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Dealing with Special Education In the Technology Classroom

James E. Taylor
St. John Fisher College

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Dealing with Special Education

In the

Technology Classroom

St. John Fisher College

James E. Taylor
Master Signature Page

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Chapter I

Introduction

Dealing With Special Education in the Technology Classroom

As a fourth year Technology educator in the Rochester City School District, at Charlotte Middle School, my professional commitment is to meet the needs of all students. In the first couple years of teaching at Charlotte Middle School all technology teachers taught students who were regular education eighth graders. Educated to teach regular education students lessons consisted of thought-provoking projects, and motivating experiences that engaged students.

These students participated in cooperative learning activities based on the New York State Standards in Mathematics, Science, and Technology.

However, in the last two years, the make-up of the class lists has dramatically changed. A typical technology class may now consist of regular education students and/or students with special needs. These students are not just in inclusion classes but entire self-contained special education classes. In a typical day, a teacher may find themselves teaching a class of students with severe
emotional and behavioral concerns. Most of these students labeled emotionally disturbed, or a class of students with very low intellectual and cognitive abilities, these students are labeled mentally retarded. Many regular education teachers have become frustrated, as they have not been trained to respond to behavioral problems or learning disabilities of children whose academic performance is below those of their classmates. This paper will address the challenges and the impact of regular education teachers with the changing face of the classroom to include children with disabilities.

Charlotte Middle School is a comprehensive middle school in the Rochester City School District located on the northwest side of Rochester. The school is structured into three houses, each with its own administrator, support staff and social environment. The school provides full time counselors and also has a Wellness Center to serve students and their families. Charlotte has extensive computer support in technology and writing classes, which is backed up by Discourse Technology, an assisted computer-learning program. Charlotte has accepted a plan to become an America Choice School. In keeping with the No Child Left Behind Act of 2001, America’s Choice School Design is a comprehensive K-12 school reform model designed by the National Center on Education and the Economy. The goal is to ensure that every student is a competent reader, effective writer, and is skilled in mathematics so that when they leave high school they will be prepared for college level work. (www.ncee.org)
The school offers art, drama, technology and leadership clubs along with a competitive athletic department, fielding twelve sports teams and after school intramurals. Charlotte has a total enrollment of approximately 950 children; approximately 225 of them are students who are labeled as having special education needs. More than one third of all students are served in resource or inclusion programs.

The workday at Charlotte consists of an eight period day. As Technology teacher the workday consists of five, forty-minute class periods delivering instruction to a very diverse population of children. Teachers have one planning period, an administrative assignment, and a lunch period. The first class of students that are labeled Emotionally Disturbed and are in an 8 to 1 self-contained class setting. There are six students in this class at the present time. The class list changes frequently due to children receiving long-term suspensions as a result of intense behavioral problems. There are four Para-professionals that come to assist with students. Two of the Para-professionals assist with a specific student who is assigned to them. These two students have such intense behavior concerns that they are assisted all day long by a 1 to 1 staff member. The other Para-professionals are there to help out with all the students. The main focus of the Para-professional is to help maintain appropriate classroom management.

The second and third classes are regular education eighth grade students with special education students blended into the classes. In these classes the
special needs students are those labeled with Learning Disabilities and Emotionally Disabilities. Their disabilities are considered mild and they are mixed with the regular education students for the entire day. These students have the support services of a special education teacher who sees them in their core subjects only. There are no teachers assistants to help in this class. There are approximately twenty-four students in each of the classes.

The fourth class is comprised of two students. These students come from a blended self-contained class of twenty-four students, which consists of half special education students and half students who were identified as needing a smaller self-contained class although not labeled with a specific learning disabilities. The self-contained class room is a new model of inclusion with two to four adults in teaching at all times. Most self-contained students attend general education electives. In the fourth period class, only two students comprise the class due to their modified curriculum. These two students do not come with a Para-professional. They are labeled Mentally Retarded and Other Health Impaired.

The last class of students is an 8 to 1 group of students who are labeled Mentally Retarded. These students come from a self-contained classroom and have a modified curriculum based on domestic, community, and vocational and recreational skills. There also is a strong behavior management component based on severe behavioral problems. These students have very low cognitive abilities. Many of these students have limited verbal communication skills and also very low
receptive communication skills. The students are accompanied to the classroom with one Para-professional who assists them for the entire day. The Para-professional helps mainly with communication and 1 to 1 assistance.

As stated before, regular education teachers are prepared to motivate and educate students who learn in a traditional way, but many teachers feel apprehensive in motivating those who do not respond to conventional teaching strategies. Having no previous training in special education teacher often feel overwhelmed by the unique needs these students. As a professional, a teacher continues to incorporate standards reaching measurable goals for students, but many times students with special needs propose perplexing challenges.

It is important for the reader to understand that after working ten years at a detention center, the decision was made to change careers. The population of the children at the center ranged in age from 10 to 16 years old, these children had been arrested for committing serious crimes. For five of those years, the job entailed working part-time on the child and adolescent psychiatric unit at an area hospital. The children on this unit were mainly suicidal but some were autistic and mentally retarded. Having many different experiences working with many diverse populations of children have not prepared this educator for what is expected of a classroom teacher.

After fulfilling the teaching requirements through course work and work related experiences, teachers are confronted with yet another challenge. The
challenge, of the special education students with their wide range of disabilities being placed in regular education classrooms.

In 1975 congress passed Public Law 94-142, which guarantees free and appropriate public education for children and youth with disabilities. This law requires these students to be educated in the least restricted environment. Research suggests that to address these concerns, students with learning disabilities or other special needs would be better and more efficiently served in general education with the support of special education teachers (Doyle and Lacrasta, 1988).

