The social interactions and communication opportunities of deaf-blind students in the inclusion classroom: A literature review.

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Educating and Understanding Deaf Students with Additional Disabilities

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Introduction
This literature review will examine various research studies regarding social interactions and communication opportunities for deaf-blind students in the inclusion classroom with sighted and hearing peers. Incidence levels, educational setting, data collection methods and definitions of deaf-blindness will be discussed concerning the effect they have on accurate systematic data for deaf-blind students in the inclusion classroom. Drawing from extant studies, the researcher will also discuss common themes present that are significant to the successful inclusion of deaf-blind students.

Background
Incidence Levels According to the 2007-2008 Annual Survey of Deaf and Hard of Hearing Children and Youth, there are approximately 1,718 children in the nation classified as either deaf-blind or deaf with visual impairments (Gallaudet Research Institute, 2008). This may seem like a rather large portion of today’s youth but, of the total number of students surveyed nationwide, this group only accounts for 5.4%. Although the Gallaudet Research Institute (GRI) researchers that administer this survey try to be as comprehensive and precise as possible when gathering information regarding the deaf/hard of hearing population with visual impairments, there are gaps in the survey results. For example, gathering data from students located in rural areas, or attending mainstream programs with no other students who have deafness, may have been overlooked. In contrast to the findings of the GRI, the 2007 National Child Count of Children and Youth who are Deaf-Blind found there are 10,174 deaf-blind children ages birth to 22 years in the United States (NCDB, 2008). This statistic comprises varying degrees of combined visual and hearing impairments, as well as varying additional disabilities. Deaf-blindness in itself can necessitate the use of additional educational services on top of the student’s current educational placement (Correa-Torres, 2008a). This may account for the varying findings of the two surveys, as they may not have accounted for all of the possible placement options for these students.

Educational Settings Reportedly 9,095 (39.1%) of all the students surveyed by the GRI attend a regular school setting with hearing students. Because this survey focuses on the deaf/hard of hearing group as a whole, it is not apparent what percentage of that total is deaf-blind students. The National Consortium on Deaf-Blindness (NCDB), the publishers of the aforementioned child count of deaf-blind children, also collected information specific to each child’s educational placement. Out of the data provided 4,508 students attend a regular classroom setting for 80% - 40% (or less) of their educational time (NCDB, 2008). This is roughly 54% of the students attending some form of formal schooling, a percentage vastly different from that found by the GRI in their survey. Although these statistics greatly differ concerning the population of deaf-blind children in America, data collection methods may explain the discrepancy between the two.

Data Collection Methods The GRI results may be moot as they aim for gaining the most information about “typical” or the majority of deaf/hard-of-hearing students. Relying on deaf educators for their information, the survey does not allow for the possibility of alternative placements of deaf-blind students. Some deaf-blind students are placed in blind programs versus deaf programs and therefore may not accurately be accounted for in the statistics found by only asking deaf educators. The NCDB Child Count may be more reliable as they are specifically
targeting deaf-blind students and contact programs providing services to deaf-blind children, as well as the educators who teach them. Another challenge with data collection is the lack of a uniform definition.

**Definitions** The sharp contrast between the two survey statistics may also be in part due to the inconsistencies in defining deaf-blindness. Definitions vary at the state, federal, and international levels. The federal definition is very broad and does not identify any specific visual or hearing impairment level needed to be present to be considered “deaf-blind”, stating that the child only needs to have a combination of both hearing and visual impairments, the combination of these two impairments causing significant difficulty with communication, development and learning (as sited in Correa-Torres, 2008a, p. 197). Whereas, the Helen Keller National Center for Deaf-Blind Youths and Adults sets a minimum visual impairment level for youth and adults to receive services. Without uniformity in defining deaf-blindness, students may be put in programs in an inconsistent manner throughout the nation, and thus remain unaccounted for.

**Review of Research**
The 10,174 deaf-blind children identified by the NCDB (2008), as previously mentioned, require supplemental services to aid in their inclusion in a mainstream classroom (Correa-Torres, 2008a). It is important to discuss the extent to which these students are provided opportunities for socialization because deaf-blindness and the services these students require can be very isolating (Correa-Torres, 2008a) in a classroom with typical students. With only 41 of the students from the Gallaudet Research Institute survey receiving special deaf-blind interpreting services to mediate between the deaf-blind and typical students (Gallaudet Research Institute, 2008), it begs the question: do the remaining students have sufficient interaction with their sighted and hearing peers in an inclusive classroom? Whilst the survey by the NCDB (2008) did not address what amount of services the deaf-blind children in the nation receive, examinations of extant studies on social interactions of deaf-blind students must be done.

**Articles** The articles under revision all dealt with the inclusion of deaf-blind students in mainstream classrooms and the extent to which these students had authentic communication opportunities. Three studies (Cloninger & Giangreco, 1995; Goetz & O'Farrell, 1999; Mar & Sall, 1995) focused on approaches/strategies to including deaf-blind students and were geared more towards dispersing information than testing extant theories. The approaches discussed seem to be beneficial to the students included and if schools are attempting to promote socialization between disabled and non-disabled students these techniques might be useful. Two studies by Correa-Torres (2008a, 2008b) were focused on the nature of the moments of socialization for deaf-blind students between the ages of four and nine years old. The author found in both studies that the majority of social interactions were with adults. Ingraham & Daugherty (1995) examined the hardships and achievements of three gifted deaf-blind students in inclusion classrooms and provided advice and suggestions for educators regarding the inclusion of these students. Lastly, Moller & Danermark (2007) discussed the obstructions to full participation for deaf-blind students from the students’ perspectives.

