

Special Education Data Program Design and Implementation in the NYCDOE: A Policy Paper

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Figure 1: A school psychologist’s desk on January 30, 2013. Note the files with cases that are out of compliance because they have not properly migrated to CAP.⁴⁰

Introduction

“Thank you for your letter in which you ask about data concerning children who had been certified handicapped and have returned to regular education. While these are certainly very interesting data...these data are not required in State Plans nor has the Office of Special Education Programs collected them in any other survey.”¹ These words were written by the Deputy Director of the United States Department of Education to Alan Gartner in 1986. Attitudes have definitely changed for students with disabilities since these sorry words were written, but more recent attempts to remedy this situation in New York City has caused much anguish for administrators, educators, service providers, and the students who are legally mandated to receive services. This paper will discuss the reasons this occurred and better ways to implement changes to Special Education data reporting systems. The reasons for the change to Special Education Student Information System or SESIS will be explained. The next section will explain the benefits of SESIS. There will be a review of the problems with SESIS. Last, there will be an analysis of the lessons learned by SESIS’s creation and implementation.

Reasons for/Purpose of SESIS

Students with disabilities are legally mandated to receive the services from the New York City Department of Education (NYCDOE) as listed on their Individual Education Plan (IEP). With the NYCDOE’s restructuring during the early years of Mayor Michael Bloomberg’s tenure, it became obvious that the Special Education records system needed an overhaul. The Comprehensive Management Review and Evaluation of Special Education or Hehir Report concluded the near hundred page review of the existing systems with the following statement:

The DOE should take immediate and proactive steps to continue its progress in developing a live interactive data system that is IEP based....Such a system will enable staff at all levels to access and use accurate, real-time data to drive decision-making. An integral component of this system should be an online IEP, so that all relevant information about students with disabilities in NYC is housed in one place, and so users can access the system and analyze data both on an individual student by student basis, as well as across specific groups of students and schools. We recommend that the DOE implement this system in an expedited manner.²

This 2005 review was a clear policy directive for the NYCDOE to reformulate Special Education service data management. SESIS was designed to address the report's findings and other issues surrounding Special Education data.

SEGIS wasn't just created because of one report. Because of the Individuals with Disabilities Education Improvement Act (IDEA 2004), schools within New York State had to reduce their bureaucratic forms and requirements as well as improve the monitoring of systems in place for tracking services to students with disabilities.³ In addition, No Child Left Behind (NCLB)⁴ and the newest federal mandate New York State is still trying to reach, Race to the Top, required better data capture and reporting systems⁵. News of a replacement for the 1979 system in use first appeared at the end of 2007.⁶ A Request for Proposal (RFP) was issued⁷ and bids were submitted early in 2008. The official press release and chancellor's announcement for SESIS were in January 2009 and the new \$78.6 million system contract for SESIS was publicized.⁸ As per the SESIS RFP, the NYCDOE licensed an already existing program and had the developer customize the software for the NYCDOE.⁹ SESIS was based on TIENET, a program created by MAXIMUS for the Chicago Public School system. It was lauded by many including the director of Advocates for Children¹⁰ who eagerly looked forward to an upgrade from paper files and the antiquated mainframe computer based Child Assistance Program

(CAP).The RFP called for a very short pilot time and a close to three year implementation from when the bid was first submitted.¹¹

“Game Changer” or “Fouled Up”?

SEIS has many notable features. The consolidation of all data sources¹² was supposed to decrease paperwork and serve as a data hub to address the “desperate need of a comprehensive system for tracking relevant general and special education information that is convenient, clear, and accessible for staff at all levels.”¹³ The program would be written in a way that it wouldn’t be as challenging to update as new state and federal mandates developed. There were concepts innovative to the NYCDOE including a single username across all DOE accounts¹⁴ and improved data integrity to help with state and federal funding reports.¹⁵ As is supported by research,¹⁶ the program would be available online to all users at all times in all places. The vision for the program included a system designed for an updated and unified Standard Operating Procedure Manual (SOPM) from the NYCDOE Office of Special Education Initiatives (OSEI).¹⁷ The new service capture feature was designed to make sure that all service providers delivered the timely mandated services.¹⁸ As was reported, “the program is designed to track special-ed students regarding their specific educational needs — what's been done on each student's case, who's done it... and what needs to be done next. If anyone involved with the child shirks his or her duties, it's noted in the system.”¹⁹ It was heralded with high hopes by Kim Sweet of Advocates for Children who felt the system would make the NYCDOE more responsible for their students with disabilities.²⁰ As the United Federation of Teachers (UFT) Vice President Carmen Alvarez said, it was a ““game changer””.²¹

