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# Nonverbal learning disability (NLD) : a case study

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**Nonverbal Learning Disability (NLD): A Case Study**

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### **Abstract**

Non-verbal Learning Disability (NLD) as a diagnosis emerged about forty years ago. It is a disorder that occurs in the right hemisphere of the brain and the symptoms can be grouped into three major areas: neuropsychological deficits, academic deficits, and social-emotional/adaptation deficits, there is also poor motor co-ordination that can result in a sense of overall clumsiness. This paper describes one individual, Mary, a fourteen-year-old girl living with this disability. This case study focuses not only the daily life of this individual, but also examines the research in the field that speaks to various aspects of the challenges faced by these individuals. Specifically what the ideal learning environment should be for those students with the disorder, as opposed to what Mary faces day to day. Also what the outcomes could be long term for some one with this disability, and what the out come or future could be for Mary.

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### **Introduction**

The purpose of this case study is to examine the ideal learning environment In contrast with the reality of a child living with a developmental variation, in this case specially a Nonverbal Learning Disability, or NLD. By examining the disorder itself, and how students with this disorder should and can be accommodated, as opposed to the day-to-day struggles of this particular child, it is clear that there is a significant discrepancy for this individual. The implications for the subject of this case study can be tragic, as the following pages with illustrate.

### **Definition of Nonverbal Learning Disability (NLD)**

NLD as a diagnosis emerged in the 1970s. It is a disorder that occurs when there is significant destruction of the neuronal subcortical white matter (long myelinated fibers), in the right hemisphere of the brain (Harnadek & Burke, 1994, p. 145). According to Byron Rourke, the preeminent researcher in the field, the symptoms can be grouped into three major areas: neuropsychological deficits, academic deficits, and social-emotional/adaptational deficits (Roman, 1998). There are has also been poor psychomotor coordination observed in relation to this diagnosis, usually along the left hand side of the body that will result in overall clumsiness and lack of coordination (Thompson, 1996).

Those with this diagnosis exhibit clear strengths in the areas of rote memorization, verbal output, and word recognition and spelling ( Harnadek & Rourke, 1994, p.144). However this verbal strength can result in cumbersome monologues. Normal conversations with “give and take” can be hard to execute with regularity (Thompson, 1996).

In other words, individuals with this disability are memorizing each phrase they are hearing, which means they are not able to hear, or process aural information as the same speed as a non-NLD person. However they can read and memorize texts visually with great strength and accuracy. People with NLD also have difficulties with non-verbal social cues, and everyday personal interactions. Moving around, whether it is in a room

or in a city is a challenge on multiple levels. There is no cure or treatment available to reduce the symptoms of NLD (Roman, 1998).

### **The Challenges of the Learning Environment for NLD Students**

In order to get a meaningful perspective on the full range of the challenges, and optimal solutions for students with this disability, it is critical to address each issue individually relative to the needs of each specific child. However the following are some broader descriptions and recommendations.

#### *Motoric Challenges*

A child with NLD will have many gross and fine motor challenges. This will include everything from walking quickly to athletics to tying shoes. These challenges will also include handwriting, which will not only be “sloppy” or illegible, but also executed very slowly. This experience has been likened to asking an adult to hand write that has taken a muscle relaxant, or has recently suffered a stroke (Thompson, 1996).

Students should, therefore, have accommodations that would allow them to have minimal paper and pencil tasks. Tasks involving cutting, or folding should be limited, or eliminated if at all possible. They should also not be penalized for being tardy to class, and if possible should have extra time to transition between class spaces and activities (ibid). In specific cases occupational, and physical therapy might be appropriate (Roman 1998).

#### *Visual Spatial Challenges*

A child with NLD does not form visual images and therefore cannot re-visualize something that has been seen previously. Experiences are stored in the student’s memory by their verbal labels, not by visual images or by proprioceptive recall. Additionally, a



student with NLD will have a relatively poor memory for novel and/or complex material and/or material which is not easily verbally coded, because the child does not form the visual images which help the rest of us to recognize and comprehend something we have seen or a place we have been before. This causes extreme difficulty for a student trying to find his or her way in new places. Once in school, he or she will have difficulty figuring out where and how to place written responses on a sheet of paper and/or how to get back to the classroom from the nurses' office. Copying accurately from the board or a book are impractical and agonizing for a child with NLD, as is accurately and consistently filling out any sort of assignment sheet or book (Thompson, 1996).

Appropriate accommodations for this aspect of the disorder can include those mentioned above such as not punishing the student for being tardy. It may also be difficult for these individuals to listen to oral presentations and take notes. If this occurs, compensatory techniques such as using a tape recorder during lectures should be considered. Timed tests may not accurately reflect actual knowledge or ability because problems with rapid processing of visual-spatial information often make it difficult for individuals with NLD to perform well when time is a factor. Allowing additional time or completely removing time constraints reduces this problem. Also, asking for written comments to explain graphs, getting verbal directions, or reading figure captions and legends carefully can prove helpful (Roman 1998).

