holistic approach in teaching where the teacher functions as the main educator/case manager for all the services the child might need (Cloninger, 2004). In turn, the other service providers perform as consultants for the main teacher. The transdisciplinary approach is a very collaborative approach between service providers where the providers have to share information and specific teaching techniques with each other to better serve the child in one specific, natural environment (Cloninger, 2004). The providers need to work well together to teach the necessary practices and strategies for their particular service in order for the main teacher to appropriately provide the service in the classroom. Therefore, the conventional roles of the parents, teachers, and therapists are changed and molded together. As an example, Jimmy is in a private deaf education school and needs services in speech and occupational therapy. Instead of having other professionals pull Jimmy out of the classroom for speech and occupational therapy, the deaf education teacher provides Jimmy with the help and practice he needs in these areas. The professionals (Speech/Language Pathologist and Occupational Therapist) work as consultants for the deaf education teacher, providing her with their basic information and skills so she can best provide for Jimmy in the

classroom. The goal of the transdisciplinary model is to limit the number of service providers that the child is working with to provide easier generalization of skills and more naturalistic teaching. With this model, certain skills can be taught on a daily basis, as opposed to thirty minutes, once a week (the typical frequency of related service providers). The transdisciplinary model maintains that students who are deaf with multiple disabilities will learn skills better when they are in a more natural environment to learn the skills and are using the skills in conjunction with other skills (Cloninger, 2004). The more natural environment refers to the classroom environment where all of the other learning occurs. “In contrast to other team models, the transdisciplinary model results in intervention that coordinates and integrates expertise so that intervention can be planned that has the most potential for effectiveness with complex children with multiple disabilities” (Ewing & Jones, 2003, p. 3).

Another teaching model beneficial for students who are deaf with multiple disabilities is the person-centered model. Borders and Bauer (2012) conducted a study looking at the IEPs of 62 students with audiological services spanning over a five year period. Preliminary analyses show that the students who had an educational label of hearing impaired (HI) were given more minutes per week with a speech language pathologist (SLP) than students who had an educational label of speech-language delay (S/L Delay) and cognitive delay (CD). Five of the students observed in the study had their educational label changed from S/L delay to HI over the five year period. Upon the changes in the educational labels, changes also occurred regarding the minutes of service by an SLP for four out of five students. These changes included both increases and decreases in the minutes (Borders & Bauer, 2012). This shows a focus on the label of the student as opposed to the student as an individual, with his/her individual needs.

The person-centered model, for teaching students who are deaf with multiple disabilities, looks at the student as an individual, the specific learning style of the student, and the specific language needs of the student (Ewing & Jones, 2003). The model is focused on the specific needs of the student instead of the disability the student has or the needs of the service providers working with the student. Students who are deaf with multiple disabilities do not fit into one specific mold. “A noncategorical focus that works with each child individually to develop the best instructional model will enable students to reach their full potential throughout their lives” (Ewing & Jones, 2003, p. 5). This model allows the family and the providers to look at the student’s specific qualities and needs (strengths and weaknesses) to help form the student’s education. Therefore, the education is driven by the child as opposed to the teacher or the primary disability label. This model is very similar to and takes on many of the same practices as differentiated instruction. Differentiated instruction, like the person-centered model, looks at students as individuals in the classroom with different learning styles (Tomlinson, 2004). This model makes it the job of the teacher to provide the individual learners with different expectations and strategies for learning that meet the needs of every learner in the classroom (Lawrence-Brown, 2004). Similarly, the Universal Design for Learning (UDL) is an approach that individualizes instruction specifically for the individuals (Center for Applied Special Technology, n.d.). The Universal Design for Learning incorporates three main principles of learning: present information in a variety of ways, create different ways for students to show what they know, and create a motivation to learn (Center for Applied Special Technology, n.d.). These models create high expectations of the teachers to provide each individual student with the services and instruction they need to be successful in the classroom. The person-centered model,

differentiated instruction, and UDL provide an environment where all students can learn and be successful, especially those students with multiple disabilities including deafness.