Problems began to surface as SESIS was rolled out by the NYCDOE. It had many features which were impressive, but it was immediately criticized by most of the end-users. Students with disabilities are protected by many laws and their services and documents must be accurate and current. As the Hehir Report noted, focus on proper documentation and compliance within the NYCDOE culture lingers from the *Jose P.* case. Official procedure had priority before educating students with disabilities.²² SESIS was attempting to change and consolidate this entrenched paperwork trail. It was a noble attempt. To quote UFT President Michael Mulgrew, SESIS was “a good idea that the Department of Education fouled up in the implementation.”²³ It became obvious that SESIS lacked proper training and support systems. This, coupled with evolving system development, caused many compliance issues.

Teachers and other users did not feel prepared to use the system. As schools started to use the SESIS system, they sent a minimal amount of staff members for training and then started using the system in school. Teachers who went to the training were not confident in their ability to successfully use the program or to train other members in using the program to develop IEPs. Most users had to teach themselves the system as they went along.²⁴ Teachers were provided with different presentations²⁵ and webinars which were designed to help teachers remediate their confusion²⁶ about SESIS but they generally were meant for teachers to “brown bag” (on their own time),²⁷ in addition to their other responsibilities. Typical is the description of Rose Blake, a speech pathologist, who testified that she had twenty minutes of training before she attempted to use SESIS. She eventually wrote “SEIS for Dummies” which the DOE then asked her to use for training!²⁸ Although training and support was in the original RFP²⁹ and offered to users,³⁰ they were not confident in SESIS operability.

SE SIS kept changing after it was in use, sending messages to users as issues were remedied.³¹ Although the program ran online for accessibility, many schools still lacked proper hardware for efficient SE SIS use. All schools had different bandwidth³², computer, fax-machine, and printer availability.³³ At most three laptops were provided to schools as part of the program rollout, which wasn't enough for proper access.³⁴ A later remedy included a single broadband card to improve school access were offered by the DOE at the end of the second school year of SE SIS use.³⁵ This proved frustrating for the service providers who had to work with a dysfunctional platform that was constantly being de-bugged and changing as things developed. The system was virtually inaccessible during school hours as more users tried logging on to the system to record their attendance and report services. It was inordinately slow as "technical glitches...sometimes take weeks to get resolved."³⁶ The SE SIS helpdesk was constantly called and wait time took up to an hour on average.³⁷ In many cases, the answers provided by the help desk did not always resolve the issues.³⁸

The most troubling part of SE SIS was the myriad of legal compliance issues that developed. IEPs were not properly-to use the SE SIS terminology- migrating to the older CAP system and the help desk could not always resolve the issue. Before SE SIS, there was a way for technical compliance errors to be fixed within CAP. Once SE SIS went "live" during the 2010-2011 school year, this type of access to CAP was no longer available. Teachers were faced with screens that read "successful" or "unsuccessful" migration to CAP with no way to remedy the situation. As a result of these SE SIS issues, schools were listed as out of compliance and faced legal and financial repercussions even though they were compliant.³⁹ School psychologists and others working on student evaluations still have cases that are currently out of compliance and

cannot be resolved because of SESIS issues.⁴⁰ Schools could not meet mandatory deadlines for “inputting encounter attendance information”⁴¹ and students were not being serviced because of SESIS’s complications.⁴² SESIS’s problems even affected future kindergarten children as their evaluation results were not being entered properly because of SESIS problems or the lack of bandwidth mentioned earlier.⁴³ As Julie Cavanaugh noted, “It’s impossible to know how many kids throughout the city aren’t getting services because of problems with SESIS.”⁴⁴

Proper attendance and record of service capture is imperative for the NYCDOE to be reimbursed by state Medicaid funding.⁴⁵ The NYCDOE mandated that providers utilize SESIS data capture to ultimately help with better state funding.⁴⁶ Service providers had to input their attendance and with service capture on average ten minutes a student, they now had additional work without enough time to complete it during normal work hours.⁴⁷ There were other programming issues that threatened compliance. Student records in SESIS were not always accessible when the students transferred schools.⁴⁸ Although it would be recorded if a user accessed an IEP of a student they didn’t teach, that was the limit of the security. IEPs on SESIS were accessible to users who should not have had access to those legal documents.⁴⁹ Unfortunately, this is an overview and not in any way a complete discussion of all the problems with SESIS.