*Social Challenges*

The social deficits for individuals with NLD include the following: deficits in social perception, social judgment, and social interaction skills. They also have an increased tendency toward social withdrawal, and even isolation as the age of the individual increases (Harnadek & Burke, 1994, p. 145). This is the most debilitating feature of the NLD because much of social communication is nonverbal, involving "body language," facial expressions, and tone of voice. Individuals with NLD are at a significant disadvantage due to their impairments in visual processing and visual-spatial perception. In effect, when individuals are unable to accurately perceive a social situation, they are at a significant disadvantage for choosing a correct social response. Deficits in reasoning and generalization of knowledge also directly contribute to disadvantages in social interacting and problem solving. Additionally, their behavioral response to similar situations occurring over time may appear very inconsistent and even contradictory. Also individuals with this disorder respond poorly to novel circumstances. The ability to deal with changing circumstances is a fundamental aspect of social competency. The difficulties with reasoning, flexibility, and problem solving in NLD individuals, combined with their other cognitive deficits, place them at a substantial disadvantage for coping with the changing circumstances of day-to-day life (Roman, 1998). These social interactions can also include changes in tone and or pitch of voice and or emphasis of delivery are not noticed or distinguished. Likewise, an individual with NLD will not appropriately alter his or her expression and elocution in speech. This can be evidenced in what may appear to be terse or curt response styles (Thompson, 1996).

Accommodating for these types of social deficits is a challenge and obviously depends on the particular individual's needs. Some overarching suggestions include avoiding power struggles, punishment, and threatening. Students with NLD do not understand rigid displays of authority and anger. It is imperative to keep in mind that the "confusion" and social awkwardness the child displays are real and unintentional; they should not be viewed as conduct to be penalized (Thompson 1996). Occasionally occupational, or play therapy can be recommended for children with NLD, but the more important intervention that can be given to a child with this disorder is the ability to interact with, and observe their normally functioning peers (Personal Communication, July 2011).

#### *NLD Schools*

In her book *Nonverbal Learning Disabilities at Home: A Parent's Guide* (2001), Pamela Tanguay goes into very specific detail about choosing the best education option for a child with NLD. She begins by explaining that while the child's needs remain constant, the demands of a school will change over time. In a traditional school, environmental support is withdrawn from students just as demands increase, and the child's environment becomes more complex to navigate. Students with NLD will be unable to adapt to these changes. The other important component that Tanguay illustrates that the environment is paramount for students with NLD in terms of their behavior in these settings.

“Every step that is taken away from what this child needs, compromises her ability to succeed. If the child displays unacceptable behavior, whether she is acting out or seems overly sensitive, the problem is almost certainly with the environment, and not with the child! Always look at the appropriateness of the demands and expectations being placed in this child before assuming that there is a behavior problem. Determine

what is causing the behavior, and then correct it. The behavioral problem will almost certainly disappear once the environmental problem is corrected (Tanguay, 2001).”

The ideal learning environment for a student with NLD according to this author contains seven main features. These features are based on research done by Rourke and others in the field, and reflect Tanguay's own observations as well. These requirements should be in place at any school – public or private- that a student with NLD attends. The first requirement is that there be a creative, flexible staff that is knowledgeable about NLD, or committed to the prospect of becoming more familiar with the disorder. Second, the physical layout of the school is easy for the child to navigate: straight corridors, well-marked doors, clear signs, etc. Third, the school should have a very small total student population, with fifty or so being ideal, but if possible not more than two hundred. Fourth, Tanguay stresses the importance of small class size for students with NLD, with no more than six to eight students in a younger classroom, and ten to twelve in an older classroom. Both of these class models would include having an aide in the class as well as the teacher. Fifth, the student community should stay together from year to year so that the NLD child can develop an understanding of the group dynamic and form meaningful relationships. Sixth on the list is teacher continuity. Ideally, the student has the same teacher(s) for multiple years, and there are a limited number of teachers working with the student with NLD. Finally, there should be a school philosophy of teamwork, and a policy of zero tolerance for bullying (Tanguay, 2001).

While at this time no research was found that supports the idea that children with NLD should be in special schools, and not with the general education population, there are schools that are specialized for children with NLD. Using the seven requirements put forth by Tanguay, I was curious if these schools would align more closely to these ideals

as opposed to the setting that Mary is currently in. I looked at two specific schools. The first is the Orion Academy located in Moraga, California. This is a high school with 97% of their graduates in college. According to their website, the school's mission statement is:

To educate secondary students with NLD, Asperger Syndrome and other neurocognitive disorders in a program that equally emphasizes academics, social competency and pragmatic language development (<http://www.orionacademy.org/about/mission-statement/>).