Research, such as that of Doyle and Lacrasta, (1988) has strongly influenced school districts and their policies. Increasingly, regular education teachers will be facing the challenges that as an educator we are responsible to provide the best education for all students. In response to these issues this paper will review the literature and talk to other educators in order to get ideas and recommendations for maximizing learning in the classroom. It’s proposed to implement many of the instructional methodology in the classroom to determine how well students with disabilities respond. The last proposal to do is to write a set of guidelines that will help other teachers who work in blended classrooms and who have not received appropriate training in meeting student needs.

_He drew a circle that shut me out_
_Heretic, rebel, a thing to flout_
_But love and I had the wit to win:_
_We drew a circle that took him in._
(www.wisdomquotes.com)
Chapter II

Literature Review

History of Inclusion

The education of students with special needs has progressed substantially in Rochester, from the days of abandonment or institutionalization to residential schools to public schools, to resource rooms, to mainstreaming, and now the future is heading toward full inclusion (Snyder, Garriott and Aylor, 2001).

According to Heins and Piechura (1998) the parents are in favor of inclusion, these same parents also feel that general educators lack the understanding and knowledge of how to teach and deal with students with disabilities. This is an understandable predicament, considering that these same parents not too long ago were told that segregated programs would provide the best setting for their child. Now these parents are being asked to place their children in general education classrooms. The parents are not the only ones who are asking the questions. So are the general education teachers who feel ill equipped and unprepared for the challenge of full inclusion who is often confronted by confused and anxious parents.

Twenty years ago, the buzzword in special education was mainstreaming. Mainstreaming was based on the principle of educating most children in the same
classrooms and providing special education on the basis of learning needs rather than categories of handicaps. It was anticipated that mainstreaming would provide a better education for most students through better use of the schools facilities and personnel (Wilcox & Wigle, 1997). It also was noted that segregated classrooms for students with disabilities exceeded the cost of integrated classes, so from both an educational and a financial standpoint, mainstreaming was encouraged. From the philosophy of mainstreaming and its successes and failures has come the concept of inclusion.

Full inclusion means that all students, regardless of their disability, may attend their neighborhood schools and receive special education services within the general education classes. These students are considered to be full and equal members of their classroom groups and school communities (Janney and Snell, 1997). Putting this concept into practice though requires significant changes in curriculum, instructional practices, and new and modified roles for the teachers. Janney and Snell site that little research has been conducted to investigating how these decisions are made about these changes and how these changes are actually implemented.

With the emphasis on (N.Y.S. standards, such as standard #1 Students will read write, listen and speak for information and understanding) enhanced academic performances for all students, districts have felt the increased pressure for schools to boost overall achievement levels. The emphasis on performance, as well as
higher-order thinking skills, has posed a problem for students with disabilities (Mamlin 1999). With the need to be financially responsible and to increase student performance, districts are looking at new alternatives of school restructuring and reform. This has pushed inclusion into the spotlight.

The philosophy of inclusion is that all students are entitled to be full participants in the school community; with the proper support all students will be taught almost exclusively in regular classrooms (Kilted, Wilkinson and Briggs, 1997). Some of these disabilities may consist of students with learning disabilities, mental retardation, and emotional and behavioral problems. The key to these researchers statement is that student with disabilities will be successful with the proper support. Many times teachers in the electives classes, such as art, music, and technology are overlooked because they are not core content area subjects so few or no services or support are offered to them.

**Inclusion- The Challenges**

Teaching students with special needs can be a challenging experience even for those with special training in the area (Howell, 2000). This research found that although 98% of the general education teachers felt their planning skills were good to excellent only 39% of these same respondents felt that they were competent to plan for students with special needs. Howell also sites that the general education teachers were receptive to students with special needs but they felt they lacked the
skills necessary to do the job to meet high standards. These teachers revealed that they had received little if any training in how to teach student with disabilities. They also felt they were not included in developing the IEP (individual education plan, required for all students with disabilities).

Howell (2000) states that the general education teachers in this study perceived a fairly low level of support from parents, school administrators, and outside agencies in helping them work with special needs students. The teachers in this study said they would welcome future training, for example being allowed to observe and sit in on conferences with other teachers and receiving more training materials that would help aid them in teaching students with special needs.

In the studies by Wilcox and Wigle (1997), it was found that it was difficult to find special education and general education teachers who were well prepared to work in inclusive settings. It was reported that it remained difficult for teachers to appreciate the degree to which they were expected to cooperate with other teachers in dealing with students with disabilities. General and special education teachers lacked the cooperative and team teaching skills necessary to be effective in inclusive classrooms.

The initial apprehension most classroom teachers had about including students with special needs evolved into positive attitudes as they participated in experiences that increased their involvement with the student (Janney and Snell 1997). According to the teachers in this study, a high value was placed on
teamwork in making inclusion a meaningful experience for the child. They did note though that the increased traffic of specialist’s coming in and out of the classroom could be disruptive. These teachers thought that it would be better to make simple changes within the classroom that could modify the program to meet students with disabilities needs.

In Howell’s study (2000), he explored what training, preparation and feelings the teachers of technology had about the inclusion of students with special needs. The research design of this study was through solicited responses of teachers through the use of a validated instrument and questionnaire. The validity of the survey was established through the uses of an advisory committee that analyzed the prototype and final version for accuracy, clarity, and scope.