Lessons Learned for the Future

Looking towards the next administration, there are things that could be done to avoid a repeat if a similar program overhaul were to occur. SESIS, or a program like it, was long overdue. Many of the issues that developed could have been avoided had the program been

designed and implemented differently. In the NYCDOEs alacrity to meet the immediate data demands of IDEA 2004, Race to the Top, and the inadequacies outlined in the Hehir Report, they ignored a valuable resource; the teachers and service providers-the program's end users. SESIS was written to match the NYCDOE's RFP. The RFP reads as written from a theoretical system analysis rather than from a definition of end users' needs. Research by Weimer and Seuring shows that generally, outsourcing is built on a theoretical framework just as SESIS was tailored by MAXIMUS.⁵⁰ The RFP suggested sixteen weeks from the contract to the first SESIS program pilot.⁵¹ To paraphrase the old adage, the haste made more than waste. It cost frustration and over \$38 million dollars paid to teachers and service providers as part of the SESIS arbitration agreement.⁵²

As mentioned, from the beginning the program was not user friendly. Special Education teacher Tatum Metellus said, "the first time I used it, it took seven hours to do one IEP...It was all trial and error. The training was minimal to nothing. Even the SESIS trainers don't know how to use it. Plus, they're always changing it. Why not do it right the first time?"⁵³ The question is what doing it right the first time means. CAP was written for mainframes in COBOL, a 1970s computer language. CAP is a non-Open Database Connectivity or ODBC compliant program⁵⁴ meaning it cannot interface easily with many current databases.⁵⁵ SESIS did not replace CAP, it was meant to augment it for the end-user and make certain IEP planning and record of service functions accessible to teachers and service providers. Others functions in CAP, which served as a funding record became inaccessible to ensure greater compliance.⁵⁶ For SESIS to totally replace CAP, so that information would not have –to use the SESIS terminology- to migrate, much more time and funds would have had to be spent on development. A new program for

entering students would have had to run simultaneously while CAP was slowly phased out. Totally replacing CAP in the first place would have cost more in development, testing, and implementation; however, it wouldn't have had as many migration and compliance issues. The next administration needs to judge the value of keeping an old system when attempting to move ahead. The funding was available as the city had to pay the end-users for all the extra time they spent trying to deal with SESIS's realities. As part of that decision, when an RFP is written it needs to be far more specific in its needs and goals. The costs of the learning curve must also be factored in to the expenditure.

SEGIS users feel left out of the design process. The result was a program with flaws that suffered from impractical implementation. True, there are many users in New York City and attempting to have all of their opinions in design input is not an option; but, their voice should have value. There probably would have been resistance to a system change, for the Hehir Report noted that the paperwork culture was embedded, yet change was desperately overdue.⁵⁷ At the same time, a percentage of users could have been represented in the development process. Project Forum through the National Association of State Directors of Special Education or NASDSE researched the approach four states took for data recording program design and at least one state consulted with Special Education staff to make sure the program would meet their needs.⁵⁸ It has not been done on a large scale, it is feasible with a method different from the one used with SESIS development. When developing programs, the future mayoral administration should emphasize user based design from the beginning. Research by Brady, Davies, and Gann shows that programming solutions should be described by the users who have to deal with the input and output of the system.⁵⁹ The nursing industry

relies on Nursing Informatics as a way for nurses to automate medical record keeping for nurses.⁶⁰ Using this as a paradigm, future administrations should use their teachers and service providers when creating systems similar to SESIS. When the NYCDOE had MAXIMUS convert TIENET to SESIS, it needed to realize that the users or as project management researchers term it, customer, needs. Users/customers need a “change in emphasis towards customer-centric thinking” that “has major implications for the kind of activities that need to take place in the project life cycle, particularly in the early stages.”⁶¹ Usability design research by Goransson, Gulliksen and Boivie finds what SESIS users know; some hypothetical models on an RFP and sample students in training sessions cannot create the “context of use”⁶² that users understand.