But how do they do this, and does it conform to the seven requirements set forth by Tanguay? According to further research on the schools' website the students learn in small groups that remain consistent over the year. Students have the opportunity to interact and learn with the entire Orion community in social skills group, activity classes and P.E., yet the bulk of the educational day will be with the same core students. The average class size is eight students to one teacher. This aligns with the fourth and fifth goals which are small class size and student continuity. Additionally the school uses the Webster board system, allowing information from the whiteboards used during class periods to be directly transferred to the student's computers, reducing the note taking requirements in certain classes. While this is an excellent differentiation technique for NLD students due to their strengths as auditory learners, and struggles with grapho-motor skills, this is not one of the requirements on Tanguay's list, but perhaps it should be. After much research on the website of Orion Academy there was little else that directly aligned their goals and instruction with what was described by Tanguay.

The second school that I researched was Franklin Academy. This school is a boarding and day school located in East Haddam, Connecticut and serves high school students. Their mission statement is:

Franklin Academy is designed to help students with Nonverbal Learning Differences and Asperger Syndrome manage their unique strengths and weaknesses in a safe, supportive, and nurturing school community as they develop friendships, master important skills, and pursue collegiate goals and career aspirations (<http://www.fa-ct.org/program.html>).

The site is very specific about student life at Franklin, and how these skills are acquired.

The school is also very specific about many aspects of their program, and how each of these aspects supports their goals for the students. For the most part there is more overlap with Tanguay's list here than at Orion. For example the school makes an effort to diminish and address behavior that could become an issue, and even lead to bullying. The school believes that:

“Our Code of Conduct provides the philosophical foundation for our community. In our Individual & Community course, community meeting, Core, and hall meetings in the dormitory we discuss and build skills in conflict resolution, collaboration, and group dynamics. This gives us a common language and shared expectations that shape our behavior in dormitories, activities, and classes (ibid.).”

This “core” that is mentioned above serves as a home base for students, and these small groups meet once or twice throughout the academic day with a faculty member. The goals of these meetings vary depending on the students in the group, and their personal needs on any given day. This addresses numbers four and five on Tanguay's list allowing for NLD students to be in small group settings and have student continuity as well.

If one were strictly going by the presence of Tanguay's best practices then Orion only had two attributes that adhered to the list, while Franklin has three. However after spending time looking through Franklin's website, their efforts, and implementation of their goals were much more transparent and made sense given the big picture of what

NLD students struggle with the most. For example they take the time to state very clearly that their belief is that no single method of instruction is effective for every student. Instead, they evaluate teaching strategies and match them with each student's individual learning style. That the program is designed to be flexible, though they expect their students to focus on a learning process in which they pursue interests, ask questions, conduct research, apply thinking skills, and solve problems (ibid). The fact that they try to meet each student where they are, and create the ideal learning environment for that individual makes the most sense for any student, not only those with NLD. Franklin is very specific in how they do this and one of their strategies is how they have structured the school year to better accommodate NLD learners. In their own words:

“We know from previous theory and current experience that our students often need shorter days with more breaks. Why? Compared to neurotypical peers, students with NLD and AS do not process information quickly, requiring greater concentration and effort to learn skills and complete tasks. As our students fatigue or experience increased levels of stress, their ability to process new information, to stay organized, and to regulate emotions decreases... we have adopted five 5-week quints and two shorter intersessions. In general, we use the first week of the quint to introduce new skills; weeks two, three, and four to focus on practicing and mastering those skills; and week five to consolidate the gains and to review... During quint 1 we assess students. Quints 2 through 4 are used to introduce and practice skills. Finally, quint 5 is used to consolidate skills and reassess in preparation for the start of next year.... Frankly, our students find the assimilation of new information to be relatively easy. Far more difficult and challenging is developing the skills to find, organize, analyze, use, and communicate information (ibid).”

What is remarkable about this system is not how complex it is, but how much time and effort was put into making it the best possible system for their students according to their real life experience and research in the field. This model also adheres to the Response to Intervention Model (RTI) that is commonly used for children with special needs, and uses it across the whole school so that there is coherency and commonality across the board.

This school also takes an active stance in preparing their students for the “real world”. Yes they teach life skills classes (as does Orion) but they also do this with how they organize the student’s day to day existence. They acknowledge that

“Our students like routine and predictability with as few transitions as possible. Unfortunately, life often surprises and challenges us to adapt and change. This is one of the main reasons why we systematically build variation and disruption into the routine of our weekly schedule and yearly calendar. Thus, the structure of the daily schedule for Monday, Tuesday, Thursday, and Friday is different from Wednesday and Saturday, and Sunday has its own unique schedule. To help our students learn to cope with change - a vital skill that our students must learn if they are to be successful, independent adults. In addition, there are five major vacations during the school year, necessitating travel and transition from school to home and back to school again(ibid).”