The teachers who completed Howell’s survey varied in their range of experience from 0 to 33 years. They reported that they had received training through seminars, workshops and in-service training. About one-third reported not having any in-service training for special needs students and the other two-thirds of the teachers reported attending 1 to 50 hours of in-service for teaching special needs students. The teachers in this survey felt they had the skills to teach special needs students but could do better with more training. These teachers believed that they maintained a suitable classroom environment when special needs students are included. They felt it was appropriate to include special needs students into their classrooms.
Responses to the questions dealing with the level of support these teachers received were less than encouraging. Although they did receive some level of support, they did not perceive the support was adequate.

**Inclusion Models**

Mamlin (1999) sites that for inclusion to have the greatest chance of success; there are three important factors of implementation. First, the administrative team needs preparation and a well thought out plan. This plan cultivates the need to foster the disposition toward lifelong learning for everyone and for the development of collaborative work cultures to help staff deal with innovations. The second key factor of success is the teamwork among teachers, having everyone involved in the preparation and the planning to increase the success of inclusion. Losing territorial attitudes regarding special or general education is essential. Lastly, Mamlin found that the input of those who will be affected by its implementation played a major contributing factor to the success of inclusion.

The need for professional development is essential for reform in teaching and curriculum change (Kimmel, Deek, Farrell and O'Shea, 1999). Their studies in the professional development of math, science and technology teachers who taught students with disabilities showed that there were five key components missing from most professional development programs. “These components are as follows:
1. Programs are not provided within the context in which the skills and knowledge are used.

2. Programs are not focused on teacher behavior in the classrooms.

3. Programs do not consider all factors to the complex array of teacher behaviors that constitute standards based practice.

4. Programs do not consider all factors affecting teacher’s behavior, beliefs and perceptions.

5. Evaluation of programs focuses only on the outcomes of the training for teachers and does not include teachers practice.” (Kimmel, et al., 1999, p.241)

Their goal was to develop a model professional development program for teachers of self-contained general education classroom and special educators (meaning to put all students in one classroom) to help them include children with disabilities in general education. The primary focus was to promote positive and permanent changes in the academic climate of the classroom by influencing teachers’ beliefs about the ability to make changes and adaptations to accommodate the needs of the students.
According to the authors the program was designed to bring general education and special education teachers together for collaborative participation in professional growth activities. The program took into consideration essential elements: change in teacher behavior is a gradual process; regular feedback to teachers is essential; and opportunities for reflection and discussion with peers should be provided regularly.

Janney and Snell (1997) conducted research on elementary school age children in Virginia. Their focus was on inclusion students with moderate and severe developmental disabilities. Twelve districts in Virginia participated and engaged in systematic and district wide efforts to include students with moderate and severe disabilities in age appropriate regular education classrooms in the study.

According to Janney & Snell (1997) Classrooms fit into one of three models of integration: (1) Full inclusion, which means that all students with disabilities could attend their neighborhood schools and receive their special education and related services within the general education. (2) Full integration, which means that students with moderate and severe disabilities are served virtually full time (over 90%) in the general education classes. (3) Partial integration, which means that students with moderate and severe disabilities are clustered in a particular school and based in a self contained special education classes but integrated into general education classes for at least 25% of the day for academic as well as nonacademic subjects.
They stated that the students and teachers in these classrooms all received the support from special education teachers and teaching assistants. The special education teachers provided support services to students in their general placements and did not operate self-contained classrooms.

The data from their study was collected over a two-month period through two different field investigators and several different methods and sources of data collection. The different methods of data collection included classroom observation, informal teacher and staff interviews, observations of teachers and staff planning together, and paperwork. The sources of data were general and special education teachers, assistant and students. The data was organized into three main categories: teacher roles and responsibilities, instructional activities, and peer interactions.

In Janney & Snell’s study the modification to the teacher’s role was as follows, the additional adult on a full time basis means that the adults involved had to delineate how they would divide and share responsibilities for the inclusion students. The general education teacher remained the teacher in charge and was clearly still responsible for determining the lessons, rules and routines. The special educator becomes the helper, creating adapted material, monitoring seatwork, providing small group instruction and implementing any instruction that was conducted separately.
The modification to instructional activities was that the observed teachers referred to virtually all modifications to instructional activities as “adaptations”. In general the students with disabilities all typically did the same or similar activities at the same time. Lesson formats include teacher led large groups, small, teacher directed ability groups, and seatwork and cooperative student directed small groups.

According to Janney & Sneell (1997) the aim of the social involvement with inclusion students was to achieve social involvement of students but not to the extent of accomplishing meaningful academic participation. Social participation strategies were more common for the students with severe rather than moderate disabilities. The activities occurred more frequently when staffs were not available to provide instructional support.

They noted that at many times parallel activities were designed and delivered by the regular education teacher. When the regular education teacher was giving a lesson the special education teacher may also give a lesson on the same subject but broken down into small units. Teachers felt that the students were still learning more by being exposed to the general education curriculum and having opportunities for social interaction with classmates than if they were to remain in a separate special education class.

Wilcox and Wigle (1997), who studied five school districts over a twenty-year time span, found these four important factors in their practices. (1) Teacher
preparation, (2) placement and services for students with disabilities, (3) attitudes toward mainstreaming and (4) the cost. Again their findings, like that of others found these teachers felt they lacked the skills needed to individualize instruction for the broad range of individual differences found within the typical school populations. Difficulty in finding teachers who were fully prepared to work in inclusive settings was cited as an issue in 1974 as well as 1994. And at both times it was reported that beginning teachers did not fully comprehend the degree at which they would be expected to cooperate with other teachers regarding students placed in special education services.