If a student has disabilities in addition to deaf-blindness, this can also hinder student social interaction with peers. Often times the majority of social interactions in the inclusive setting tend
to be with an adult in the classroom, as they are facilitating learning, activities, and communicating with the student (Correa-Torres, 2008a; Correa-Torres, 2008b; Ingraham & Daugherty, 1995). Deaf-blind children often need accommodations in order to enable them to interact with their peers (Cloninger & Giangreco, 1995; Goetz & O'Farrell, 1999; Mar & Sall, 1995). Sometimes an accommodation can simply entail a non-disabled peer acting as a helper to the deaf-blind student (Correa-Torres, 2008b; Goetz & O'Farrell, 1999). All of these elements can combine to either hinder or aid in the full participation of deaf-blind students.

**Multiple Disabilities** Several of the studies had participants who had disabilities in addition to deaf-blindness (Correa-Torres, 2008a; Correa-Torres, 2008b; Goetz & O'Farrell, 1999; Ingraham & Daugherty, 1995; Mar & Sall, 1995). These disabilities ranged from cerebral palsy, seizure disorder, quadriplegia and so on. Correa-Torres (2008a) indicated that a good amount of the communication/socialization occurred during times that the teacher or paraprofessional was assisting the student. The researcher offers the examples of eating and going to the restroom as potential opportunities for interaction between the adult and student. A student with a combination of deaf-blindness and additional disabilities will likely need more assistance than a student who is only deaf-blind. Therefore, the students with additional disabilities are at risk for being isolated due to inability to function independently. This can add another barrier to communication with their non-disabled peers and can prevent authentic social interactions. Non-disabled peers having little to no knowledge of what deaf-blindness is and how to communicate with a deaf-blind student adds an additional obstruction to the initiation of social interactions and communication (Correa-Torres, 2008a; Correa-Torres, 2008b), leaving only the adults who are somewhat knowledgeable of communication strategies to work with them.

**Adult Social Interactions** In studies observing student opportunities for communication, Correa-Torres (2008a, 2008b) and Ingraham & Daugherty (1995) found that the majority of the social interactions of deaf-blind students observed in the classroom occurred with an adult rather than with their non-disabled peers. Correa-Torres (2008a, 2008b) indicated that the majority of student interactions with adults or paraprofessionals were while providing assistance during daily classroom activities, giving directions, facilitating play or the students were doing independent work. In the study by Ingraham & Daugherty (1995), researchers reported that the interpreters were the adults diminishing the students’ ability to interact with their peers, stating that they “became the students’ connection with and sole source of communication and information with both the other students and the teachers” (p. 260). In order to better facilitate the interactions among students, the teachers implemented accommodations (Cloninger & Giangreco, 1995; Goetz & O'Farrell, 1999; and Mar & Sall, 1995).

**Accommodations** As Correa-Torres (2008b) puts it, “one cannot expect that inclusion, by itself, will increase social interaction” (p. 273). For student interaction to occur, accommodations need to be implemented for the deaf-blind students (Cloninger & Giangreco, 1995; Goetz & O'Farrell, 1999; Mar & Sall, 1995). Cloninger & Giangreco (1995) discuss such accommodations as multilevel instruction and curriculum overlapping. In a study done by Giangreco, Dennis, Cloninger, Edelman, and Schattman (1993; as sited in Cloninger & Giangreco, 1995) researchers found that the non-disabled students also benefited from the modifications made to the classroom. Correa-Torres (2008b) also found that inclusion benefits all students involved. One
way to initiate interaction between disabled and non-disabled is to assign a peer to the deaf-blind student to help with classroom activities.

**Non-Disabled Helpers** The use of “helpers” for the deaf-blind students was a practice observed by two studies (Correa-Torres, 2008b; Goetz & O'Farrell, 1999), in which non-disabled peers of the deaf-blind students assist with things such as completing classroom assignments or facilitation of play. It is also noteworthy to mention that Correa-Torres (2008b) also observed that nondisabled peers would interact with their deaf-blind classmates during free time or during recess. The study by Goetz & O’Farrell (1999) discussed the involvement of classmate-partners as part of the inclusion strategies implemented by the educators in the classroom. A discussion about further research and the use of more accommodations needs to begin in order to add to the knowledge base that we have.

**Discussion**
The current research available is limited in that there are only three articles from the twenty-first century. All other articles were from the late 1990s. Unfortunately, there seems to be a downslope in literature on deaf-blindness and the inclusion classroom. During an interview about teaching students who are deaf-blind, Dr. John Venn, a professor at the University of North Florida who previously taught deaf-blind children, attributed this dearth of information to the lack of professionals in the field who are interested in research. Dr. Venn said, “The best people in deaf-blind are practitioners not scholars and it’s such a small field, if you write something there’s only like ten people that are going to read it. Twenty might read it, but only ten are going to buy it” (Venn, 2009).

In the author’s opinion, additional research is needed to better understand the socialization and communication needs of students who are deaf and blind in inclusive settings. Deaf-blind students have so many unique needs and require specialized education. Research should focus on the socialization of these students as there is a major possibility of them moving through the educational system without having authentic opportunities to socialize with their peers. This is a detriment to not only the deaf-blind student, but also the peers who will not have experience with this unique population of learners. As previously stated, researchers have found that inclusion does indeed benefit all students involved (Correa-Torres, 2008b).

The aforementioned studies are a good foundation to the beginning of a bigger discussion. The use of nondisabled helpers seemed to be quite beneficial for the students involved and might be the best way to encourage interaction among these students. In order to validate this theory, replication studies are needed.

Though there is limited research, as more students are placed in inclusive settings because of the least-restrictive-environment stipulation in the Individuals with Disabilities Improvement Act of 2004 (P.L. 108-446), perhaps researchers will begin to recognize that additional research is essential to understanding the communication and social needs of deaf-blind students.
References