Franklin also pays attention to the pace of the day and provides plenty of transition time for their students, in addition to breaks throughout the day for students to refuel and refocus.

It is hard to know what the actual experience is for students who are attending these schools, and a website is a marketing tool for whatever institution it is representing. However, given these limitations, both of these schools have taken the time to try to create environments that will allow their NLD students to do their best work while learning skills that aren’t necessarily taught in the classroom. Whether or not these types of schools are the ideal learning environment for a student with NLD depends entirely on the student, and the family of said child. Mary, the students who is the focus of this case study has not, nor is there any plan that she will attend a school like this for high school for reasons that will be discussed further later in this paper. However I find myself wondering would Mary, the subject of the case study, succeed in one of these environments?



## Mary

### *Background Information.*

Mary (this individual's name has been changed to protect confidentiality) is a fourteen-year-old girl living with NLD. Mary was originally diagnosed with PDD-OSS (Pervasive Developmental Disorder—Not Otherwise Specified) when she was about three years of age. According to her mother, she knew that something needed to be checked out because Mary at the age of three, could recite the entire score of the “H.M.S. Pinafore”, but had never asked for anything to drink, or expressed that she was hot or cold.

After this original diagnosis Mary began to work with a Special Education professional, Michelle Melconian, who is still a key part of Mary's support team. When they began meeting at this time they focused on “...a lot behavior based intervention to treat and modify her behavior and teach her new skills. Such as how to sort categories, expressive language skills, theory of mind perspective taking etc. (M. Melconian, personal communication, July, 2011).” At this time Mary was attending a private nursery school, and there were other students with special needs in her class, however it was not a special needs classroom.

At the age of five, Mary got an IEP, but it was for her severe allergic reactions to peanuts. The reason for this according to Ms. Melconian is that is all that they needed for a paraprofessional's support at school and it was faster, and it meant that she would have a person, as opposed to all the money needed for lawyers and tests for basically the same thing. Mary enrolled in a public school in Manhattan in kindergarten and remained there until the end of fifth grade.

Mary's educational experience in this school was inconsistent, and while she was given support, that support fluctuated in terms of its effectiveness and appropriateness. Mary occasionally had speech therapy, but that was focused more on her social skills, she also had various other types of occupational therapy, but it was sporadic and minimal. As previously stated, Mary was given a paraprofessional to be with her in her classrooms. There were two or three that were assigned to her over the five years she was at the public school, and some didn't seem to have a great grasp of English, let alone how to best support Mary. Ms. Melconian was asked by Mary's family to go into the school to work with the paraprofessionals. These efforts had mixed results. Because there was an assortment of individuals who worked with Mary over time, there was no consistency in the approach to Mary's support, and one individual actually fought with Ms. Melconian, claiming that she philosophically disagreed with what was being done to help and support Mary.

Mary's classroom experience itself was also erratic. In third grade, Mary was doing very well and her parents decided that there was no longer a need to spend additional money on support. This circumstance however changed drastically in fourth grade. In this grade, Mary wasn't making the kind of progress she needed to, and with the middle school transition coming up, Ms. Melconian brought in a colleague to work with Mary a couple of times a week, with Ms. Melconian overseeing the program as a whole. Mary was in a CTT classroom with a remarkable teacher, with about a quarter of her peers having an IEP of some kind. In time Mary's progress improved, and she ended the year with a strong performance. In fifth grade, this changed once again. It was at this time, going into fifth grade that Mary was formally re-diagnosed with NLD. In Mary's

fifth grade CTT classroom the teachers weren't as strong, and the teacher's solution was to simply divide the class up – students with IEPs in one half, and the rest in the other half of the room. Inclusion didn't work in this case, and the year was bumpy for Mary.

When it came time to look for middle schools, there were many factors at play for what would be the right fit for Mary. The family, with Ms. Melconian's support, toured some schools for children with special needs, however as Ms. Melconian points out, "...it was not an appropriate setting for her at that point from a social aspect, and it wouldn't have been a good choice for her. Everyone has something, so there would not have been good peer models for appropriate social behavior (Personal Communication, July 2011)." In the end the goal was to find a place where Mary would derive educational benefit, and would allow her to be in a normal social environment. Mary went to a private all girls' catholic school for the fall of sixth grade, and is still currently enrolled as a student at this same institution.

#### *Mary's Current Educational Environment*

Mary's transition to her current school had many challenges. First of all Mary is the only student in the entire building with NLD, or any sort of supported disability or difference. There are other girls who need some help from the learning specialist, but this is done quietly, and in a private manner without many of their peers even being aware of the situation. Mary also joined a very small grade, where there are rarely newcomers, and the girls that were already in the grade had been together for numerous years, many since pre-school.