The Wilcox’s study found that parental desire for inclusionary practices for their children had increased over the past twenty years but that teacher attitudes toward inclusion did not parallel those of the parents. Some of their districts reported that not all of their teachers accepted inclusionary practices and some had actual professional agreements in their union contracts for stronger limitations on inclusionary practices. This present study found that the cost of segregated classes for students with disabilities in 1994 exceeded the cost of segregated classes for students with disabilities in 1974. There were no favorable statements from any of the respondents regarding the cost of inclusion.

Hunt and Goetz (1997) review the research and practice in the provision of inclusive education for students with severe disabilities. Five members of the research team analyzed the data produced by the interviews using inductive
analysis procedures; consensus was reached on the identification of emergent themes related to the process leading to inclusive education and the people involved (the research team). The findings of the study indicted that the process of the movement of the students with moderate to severe disabilities from self-contained classrooms located in a separate wing of an elementary school to placement in their home school in general education classes focused on three areas; These were precipitating influences such as due process, positive working relationships such as focusing change by bringing individuals together and facilitating their growth and additional elements such as sharing success stories, and selecting willing people to participate in inclusion programs.

Several emergent themes related to the interviewees' perspective on the staff involved in the inclusion process. A positive regard for the students with disabilities and their perceptions that the students were "whole people with needs more similar to than different from those of their classmates." (Hunt and Goetz, 1997, p.4). Also their beliefs that the affective outcomes of inclusive education, including respect, getting along with each other, caring and helping were highly valued. The staffs' perceptions that their collegial interaction with supervisors and other educators were of a positive nature with no one feeling left alone.

According to Hunt and Goetz (1997), several policy changes were made during the course of the study including a reconceptualization of roles and responsibilities of educational staff that allowed individuals to function outside of
traditional roles and responsibilities. This was in an effort to more adequately support all students, establishment of a reduced size for classes that included a child with significant disabilities and the opportunities for daily contact by all student and teachers with students with disabilities. Tensions that developed between the general education and special education teachers were relieved by the creation of regularly scheduled team planning meeting to design ways in which members of the team could work together to meet the needs of all students.

The approach to teaching students with disabilities (Hunt and Goetz, 1997) also changed from a parallel curriculum model with students seated in the back of the classroom and time spent in pull out activities in a special class to the identification and use of a curricular adaptation model that promoted the instructional inclusion of the students while addressing their individual needs. The major change was the attitude of the general education staff from resistance to cooperation to overt support. This change came about with “experience, knowledge and modeling”. The author reflects, “The momentum for systems change became more of a shared agenda as staff worked collaboratively with administration to articulate their vision of inclusion, Sustained progress occurred as staff experienced success in meeting the needs of students with significant disabilities.” (Hunt and Goetz, 1997, p.15)

Hunt and Goetz (1997) identified the types of assistance they received from special education teachers as either “helpful” or “not helpful.” An effective
relationship with staff include a shared framework and goals for including the student with disabilities in the general class routine, the presence of another person on whom they could rely and teamwork which provided them with technical, resource, evaluation and moral support. Ineffective relationships were categorized as having goals not relevant in the general education classroom, assistance was intrusive and disrupted the classroom routine, assistance was overly technical and specialized, the presence of multiple specialists and other visitors associated with the child with disabilities, pullout of the student from classroom activities and the use of activities, materials and approaches that were not typical of the general education classroom.

**Inclusion Implementation**

Mamlin’s research (1999) investigated the impact of the implantation of an inclusion plan on a school and several of its classrooms. It sought to describe the culture of the school and the attitudes toward inclusion. The site was elementary school in an urban school system in Middle Atlantic State. The school was under restructuring to include special education into the general education for students with mild to moderate disabilities. The restructuring was led by a researcher from a university in collaboration with the state department of education and the local school district. A qualitative method using observations and interviews at the school, the district and the university shed light on the complexities involved in implementing an inclusion program. This study provided knowledge about how
teachers and principles prepared for the change, how teamwork developed, which placement options existed, and how input from the entire staff was sought. Much of the documentation showed factors that assisted or impeded the development of an inclusion program.

The school studied in (this) research was an urban elementary school, which held approximately 500 students. There was a school wide Chapter One site with most students qualifying for free or reduced meals. The restructuring was an initiative led by researchers from a local university and the state department of education. The participants in the study were teachers and administrators from the new building. Data was collected through taped interviews and the review of filed notes.

According to Mamlin (1999) the move toward inclusion included moving students who had been resource students and self-contained classes into the general education classes, nothing changed for students who had severe retardation or autism. The changes at the school seemed to be just surface changes but were meaningful to the participants. Students were given what was referred to as “individual schedules” that were supposedly a response to the students needs. When students did not do well on their “individual schedule” there were no other options open to that student. Several of the students transferred out of the school. There was on some level the awareness that “individual schedules” did not represent inclusion.
Mamlin's most striking findings in this initiative were that special education was seen truly as a separate system and that the idea of collaborating with general education remained foreign to the staff. For example, special education staff only attended assessment services, yet at meetings that included both general and special education staff; the special education faculty was often left out of decisions. There was deeply ingrained culture of segregation and a tendency to sort students. Special education students were routinely exempt from the district and state assessments.