To improve future implementation, a program like SESIS needs more planning and piloting. “The development process must allow enough space and time for interaction design activities to that do not benefit from being framed by the formalized process.”⁶³ The SESIS RFP did not allow enough time for piloting and testing as the contract was awarded and piloted. The lack of a much wider User Acceptance Test (UAT) than the one in the RFP,⁶⁴ with more time allowance for testing, may have demonstrated the lack of functionality that is apparent to the users on a constant basis. Some say that the NYCDOE “failed to do proper discovery before issuing the RFP and, therefore, missed major functional requirements that are not identified until more intensive discovery occurs during development or initial implementation.”⁶⁵ Before contracts like SESIS are finalized, many more test cases are necessary. The few that were shown in the original RFP and at later trainings should be studied to avoid malfunctions. Future administrations should look for end-user participation in the group that certifies the system and provides unit testing. This would limit the purposeless minutiae that have cost users so much

time. When discussing SESIS with a School Assessment Team leader, she wished aloud for SESIS to be able to list student annual reviews by the class or user not just by name or school, as the teams had been able to do in the past.⁶⁶ It might seem small, but things like this would have been apparent had end-users been included in development.

As pithy as it sounds, when the new mayoral administration looks to change programs, they have to be cognizant of user realities such as time constraints and environment. In the arbitration agreement, it was noted that the DOE hinted in their webinars that SESIS was more accessible after hours, i.e. outside the workday.⁶⁷ Future programs for users should be designed with the work time allowances built in to the program. Testimony from the arbitration agreement reveals that the NYCDOE used one of the lightest weeks of the year, the end of the summer and first week of school to measure site traffic after hours and help desk response time, concluding that users were only logged “in during non-work time in excess of 20% for every month.”⁶⁸ The UFT argued that teachers spent closer to 30% and they also had to do double work, taking notes and then doing the data entry,⁶⁹ just as Ahearn warned in Project Forum’s research.⁷⁰ Although it was done after many users spent hours trying to reach the help desk, the arbitration agreement noted that schools eventually had SESIS liaisons to help speed up the help desk wait time.⁷¹ Liaisons should be contemplated for any similar system that would be developed by future administrations.

Time constraints were only part of the equation. As mentioned earlier, the lack of hardware and bandwidth made it virtually impossible for some teachers and service providers to complete their SESIS work. When a program is implemented, summarily sending some laptops as program usage starts and sending a singular broadband cards as a Band-Aid at the

end of the second year the program is “live” should not be a practice the new mayoral administration ought to emulate when implementing new data capture programs. Research in other industries demonstrates that the data entry functions are not necessarily the responsibility of the system’s end user. When future administrations look to implement such systems, they need to realize the importance of research like that done by Wojner, Rauch, and Mokracek which suggests hiring additional manpower to maximize the usefulness of a system.⁷² This will cost a considerable amount of money; however, the monies were available considering the \$38.5 million dollars paid out to teachers and service providers as a result of the arbitration agreement.⁷³ If a future administration still wants to argue budgetary limitations after that, they need to make time for users to complete the additional tasks. SESIS has been left open-ended for later negotiations and more grievances despite the second arbitration agreement.⁷⁴

Finally, SESIS was designed by MAXIMUS but NYCDOE took responsibility for the “end-user support and training.”⁷⁵ The next administration can use this part of SESIS implementation as a case study in what not to do. Users should not be confounded by a system they encounter after minimal training. A chart on SESIS workflow and PowerPoint crosswalk presentations on changes are insufficient. Out of desperation, teachers and service providers used a speech therapist’s self-developed “SEIS for Dummies” manual available online. The NYCDOE eventually suggested this as a resource for SESIS users.⁷⁶ The practice accounts given to teachers during initial professional development did not match what they encountered when first navigating the program.⁷⁷ In addition, “brown bag” webinars did not address many of the issues users had. Research shows that teachers respond best to professional development that is hands on with step-by-step directions when encountering new technology.⁷⁸ A study of how

and when professional development is offered for new systems and mandates is essential.

Additionally, analysis of how professional development when a new system is executed would allow for a smoother transition.