Mary started sixth grade with no in-school support. This was quickly seen as not working: Mary was not handing in assignments, and those that were handed in were often

incomplete, she often had emotional breakdowns in school, crying in the hallways and during her classes, she was experiencing so much anxiety that she had pulled out a significant amount of her own hair creating a visible bald spot, she was doing poorly making friends, and many of her peers avoided and shunned her as a result of her seemingly strange behavior. Ms. Melconian was asked to come in to the school by the parents, to once again support and shadow Mary, and the school asked that in seventh grade, this previous year, that Mary have full time support. Mary in seventh grade had three full time shadows, with Ms. Melconian serving as one of the shadows, and the supervisor of Mary's program.

This is how I met Mary. I was her shadow on Thursdays for the entire school year of 2010-2011, and from November to February of that year, I also worked with her on Wednesdays. The Mary I met was an exceptionally bright, tall young woman with piercing blue eyes, and shoulder length brown hair. She enjoys reading, drawing, and spending time with her family. I noticed that she does indeed move languidly, however she does not in any way in her outward appearance appear to be disabled. Upon our first meeting, Mary did not like me, which is to say she did not want to have a shadow, despite her own acknowledgment that she needed us. Mary very much needed us, especially in this particular learning environment, which does not meet her needs as an individual with NLD.

Mary's day was full of challenges. They began with a daily homeroom where there are often many important announcements made about the frequent changes to the students' daily schedule. Nearly all of these announcements were made verbally. This is less than ideal for Mary, not only because it is exceptionally rare that Mary can remember

and process these verbal instructions, but also that there were frequent, and drastic changes to her daily routine, and it is hard for her to make these frequent adjustments.

A big focus of Mary's classes that year was how to take notes. Mary was expected to take notes while listening, or annotate a book as she was reading it, or highlight for pertinent information. This was also a huge challenge for Mary on multiple levels; she could not listen and write at the same time, she had a hard time writing in general, and her keyboard skills, while improving, were still pretty weak. She also had a hard time annotating or highlighting – since she basically memorizing everything she read, everything she read was important, and many of her texts and handout were completely covered in highlighter. Mary was also expected to keep a homework book or planner. The school distributed the planner, and each subject has a prescribed box. Most of Mary's teachers gave the homework assignments verbally at the end of class as the students were packing up, without any written cues on the board, or they would tell the students to look on the website for the class for that night's assignment. Again the majority of these verbal assignments were completely and totally lost on Mary. One of the biggest responsibilities for us as Mary's shadows was to check her planner at the end of each day, which she usually left completely blank. Those assignments that she had managed to write down (again slowly and nearly illegibly) were often incomplete, and rarely fit into the space allotted for that particular subject.

The physical aspect of being in this school was also a major challenge for Mary. To begin with there was no transition time between classes; one class would end at 10:10, and the next class would begin at 10:10. Mary had significant difficulty packing up her various supplies at the end of each class and was often the last to leave her classrooms,

even with the support of myself and the other shadows. Mary cannot move as fast as her peers, and even if she could, the entire building was transitioning simultaneously, which creates human traffic that Mary had to navigate, not to mention the distractions along the way. Mary would often stop along her route to look at a poster on the wall, or an art piece posted in a room making her already slow progress that much more halting. Mary was often penalized for being late, something that clearly she could not help. This school also has uniforms that the students must change in and out of for gym, and other various activities. For most students, who have been doing this routine for many years, this was not a challenge, and was just another part of their day. For Mary, this presented a significant obstacle. Changing her clothes and especially tying her shoes are a slow painstaking process for Mary and she was constantly at the end of the line to leave the building, and her teachers and peers were often waiting for her in order to leave. Even if I intervened by packing Mary's bag, or tying her shoes in the hopes of facilitating the process, she was still last, and furthermore she was embarrassed by my help.

Mary's social life at school that year was personally the most heart breaking. Mary had no friends at this school. She had one girl that she was getting close to, however this student for reasons unknown was pulled out of school and started attending a boarding school the next year. Mary was often asked to work in groups, which is a nearly impossible thing for a NLD student to do, and made that much harder when Mary's peers ignore, patronize or antagonize her as a member of their group. There were indeed some individuals in Mary's classes that were patient enough to work with her, and while not being friendly were not as cruel as the others. However by early spring the students Mary's teachers had relied on so often had burned out on working with Mary,

and the group work situation deteriorated quickly and significantly. There were also several instances of cyber bullying, which Mary sometimes could identify, and other times not as successfully. In either case the ramifications during the school day were wretched and cruel.

Mary started the eighth grade with in-school support at the request of the school. The question of Mary's high school options at that time remained a mystery. Ms. Melconian thinks that home schooling, and specialized schooling, despite the benefits would be outweighed by the fact that Mary would be deprived of observing normal social exchanges, and how to relate to others which is a major part of her disability. Also these options might not be sufficiently intellectually stimulating for Mary. Ms. Melconian suggests that the best scenario would be for Mary to attend a school with a good academic program that would allow her to continue to have support, which her parents would fund as they do now. However, it is important to note that there is no "ideal" place for Mary, she will have significant challenges wherever she ends up.