To move toward more inclusive practices, Mamlin suggests the school would need to see its staff as unified, with all teachers sharing of responsibilities for all students. Rather than a predisposition of sorting and classifying students, the school view themselves, as a community of learners and that would be more conductive to inclusion. The clearest theme that emerged from his study was the leadership and its effectiveness to govern change. Leadership was not lacking but this type of leadership did not allow inclusion to occur. The principal controlled what happened by not allowing the staff to make decisions and solve problems that affected them.
Summary

Inclusion is a very controversial idea because of the assignment of students with disabilities to regular classrooms in neighborhood schools for the entire day. As a regular education teacher the challenges faced with including children with disabilities special education were not unique only in my classroom. The literature has shown that parents and general educators are equally frustrated. This literature review addressed many labels and words used with children with disabilities, often general education educators do not understand the terms. Many attempts were made to explain these terms, in order to provide a better understanding of them. Included in the research is the history of inclusion, different inclusion models, the challenges that inclusion brings and the problems associated with implementing an inclusion program, all of this information is extremely important background information for the reader to understand the challenges educators such as myself face each day.
Chapter III
Methodologies

The Rochester City School District schools and programs serve almost 60,000 students from preschool age to adult. (All of these statistics comes from the RCSD web-site.) It is the largest district in Monroe County. It is in an urban district with 81.4% students at the poverty level; this figure is based on the need for free or reduced lunches. The ethnic background of its students is: 65% African American, 17% Hispanic, 16% White and 2% Asian/Pacific Islander, Native American and East Indian. In October of 1995, the Rochester City School District took the unprecedented step of setting specific, measurable goals for improving their schools. These specific benchmarks included goals on the inclusion of special education students.

Inclusion began in the 1988-89 school year when the school district received the approval from the State Education Department to serve students with special needs in blended classrooms. The mission of the inclusion plan was to ensure students that have disabilities have equal access to the general education program in efforts to achieve their highest academic performance and to prepare them to succeed in the world in which they will live and work. The mission statement of inclusion is aligned with the Rochester City School Districts Mission to: educate all students to their highest levels of performance in effective, managed learning
environments that are safe, inclusive and student centered in collaboration with parents and major community partners. (RCSD web-site)

The research for this project will use the following methodologies to find data to analyze. The researcher will use related educational research from current professional journals to help formulate a background of inclusion and special education. This literature reviewed current thinking of general education and technology teachers who are being faced with the opportunity of having inclusion and special education classes to teach. The data will be collected in a variety of formats from educators from the Rochester City School District and from other districts. With approval from the districts the data will be collected in the form of a survey and also in formal and informal taped interviews with the professionals in the Technology teaching field. To further research this topic this writer will make classroom visits to various classrooms for informal observations of how inclusion works.

The formal survey was sent out to all technology teachers in the middle and high school level in the Rochester City School District. The survey will follow the format which is included in Appendix A (see attachment). The letter is included in Appendix B. (see attachment), the survey will be sent through the inter district mail system. Teachers will be given ample amount time to fill out the survey and return via district mail. The data will then be collected and analyzed.
The informal visitations will be to area schools such as BOCES and Churchville Chili (where they have total inclusion of all students) and district sites within the city. During these informal observations, classroom management and classroom roles will be observed. Teaching staff will be asked to speak informally about their particular special education classes. Through these informal taped interviews data will be collected regarding the roles and responsibilities, classroom management, teacher training and various information. I will also be contacting Technology teachers at the state level were also contacted for interviews, asking for their insights and input via email and phone conservations.

Through the review of current educational literature and the formal and informal data collected through various means this paper identifies what planning and decision making is needed for students with special needs. Also, what support that is needed including these students with what teaching modifications and instructional modifications are needed and what classroom management techniques are needed for these students to be successful in a Technology class.
Four Schools were chosen for this study: two middle schools and two high schools. A suburban school district and an urban district were chosen for both levels to offer various and diverse responses. Churchville–Chili Senior High was represented as the one suburban high school. This site was chosen because of the district’s inclusion policy, mission and vision. Churchville-Chili’s mission is to “challenge all students to reach their fullest potential and assure that they acquire the knowledge, skills and attitudes to become responsible citizens.” (Churchville-Chile district web-site) The Churchville-Chili School district is located amidst farms and quiet residential neighborhoods about 15 minutes from downtown Rochester. The schoolhouses 1,569 Student grades 10-12 and 160 Faculty. Churchville-Chili is known for its total inclusion of special education students and the use of technology to strengthen student learning.

The other high school chosen for this study was Edison Technical and Occupational Center. Located in the Rochester City School District, it is the oldest technical high school in New York State. Edison Technical and Occupational Centers schools mission and vision is a high school which provides academic and occupational education. It strives to help students develop their full intellectual, emotional and physical potential is preparing them for the world of work and/or
higher education. It serves 1,900 students, 200 faculty, and 350 Special education population. (RCSD web-site) It requires students to take all required regents courses while offering students real-life training which could lead to employment or college upon graduation. Careers Pathways are offered in the following disciplines, Communication, Constriction, Engineering, Manufacturing Technology, Office Technology/Computers, Service Occupations and Transportation. Students are offered Work Study Programs and the opportunity to earn a Certificate of Employability, which is endorsed throughout Rochester and used by those who consider making hiring decisions. Careers Pathways is a program in which the students study in that focus area during their four years, so that they can get a job in that area upon graduation. Certificate of Employability is a program where the student works at a place during their high school years, and upon graduation will hopefully continue working at the place of employment.

Spry Middle School is located in a suburban district outside of Rochester. The Spry Middle School Community is committed to a positive learning environment. The schools mission and vision is committed to maintaining a positive learning environment, to achieve this, all members must respect the rights of the individual and accept the responsibly for the intellectual, social, physical, emotional and creative growth of each student. (Webster school district web-site.) The building originally built in 1924 has since seen two
additions due to expanding town populations. The building now houses 1000 students in grades 6-8.