Comparison of Education

After viewing the placements and instructional strategies for both types of students, it is clear that there are many differences in the educational approaches of both sets of students. When looking at the research, the main focus for the placement of students with multiple disabilities is a self-contained classroom or an inclusive setting with a general education teacher. However, for students who are deaf with multiple disabilities, the research focuses on placement in a deaf education setting or a self-contained classroom. The difference in the placement of these students is the lack of focus on inclusion into a general education classroom for students who are deaf with multiple disabilities. Though both groups focus on the possibility of education in a self-contained classroom, the research does not really discuss the possibility of inclusive education for a student who is deaf with multiple disabilities. An inclusive setting could be beneficial for a student who is deaf with multiple disabilities and could provide them with the same type of opportunities/skills as a student with multiple disabilities, such as social, functional, and academic skills. Therefore, it might be beneficial to widen the focus of placements for students who are deaf with multiple disabilities to include an inclusive setting as a possibility. An inclusive setting may not be appropriate for every student who is deaf with multiple disabilities but it could be very beneficial for some, and that is important for researchers and educators to keep in mind. When looking at the education of teachers in these placements, there are a variety of backgrounds and specialties. Though it is important to have teachers from different backgrounds, it is necessary for the teachers be educated about the students they are working with. With a stress on inclusion, general education teachers need to be prepared to work with a

variety of students so they are prepared for these students who are coming into their classrooms. Though there is less stress on students who are deaf with multiple disabilities being in an inclusive setting, general education teachers still need to be prepared to teach these students. It is the job of the universities to prepare their teachers to work with all different types of students (not just the students they specialize in). Furthermore, deaf education teachers and special education teachers need to get that additional training as well, to better meet their students' needs.

There is also a considerable difference when looking at the teaching methods of both groups of students. When looking at the students with multiple disabilities, the teaching approaches focus on the systematic instruction approach and the functional teaching approach. However, with students who are deaf with multiple disabilities, the focus is on the transdisciplinary model and the person-first model of teaching. The focus in teaching methods is very dissimilar between the two groups of students. For students with multiple disabilities, the spotlight is more on explicit, systematic instruction and teaching functional skills, while, for students who are deaf with multiple disabilities, the spotlight is more on teaching to the child's specific needs and collaborating instruction between teachers.

Though these two groups of students might show many similarities in their learning and behavior, the placement of the students and the methods for teaching have very different focuses. It is unclear, with a lack of research, why the placements and instructional strategies are so dissimilar. The instructional strategies for students with multiple disabilities could be very beneficial for students who are deaf with multiple disabilities, and vice versa. Students who are deaf with multiple disabilities could benefit from systematic instruction and instruction of functional skills in the classroom, as well as opportunities to interact with their typically

developing and typically hearing peers. However, this has not been the focus for students who are deaf with multiple disabilities.

Conclusion

The placement and the teaching methods for students who are deaf with multiple disabilities are both extremely important in the education of the student. Additionally, it is evident through the lack of overlap, that the placement and teaching methods of students with multiple disabilities (not including deafness) are also important factors to think about when considering education for students who are deaf with multiple disabilities. The placements of students who are deaf with multiple disabilities are limited to self-contained special education programs and deaf education programs, with teachers who have a lack of expertise in both areas (special education and deaf education). Furthermore, the teaching methods for these students (the transdisciplinary model and the person-first model) do not necessarily address all areas of need in the student's education, such as generalization and functional skills.

There are many limitations in the research, and more importantly a lack of research. The information on students who are deaf with multiple disabilities is very scarce and not current. Researchers are not focusing on this population of students and therefore creating a lack of understanding of this population. Without current research and data regarding students who are deaf with multiple disabilities, the educational practices will not change when it is evident that there is a need for understanding and change. The research also lacks comparison of the two groups of students discussed in the paper. These two groups of students share many similarities in learning style and behavior, so research to show the affects of educational practices or placements on both groups could be very beneficial. Additionally, many states are not collecting data on the prevalence of students who are deaf with multiple disabilities even though the

numbers of these students are growing. Collection of this information is key for states and schools to understand the demand for information and teaching strategies for these students.

For future research, it will be necessary to fill in these before mentioned gaps and provide more information about what students who are deaf with multiple disabilities need, how to train teachers, and how to incorporate this knowledge into strategies to use in the classroom. Future research needs to analyze the teaching instruction of students who are deaf with multiple disabilities, along with students with multiple disabilities, and find the best practices for these students and what practices can be carried over into the field of deaf education. There is a great need for current research to guide the education of these students, and without this research, the current practices will not change.