### *Inclusion*

Mary spent most of her elementary school years in an inclusion classroom. Inclusion is defined as "the placement of students with disabilities in regular education classrooms (Daniel & King, 1997)". Inclusion has been the preferred strategy for many educators since the IDEA was reauthorized in 1991. This act requires all students to have "appropriate education" which is identified as:

"Special classes, separate schooling, or another removal of disabled children from regular education environments occurs only when the nature and severity of the disability

is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (ibid).”

However, despite the popularity of inclusion among both parents and educators, studies have shown that in reality these environments can have negative outcomes for the students and families involved. In one study conducted by Larry Daniel and Debra King sought to explore the effects of children with disabilities who were placed in inclusion environments. They did so by measuring the following variables: Parent concerns, teacher and parent reported instances of student problem behavior, student academic performance and student self-reported self-esteem. They used various tests and assessments on a total of 178 3-5<sup>th</sup> grade students.

The results revealed that inclusion parents were more likely to report more behavior problems and a greater concern with program effectiveness. Non-inclusion parents were less concerned about the need for change and less likely to report externalizing behavior problems. Academically, there were more mixed results. The third grade inclusion students experienced higher gains in reading scores, however 4<sup>th</sup> grade inclusion students had smaller gains in math than their non-inclusive counter parts. These results indicate that consistent academic gains do not appear to be an advantage of students who are placed in an inclusion classroom. And finally, and perhaps most importantly the self-esteem results were very revealing. Self -esteem was significantly lower for students with differences in inclusion classrooms.

The results of this study reveal that while there was no consistent pattern in achievement in academic differences for students placed in inclusive versus those placed



non- inclusive classrooms, there were greater instances of behavior problems among students in inclusion classrooms. There was also a larger amount of concern on the part of parents with children in inclusion classrooms. And finally and most importantly in many ways, children placed in inclusion classrooms have much lower self-esteem than those placed in non-inclusion classrooms (Daniel & King, 1997) .

It could be viewed that Mary, because she is a student with disabilities and is being educated in a general education environment, is in an inclusion setting. When Ms. Melconian was asked in a recent interview if Mary was in an inclusive environment, she laughed out loud before replying: “No. she is the only one with this type of support. A lot of girls get academic support but it is after school. This is not an inclusive model, but there are girls there who struggle more than Mary who get more help academically but it is not as visible. I don't know if it (inclusion) would benefit her any more or less, she would still need would organizational support (Personal Communication, July 2012).”

The results of studies such as those done by Daniel and King, report that the inclusion model has many deficits for those families and students with disabilities. The current school model that Mary is in is also lacking in terms of being a place that Mary can be academically and socially supported and a part of. It is clear that the environment does not become inclusive just because there is a student with a disability present.

#### *Where is Mary Now?*

Mary just completed eighth grade, her last year of middle school. This school year looked a lot different for Mary, however many of the challenges observed last year remain the same. The following information was obtained through a recent follow up

interview with Ms. Melconian, who still works with Mary, and will continue to do so as she begins high school in the fall.

Mary started off this school year on a very different note. At school she had a less structured support. Initially Mary had shadows in all of her classes, however after the first six weeks or so in-class support pulled out of all of her classes simultaneously. This was done because Ms. Melconian and her other in-school shadow decided Mary was really capable of doing it on her own. The in-school support team continued to work with her during her free periods, which was about five to six times a week. The time with her shadows was spent on organizing herself for upcoming classes. They found themselves very rarely doing any tutoring. This differed from previous years in that Mary was allowed to go to all her classes solo for the first time, for the first time she had more freedom. Mary had to be more responsible in terms of getting herself to classes on time, and it turns out she did a great job at that; she was only late a couple of times and then the shadows did have her go back and practice her pack up routine to get it back up to pace.

At home she had two tutors, (I tutored Mary in her home for the first semester, however we focused more on organizational skills, and less on anything specifically academic.) one just for math twice a week. While at first it was great, it became a little confusing and didn't accomplish as much as expected because the tutor was not in the class with Mary. The result was that Mary wasn't being tutored the same way she was being taught. Mary was receiving tutoring five nights a week, for three weeks a month, and four times a week for the remaining week every month. I wonder if Mary preferred to have this amount of support at home in exchange for more freedom at school. I also

wonder how this amount of support affected her life at home, her relationships with her family.