Monroe Middle School is located in the heart of Rochester's cultural district. It is within walking distance of theaters, museums and parks. The mission and vision of the school is; "We, the staff, students, parents and supporters of Monroe Middle School, work together to create a safe community that fosters respect and caring for each other while addressing the unique needs of Middle School students. We provide a variety of opportunities to achieve our educational goals, build an appreciation of world cultures and help student acquire the skills needed to live, work and succeed in a global society." (RCSD web-site)

The school offers an International Studies Program in all subject areas and the Language Academy offers a Spanish immersion program for students interested in developing fluency in both English and Spanish.

These four schools will offer data on which to reflect on the needs of Special Education Students in Technology Classes. It is hoped that these diverse schools will offer different perspectives and new insights into technology education. Each school in this report had several classes that responded to the survey. Additional information was retrieved through phone conversations and emails.

The total of questionnaires sent were sixteen, when observations were don in each classroom, all questionnaires were personally picked up.

The Churchville-Chili respondents have between two and thirty years of teaching experience. Two of the teachers received no formal training with students with special needs and one took college courses. All of the teachers teach special
needs students in blended classrooms. None of the teachers have Para-
professionals or teaching assistants that work in the room. Two of the respondents
said they had no input from the special education teacher regarding the students
needs and that they alone were responsible for the students educational planning.
One of the respondents said that he did meet with special education teachers and
occasionally with the student’s parents. He did not say how frequently these
meeting took place.

The Churchville-Chili teachers offered the following strategies as most
helpful when working with special needs students.

- Assisting students in a 1 to 1 situation as frequently as possible
to maintain student attention.
- Enabling a one to one attention to keep the student on task and
progressing.
- Pairing weaker students with stronger ones.
- Breaking complex tasks into simple/small steps.
- Various grouping methods-Cooperative Learning.

The Churchville-Chili respondents have made the following modifications in
the classroom. One used differentiation to help special needs students, stating that
not all students are expected to achieve the same end product/goal. (Differentiated
instruction is a teaching strategy, where teachers provide specific ways for each
individual to learn as deeply as possible and as quickly as possible, without assuming one student’s road map for learning is identical to anyone else’s. The teachers believe that students should be held to high standards.) He also expressed that his reason for using differentiation, is that it works better with a diverse group of students than other teaching strategies. One said he changed the curriculum for the students and the other said he seldom made any classroom modifications.

One of the respondents commented on how his special education program worked so well with the regular classes but seemed somewhat unfair when it came to specials. Such as technology, art music home and careers and so on...) the reason he said it was unfair is because the teachers in the special areas were on their own. There was no assistant, Para, or special education teacher in the classroom to help them. The system was set-up with all regular education and special education placed to the same classroom. The good thing about this is a certified special education and a certified regular education teacher in each classroom. The respondent also expressed that he received no training to prepare for these students with special needs and sometimes becomes frustrated. The only available was to ask the special education teacher how to deal with a particular student and what works best to teach him or her. In the end he expressed that having a special education assistant or some form of training would be more helpful.
The respondents from Edison Tech had between nine and fourteen years teaching experience. Special education students are mainstreamed in the classes but they teach no self-contained classes. Prior to teaching the students with special needs the teachers had no formal training. The one teacher had a son who had attended Hillside Children’s Center for behavior difficulties and he had experiences as a parent. One teacher responded that the Special Education teacher that he worked with has taught and helped him. The teachers varied on their responses to the involvement of planning for their Special Education students. One felt that he had no additional help and becomes frustrated because he needs one-to-one help. Another teacher did have teachers that distributed Individual Education Plans and would rotate students. These teachers would help, give advice as needed, make periodic phone call or short visit but did not work directly in the classroom. Their assistance was most helpful in the following ways: they kept up with students and home contacts; they assisted in giving new ways to present skills; and they assisted in giving students one-to-one attention occasionally. Their help was least effective with the paperwork from the Special Education Office.

The teachers from Edison Tech found the following strategies worked the best with students with special needs.

- Give all the students clear directions
- Demonstrations
- Practice with the Teacher
Cooperative Learning Groups
Hands on
More individual instruction and attention
Working in small groups
Patience!

The Edison teachers made the following modifications to help with special education students: they would offer students individual projects; they would partner them up with an accelerated student or use senior students; one respondent reported that he did whatever was necessary to help student be successful and another said they made no modifications at all.

One of the respondents from Edison Tech did express that he had not given a lot of thought to the Special Education situation at their school, but feels he should. Mainly because the great increase of students with special needs over the years, since he's been teaching there. He does not feel that the school has deprived the students with needs, but could have done a better job of preparation. In the future they could do research on other high schools that are similar to Edison Tech and their situation. Provide more in-services or make it optional for teacher to return to school to receive training to teach students with special needs that they never got before. I personally feel that the idea of in-services and returning to school are because it would help relieve some of the frustration when these students with special needs walk into a teachers classroom.
The Technology teachers from Spry Middle School had between two and thirty-two years of teaching experience. Three of the respondents taught special education students who were mainstreamed into the technology classes. One teacher taught a self-contained special education class of six students. One of the teachers reported that he did not teach any special education students at all. None of the respondents had any formal training in college or from the school district. None of the respondents felt they were apart of the educational planning but the teacher did comment though that he felt apart of the educational process because he was teaching them to the best of his ability. Responses were mixed regarding the help of assistants in the classroom. Two of the respondents did not have helpers in the class and two did. The two who did felt at times that the assistants were more of a burden than helpful; there was a barrier between the special education student and the teacher. One teacher commented that the assistants were more of a hassle than the students themselves. They found it least helpful when they tried to help the non-special education student or tried to discipline students without teacher permission.