References

- Borders, C. M., & Bock, S. J. (2012, February). *Preparing teachers of the deaf for a complex student population*. Paper presented at the meeting of the Association of College Educators- Deaf & Hard of Hearing, Jacksonville, FL.
- Borders, C. M., & Bauer, A.M. (2012). Implications of educational labels for students who are deaf with an additional disability. Manuscript in preparation.
- Browder, D. M. (2001). *Curriculum and assessment for students with moderate and severe disabilities*. New York, NY: Guilford Press.
- Browder, D. M., & Cooper, K. J. (2001). Community and leisure skills. In D. M. Browder (Ed.), *Curriculum and assessment for students with moderate and severe disabilities* (pp. 244-276). New York, NY: Guilford Press.
- Browder, D. M., & Cooper-Duffy, K. (2003). Evidence-based practices for students with severe disabilities and the requirement for accountability in "No Child Left Behind." *Journal of Special Education, 37*, 157–163. doi:10.1177/00224669030370030501
- Browder, D. M., & Ware, K. (2001). Communication and social skills. In D. M. Browder (Ed.), *Curriculum and assessment for students with moderate and severe disabilities* (pp. 310-336). New York, NY: Guilford Press.
- Center for Applied Special Technology (n.d.). About UDL. Retrieved from <http://www.cast.org/udl/index.html>
- Cloninger, C. J. (2004). Designing collaborative educational services. In F. P. Orelove, D. Sobsey, & R. K. Silberman (Eds.), *Educating children with multiple disabilities: A collaborative approach* (4th ed.) (pp. 1–29). Baltimore, MD: Paul H. Brookes Publishing Company.

- Department of Elementary and Secondary Education (n.d.). Missouri department of elementary and secondary education certification requirements for mild/moderate disability (grades k-12). Retrieved from <http://www.dese.mo.gov/schoollaw/rulesregs/EducCertManual/08%20Mild-Moderate%20Disability%2004.pdf>
- Ewing, K. M., & Jones, T. W. (2003). An educational rationale for deaf students with multiple disabilities. *American Annals of the Deaf, 148*, 267–271. doi:10.1353/aad.2003.0019
- Foreman, P., Arthur-Kelly, M., & Pascoe, S. (2004). Evaluating the educational experiences of students with profound and multiple disabilities in inclusive and segregated classroom settings: An Australian perspective. *Research & Practice for Persons with Severe Disabilities, 29*, 183–193.
- Gallaudet Research Institute (2008). 2007-08 Regional and National Summary. Retrieved from http://research.gallaudet.edu/Demographics/2008_National_Summary.pdf
- Guardino, C. A. (2008). Identification and placement for deaf students with multiple disabilities: Choosing the path less followed. *American Annals of the Deaf, 153*, 55–64. doi:10.1353/aad.0.0004
- Horrocks, E. L., & Morgan, R. L. (2011). Effects of inservice teacher training on correct implementation of assessment and instructional procedures for teachers of students with profound multiple disabilities. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 34*, 283–319. doi:10.1177/0888406410397556

- Hunt, P., & Goetz, L. (1997). Research on inclusive educational programs, practices, and outcomes for students with severe disabilities. *Journal of Special Education, 31*, 3–29.
doi:10.1177/002246699703100102
- Jones, T. W., & Jones, J. K. (2003). Educating young deaf children with multiple disabilities. In B. Bodner-Johnson, & M. Sass-Lehrer (Eds.), *The young deaf or hard of hearing child: A family-centered approach to early education* (pp. 297–327). Baltimore, MD: Paul H. Brookes.
- Lawrence-Brown, D. (2004). Differentiated instruction: Inclusive strategies for standards-based learning that benefit the whole class. *American Secondary Education, 32*, 34–62.
- National Standards of Autism (2009). National Autism Center's National Standards Report. Retrieved from
<http://www.nationalautismcenter.org/pdf/NAC%20Standards%20Report.pdf>
- Tomlinson, C. A. (2004). Sharing responsibility for differentiating instruction. *Roeper Review, 26*, 188.
- Wolery, M., & Schuster, J. W. (1997). Instructional methods with students who have significant disabilities. *The Journal of Special Education, 31*, 61–79.
doi:10.1177/002246699703100106
- Wright, P. W. D., Wright, P. D., & O'Connor, S. W. (2010). *All about IEPs: Answers to frequently asked questions about IEPs*. Hartfield, VA: Harbor House Law Press.