There were some bumps along the road for Mary this year. The last third of the school year her support team noticed there was some issues with math and science so they went back into Algebra and science and attended those classes with Mary again. These two subjects are not her strength in terms of her learning style, according to Ms. Melconian, so she was getting lost and she wasn't able to keep track of all the materials and information. The support teams' roles were mostly concentrated around doing some housekeeping and keeping track of all the information to help Mary.

There were also times when Mary would get unmotivated, and sometimes she would even cut classes! If Mary found a class such as model congress, to be frivolous, and was not as interested or did not feel a connection, she would make the call to just blow off. I found this piece of information to be particularly interesting because it is so like a teenager to behave in this manner, and yet very unlike someone diagnosed with NLD to break rules, or intentionally be in a novel experience. Also Mary likes to be in the good graces of her teachers, and enjoys having positive relationships with adults in the school. She must know that this sort of behavior will have negative repercussions for her. This cutting behavior would also carry on to when she was supposed to meet with her shadows during her free periods. According to Ms. Melconian Mary "... would blow us off because she would "forget" to meet us. It wasn't all the time but it was enough. (Private Conversation, July 2012)."

Mary also had some issues with her laptop. The school distributes laptops to each student to use for academic purposed during the school day and at home. While other

girls at Mary's school might be better at getting away with using the laptop for other purposes, Mary cannot multitask in that way, and the laptop became a huge issue in her classes. The solution was that Mary was only allowed to have her laptop out when a teacher specifically told her to do so. However the positive aspect of this is that the only way the Ms. Melconian knew this was due to the excellent communication that she and Mary's teachers had throughout the year. This is a marked difference from last year, but it could also be due to necessity since the support team was physically around less than they had been in previous years.

Socially there have been steps in both directions. Since it was the last year of middle school the question of where Mary would go to high school was certainly up in the air. About a third of the way into the school year Mary was very unhappy, she had no friends, no social connection, and she felt out of place, and she started to talk to her parents about going elsewhere for high school. The family did visit other schools such as Eleanor Roosevelt, and other schools that were all mainstream schools. Then all of a sudden Mary made some connections with some sophomores and the subject of looking at other schools was closed! Mary also participated in more "clubs" this school year. Mary did the drama and AV club. They went alright: she didn't have any major social slip ups, but she was isolated and on the periphery, she just decided not to do anything in group settings so that things would turn out better. This pattern continued in her academic group work. Ms. Melconian observed that when put into a group Mary would take on the least amount of work, no matter what the subject, so that Mary could be more assured of the outcome, in that her part could be done on her own without having to interact with the other members of her group.

Ms. Melconian did point out that Mary does have friends this year. The group of sophomore girls continues to be a source of support for Mary, and they even see each other outside of school. There was also a boyfriend in the picture briefly! Mary is attending the same camp this summer as last year that specializes in children with special needs, and is reported to be having a terrific time. When Mary comes back from camp she will be returning to a new home: the family moved over the summer from an apartment on the Upper East Side of Manhattan to a Brownstone in Harlem. Mary will have her own room for the first time since her younger sister was born. This too can have mixed results for Mary: it will be great for her that she will be getting her own room, and space from her sister. However it can also make her more of a “hermit, or be sneaky” with more behavior that could lead to laptop incidents like those from earlier in the year.

High school for Mary will bring a whole new set of challenges and opportunities. The building where Mary will be spending most of her time will itself present a challenge. According to Ms. Melconian the building that the majority of her classes will be held in has very little adult supervision, and there is no real place for Mary place to get away from her class for a break. Additionally Mary’s schedule remains a mystery, and an issue. In the ninth grade, the school requires the students to take a computer science class, also she would need to get another evaluation in order to continue her language waiver. The school is encouraging Mary to go back to taking Spanish (she had a waiver this year) because colleges like to see that students, even those with disabilities, at least put in an effort when it comes to foreign language. Given that she might have two additional classes added to her course load this would leave little to no time check-ins with her support team. As Ms. Melconian put it “So all her frees are taken away. It’s like a rug

being pulled out from underneath her, and we are very concerned about that and we don't think she can handle that.”

The curriculum will also pose a significant challenge for Mary. The curriculum changes completely to be a humanities centered curriculum that takes history, English and art history and combines into a big master class. However the class will be different every day, so lots of information to process and handouts because there is no official text book for Mary, and her support team, to use as a resource. It is a huge shift, and while she won't have a problem with the curriculum in terms of the academic requirements, the organization will be nearly impossible for Mary to handle on her own. Ms. Melconian met with the humanities team, and has provided them with a list of Mary's strengths and struggles in order to try to have them be aware of what to expect, and what aspects of the curriculum Mary will need more support with. To add to these challenges Mary is going to go alone from the beginning of the year because the goal for Mary is to rise to these challenges on her own. Additionally there is the social aspect; there will be numerous new students joining the class in the ninth grade. This gives Mary the opportunity for a new start with these students without the “stigma” of having shadows supporting her, even at the very beginning of the school year. There is always the ability to reassess and have support come in at any point. However the fact remains that Ms. Melconian is not happy with her current schedule because Mary has no outlets for her emotional moments that she shouldn't be having in class in front of her peers.