The teachers at Spry found the following teaching strategies the most helpful teaching students with special needs:

- Use visuals, pictures in all lessons
- Get to know students on a personal level
- Provide a number of ways to understand one topic
» Encourage students to come on their free period or after school
» Provide one-to-one help
» Teach with demonstrations
» Encourage interacting not note taking
» Using hands-on activities
» Do whatever it takes

The Spry teachers felt they did not make many modifications to classroom procedure or routine to accommodate special education students. One teacher commented that the students do not want any of their given services in the classroom.

The teachers who responded from Monroe middle school had been teaching for the longest ranging from fourteen to thirty five years. All of the teachers taught special education students mixed in the general education classes. One teacher taught a class of Option 3 students with seven children in the class. Only one of the respondents had training in college where special education technology classes were offered. The other received no formal training or in-services training. None of the teachers felt they were apart of the educational planning or process for the students they taught. One teacher commented that he felt the students were not prepared to be successful in exploratory classes (Technology, Music, Art and Home and Careers). Two of the respondents had full-time or part-time help in the classroom; the others had no help at all. They found it most helpful when the
assistant actually helped or assisted with the students. It was also very helpful when the Special Education teacher shared information regarding the student. They found it least helpful when the assistant did not possess the skills needed to assist the student or teacher.

The Monroe Middle School Teachers found the following teaching strategies to be most helpful when dealing with special needs students:

- Hands on activities
- Stay away from seat or bookwork
- Spend more time, especially explaining assignments
- Use techniques similar to what is being done in their Special education class
- Use teacher’s aide
- Smaller classes
- Easier/simpler activities

The teachers at Monroe felt that the students in the inclusion classes did not need any teaching or classroom modifications: that the students were to follow the same standards and curricula as the general education population. They did allow for more time on testing as needed or varied modifications according to their Individual Education Plan’s. One teacher used an application system. This same teacher also said he moved all computers facing forward and had a computer projector to the front wall. This was easy to follow for all students not just those with special needs.
Chapter V

Conclusion

The proposal of this research paper was to research current educational literature and collect data from educators in the field through questionnaires and visitations. The second part of this research paper was to list the strategies offered from both the educators and from current literature. Based on these findings my proposal was to produce a set of guidelines for teachers who find themselves teaching special education students and who have had no prior training.

The current research from educational literature (Hammeken 2000) suggests that the need of students with disabilities is an ever-changing field. The overview of the history of mainstreaming and inclusion has shown that educators are still looking for answers to help children who learn differently to be successful. Inclusion is now one of the latest focuses of research in order to better provide services to these students.

Inclusion ranging from total immersion of special needs students with the general education to partial or a small amount of students or to small partial immersion if even just to be present in the school building. Current research reflects that this is the educational trend of the new century. All of the schools, which participated in the data collected, had full to partial inclusion.
The most important information from the data is the need to plan for academic success. In the research the schools with the most well thought out plans on inclusion were the most successful. These plans included intense training and work with administrators and teachers. The schools philosophy needed to match the outcomes. The entire school community had to have bought in to the program to see it work. The unsuccessful schools were those that teachers were just thrown into the process without prior training and ongoing reinforcements.

In these findings from area schools the comparison between the suburban and urban schools did not prove all that diverse although few differences were noted. All the schools had long time tenured teachers and new teachers. It was hoped that this would offer a varied response to educational training and teaching mythology but it really did not. Both sets of teachers responded that they had little or no training in college or from in-services from their school districts. At the same time all of the respondents reported that they all teach students with special needs with the majority of respondents teaching these students in mainstreaming or inclusion settings.

It is interesting to note that although all the districts that responded with data had inclusion programs and special education teachers working with core teachers. Very few mentioned that the special education teacher worked with them and it was noted that this was never direct service but as a consult. None of the respondents had any common planning or meeting times with the special education
teachers. The assistance that was given to the Technology department were in the form of Para professionals or teaching assistance, this in many of the teachers minds were more of a hindrance than help.

The Para professionals that I work with that I fall into this category. I have one class with a Para professional for almost each student in the class. Many of these adults have no prior training and have not received any since they started. They are considered 'one to one' and are only to work with their student. The problems that are faced in this are that the aides want to almost do the work for the student and not let them try is on their own. These staff members are given no training and many times thrown into situations that are unfamiliar and have limited experience themselves. It seems that is the general outcome countywide.

The teachers who responded and that I talked with all genuinely seemed to care about the education of the students with special needs in their classroom. They were concerned about the general educational standards, time on task and final product. Most of the respondents did not make any educational or room modifications for students with special needs, the one room modification that was noted benefited the entire class, not just the special education students. Many of the teachers found strategies through trail and error and just what seemed the work best. More than one respondent stated that just do whatever it takes. In some ways it seemed there was a note of frustration, such as I have felt. Feeling unsure, unprepared and note in the control of the situation.
The strategies that the respondents felt worked the best overlapped in some areas, the most prevalent strategies were one to one help, hands on activities and making clear directions or simplify tasks. Other techniques used in several of the classrooms were the use of pairing students or using cooperative groups. All of the teachers felt that providing various methods such as demonstrations, visual and interactive note taking benefited all students. Teachers also offered that getting to know students on a more personal level and providing more patience and humor in the classroom were effective when dealing with special needs students.

It was meant to be a compliment that I was given so many special education classes; at least that is what my supervisor told me. It was felt that I was the most flexible and since I was still going to school had the most current teaching strategies and information. I thought the new guy was just being picked on! It is true; you need to be very flexible when dealing with students with special needs. This is not to say that you lower your standards or change your curriculum. It does mean you use differentiation in teaching. Each student with each individual need is considered when writing your lesson plans and adapting the standards.

Each class is as different as each student; inclusion of students is going to be the norm. Whether it is a self-contained class of trainable mentally retarded students or a group of mainstreamed students, the challenges for teachers are going to continue. According to Hammeken (2000) it would be wonderful if a simple blueprint existed for the development of an inclusive program, but this will never
be the case. Schools can hire consultants to assist in the development of a program, which can be costly but they will offer an objective view and can provide various models. The real experts are the educators, support staff and parents who understand the dynamics of their particular school environment.

Hammeken (2000) offers the following suggestions as schools begin an inclusive program. *) Develop a vision with the ideal program in mind. *) List the benefits and possible barriers to the program. *) Visit schools that have inclusive programs and observe their programs in action. *) Read current research, journal articles, books and search on the internet.

At the building level and implementation phase, Hammeken suggest these guidelines should be followed. 1) Review the IEP. 2) Group students at each grade level into the smallest number of classes possible, recommending 2-5 students per classroom. 3) Consider the following when making grouping, academic needs, reading levels, learning styles, problem solving skills, work habits, organizational skills and behavioral goals. 4) Group students who receive related services together so the coordination of related services is easier 5) Group students who require organizational skills and need a daily check in program together to better increase communication. Working with a small number of teachers will provide a more consistent program.

As noted from the research on Technology classes in Churchville, Webster and the city of Rochester, the reality of having a special education teacher in the
classroom is not evident. Hammeken (1996) in her guide for paraprofessionals suggests for those who work with these assistants the following. Remembering that the in the collected data that most teachers found the paraprofessionals more of a hindrance that a help.

Choate (2000) list twenty inclusive practices that are applicable to most students but that are vital to students with special needs in the inclusive classroom. In her book, “Successful Inclusive teaching she offers the following:

1. Differentiate instruction for learning profile
2. Offer appropriate accommodations and assistance
3. Use effective instructional strategies
4. Teach diagnostically
5. Specifically teach the necessary skills and strategies
6. Establish the experimental base and vocabulary for each lesson
7. Emphasize relevance and authentic performances
8. Use realistic and concrete examples and demonstrations
9. Actively involve students
10. Use questioning effectively
11. Teach self-monitoring
12. Teach for mastery
13. Provide appropriate practice and generous review
14. Integrate skills and concepts throughout an inclusive curriculum
15. Apply principles of behaviorism
16. Build interest and enthusiasm
17. Guide students to develop self-management and social skills
18. Manage instruction efficiently and effectively
19. Collaborate and coordinate efforts
20. Commit to inclusive instruction” (Choate 2000, p.46)

Choate’s twenty steps are conclusive with the current research and the data collected from the area schools. Although many of the teachers did not call it such, they are using differentiation in their teaching. I also find this the most helpful. It is the most important aspect of teaching student with special needs. Using a variety of instructional practices is also a top priority. Others tell me this is easy because my field is hands on. I do not see this as the case. My students are required to take a written state mandated technology exam in June. It does not allow them to show a portfolio of their projects. It covers the seven concepts of technology and how they are used in our society. It is my goal through various written, hands on and cooperative learning projects that students will come to these conclusions and apply what they have learned.

Many students learn best from watching, others from listening but it seems all students learn best when they are “doing”! Offering students the exposure to all of these instructional strategies gives differentiation in instruction. It allows for mastery of skills and the active involvement of students. Teaching self-monitoring
skills is a difficult task especially in the short time that I am able to see students. I do try to show their progress on visible charts about the classroom so they know how many projects they have completed and what assignments are missing or due.

An important perspective that Choate does not talk about is the ability for the teacher to use humor in the classroom, especially students with special needs. Many of these students already have poor self esteem and not as smart as the regular education student. I explain to them that I am not perfect and that we all have things we are good at and poor at. I try to make it a learning experience for all of us. We should not have to take ourselves so seriously that the education of our young is strictly tied to a standard or a final exam. It is important to never forget the human aspect of education and the importance of taking a few minutes to get to know student an on personal level. The few minutes it takes goes along way when trying to tap into each student's full potential. I feel that by using the data research collected, the current educational literature and using differential instruction for each of my students and classes that my students will achieve high expectations and be successful long after they leave.
Appendix A

Dear Colleagues,

My name is James Taylor and I am a third year technology teacher at Charlotte Middle School. As part of my master research project for St. John Fisher College, I am collecting research and data from technology teachers regarding their training and work experience with special education populations. I have found it to be very challenging to come up with lesson plans and classroom management skills that will meet the needs of very diverse population. I am doing this research so that I can I better provide for the special education students that I currently work with.

I am asking for your help. Please take the time to fill in this survey and return it to me via the district mail to James Taylor at Charlotte Middle School. My number and extension is 663-7070 x6092 and my home phone if256-9895. I would appreciate any information that you feel would be beneficial to my research.

Sincerely,
Appendix B

Technology/ Special Education Survey

*Please take time to fill out this survey and return it to James Taylor at Charlotte.*

Teacher name (optional) ____________________________ Phone number _______

How many years have you been teaching?

How many in RCSD?

At what level are you presently teaching?

What level have you taught at?

Do you presently teach any special education classes? Please explain

Did you receive any training prior to teaching special education students? Please Explain.

Do you fell you are part of the educational planning/process for these students? Explain

Does a teacher or teacher assistant work or help you on a regular basis? Explain
If yes what do you find as most helpful assistance? What is least helpful assistance?

What teaching strategies do you find most helpful with special ed. students?

What classroom modifications have you made to assist special needs students?

*Please call me at 663-7070 ext.6092 if you can help with either of the following.*

Would you be willing to let me informally observe your classrooms and teaching techniques?

Would you be willing to speak with me informally about the challenges you face with special needs students?

Thank you
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Appendix

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