*Mary's Future*

Mary's social disabilities are what make her most at risk for an unhappy, and perhaps even dangerous and tragic future. For the most part Mary is lonely; this is the first year that Mary has had real friends for a prolonged period of time. Pavri (2001) explains that children with disabilities are more vulnerable to feelings of loneliness than their peers without disabilities (p.53). Mary is aware that she doesn't have many friends, and she wishes this weren't the case. She, like most lonely children has an ideal conception of what she wants, and knows that she does not have it, but more tragically, Mary has no idea how to get it (Pavri, 2001, p.53).

Many experts in the field of NLD ( Leenaars, Porter,Rourke, and Young) have found that those with the disability are predisposed to be at high risk of committing suicide as an adolescent or adult ( Kowalchuk & King, 1989, p.177). This is of course not because of how their brains are constructed, but a failing to learn how to cope with the realities of living with NLD. Children maturing with this disorder experience chronic failure and rejection from their peers, which can lead to depression, anxiety and withdrawal (Kowalchuk & King, 1989, p.178).

The ultimate extent of this depression and withdrawal is suicide. It is not that all individuals with NLD are predisposed to suicide. However the schema of suicidal orientation such as hopelessness, alienation, and depression are often seen in those with NLD (Kowalchuk & King, 1989, p.178).

The thought of Mary harming herself in any way is scary, disturbing, and unfortunately a reality. Mary did express last year that she had thoughts of hurting and

killing herself. It can be easy to write these claims off as the cries for attention from an overwrought teen girl, but this particular teen girl has NLD, and it is worth taking note of these facts before coming to any concrete conclusions.



### **Reflection**

When I met Mary in September of 2010 I had no idea what NLD was, or how to really support a student with this diagnosis. I have learned a lot about Mary over the course of that year, and also a great deal about NLD.

Ms. Melconian, my direct supervisor was an incredibly patient and kind mentor who answered all my questions, not only about Mary, but the disorder as well. While she could tell me specifically how to record what I was observing in the classrooms, or how to prompt Mary to refocus, or even what to tell the few teachers who sought us out to discuss Mary, there is no handbook, or definite guide to working with Mary. While there might be a more comfortable and less painful place for Mary to learn, as Ms. Melconian said there is no ideal for Mary.

Working with Mary was different every time I saw her; while I could predict what circumstances and scenarios might be challenging, or sometimes just impossible for her, there was only so much I could do for Mary. This might be the biggest frustration, and realization I have had while working with someone with a disability of this kind- there is really nothing I could do to make things better for Mary. I could try to give her strategies, and be there for her as a supportive adult who cares a great deal for her, but at the end of the day she still has NLD.

What has been the most frustrating thing about my year working with Mary was Mary's school environment. The reality of Mary's school life versus the accommodations and recommendation in the field for a student with NLD is astounding, and in some ways shocking. We shadows are hired by her parents to support Mary, and while the school has

been generous enough to allow us to be there with her in her classes, that is really the extent of their accommodations for her. She does have extended time on tests, but not to move around the building. Because she is so bright, verbal, and loves to learn, most of her teachers don't look much beyond these attributes to what they could be doing to help her with her obvious weaknesses. The simplest act of writing the homework on the board would make a huge difference for Mary, and yet it is rare that her teachers, who do admire her very much, will actually make this simple accommodation for her. Some of her teachers approached us shadows on a regular basis to see how they could help Mary, and some did not. They know that she has NLD, and I cannot help but wonder if any of them have even Googled it to see what it means, and what Mary has to struggle with every day.

This fall I had the pleasure of tutoring Mary in her home once a week. We worked on organizational skills and some study skills, but not really anything relating to a specific academic subject. The Mary at home is a completely different child than the one I worked with the previous year at her school. At home Mary is warm, affectionate and funny. She would ask me questions about my life and while this might have been a procrastination technique every once in a while, she also seemed completely interested in me as a person, as opposed to the annoying adult who was following her around during her school day. I so wish that Mary's classmates could meet this Mary: the relaxed Mary who can be herself and have normal interpersonal interactions.

In my recent follow up interview with Ms. Melconian I asked her what the best possible outcome or future would be for Mary. She answered "Well I don't have a crystal ball! If we could support her in the way that she needs through the end high school (if

needed) she should be able to attend a typical four year college but in order to do that she has to be able to support herself and to use these strategies to support herself, it has to be by rote. I think that she might be okay without a person with her. Mary will always need some extra help after hours, tutoring, a coach or some other support. Post-college Mary should have a typical life once she finds her niche, and once she finds her niche her weaknesses will become her strengths (Private Conversation, July 2012).”

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