A counterargument can be made that these program implementation proposals would be very expensive. One can only concur but realize that currently over \$100 million was spent on SESIS. If proper field studies, training, and support were available, more people who had actual experience with Special Education data service capture and IEP creation should have been involved. Had that been the case NYCDOE would not have had to constantly fine-tune a program that was originally designed for Chicago and not the NYCDOE. As mentioned earlier, this discussion is not over. Teachers have been directed by the UFT to ask their principals for a letter if they are expected to work on SESIS after work hours. The onus of when SESIS reporting should be done is now on the principals and the NYCDOE has not resolved the issue.

Conclusion

With SESIS, the NYCDOE attempted to address the inadequacies of the Hehir Report. The NYCDOE addressed it through a program that was meant to increase accountability and alleviate much of the redundant paperwork. The advances in technology are commendable; however, its implementation has caused much wasted time, effort, and energy. Perhaps, there was a better program available to the DOE in response to the RFP. This information is not readily available within the time constraints of this paper, nor is commentary from the decision makers involved as they did not respond to inquiries. Under the Bloomberg administration, the end-user's knowledge appreciated. To ensure success of a program, future administrations should not overlook their most valuable resource, the educators of the next generation.

References

¹ Alan Gartner and Dorothy Kerzner Lipsky. "Beyond Special Education: Toward a Quality System for All Students." *Harvard Educational Review*, 1987: 367-395.

² Thomas Hehir et al. *Comprehensive Management Review and Evaluation of Special Education*. New York City Review: New York City Department of Education, 2005. 99.

³ Rebecca Cort, "Alignment Of New York State's Accountability Systems under the Individuals with Disabilities Education Act (IDEA) and the No Child Left Behind Act (NCLB)." *nysed.gov*. March 27, 2012. www.p12.nysed.gov/specialed/spp/home.html (accessed February 16, 2013).

⁴ Thomas Hehir, *Comprehensive Management Review and Evaluation of Special Education*, 80.

⁵ New York State Education Department, "New York: Race to the Top." *New York: Race to the Top Scope of Work*. March 2013. <http://usny.nysed.gov/rttt/docs/statesow.pdf> (accessed April 28, 2013).

⁶ Erin Einhorn, "Special Ed Gets a System Boost." *New York Daily News*, December 19, 2007: 34.

⁷ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587." *Special Education Student Information System*. New York: New York City Department of Education, January 2008.

⁸ New York City Department of Education. "Chancellor Announces New Online Database to Track Services for Students With Disabilities." *New York City Department of Education*. 14 2009, January. http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090114_sesis.htm (accessed April 9, 2013).

⁹ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 6.

¹⁰ Elizabeth Green, "DOE will spend \$78.6m in next 5 years on new database." *Gotham Schools*. January 14 2009, <http://gothamschools.org/2009/01/14/doe-will-spend-786m-in-next-5-years-on-new-database/> (accessed March 21 2013,).

¹¹ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587," 8.

¹² *Ibid.*, 5.

¹³ Thomas Hehir, *Comprehensive Management Review and Evaluation of Special Education*, 39.

¹⁴ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 27.

¹⁵ *Ibid.*, 3.

¹⁶ Eileen Ahearn, "In Forum Brief Policy Analysis: Paperwork in Special Education: Survey Findings." *Informing the IDEA and ESEA Reauthorization Process: An Annotated Bibliography of Selected Project Forum Documents*. November 2011. <http://projectforum.org/docs/PaperworkinSpEd-SurveyFindings.pdf> (accessed April 14, 2013), 3.

¹⁷ Note that this didn't exist at that point because the "newest" SOPM was fifteen years old and different users had developed their own systems. New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 27.

¹⁸ New York City Department of Education, *Encounter Attendance Frequently Asked Questions*. New York, October 24, 2011.

¹⁹ Ruth Ford and Adrienne Day, "Beyond City Time." *The Investigative Fund*. 14 2011, November. http://www.theinvestigativefund.org/investigations/politicsandgovernment/1581/beyond_citytime (accessed February 14, 2013).

²⁰ Elizabeth Green, "DOE will spend \$78.6m in next 5 years on new database." (accessed March 21 2013).

²¹ *In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11 (Jay M. Siegel, Esq. Arbitrator American Arbitration Association, January 1, 2013), 37.

²² Thomas Hehir, *Comprehensive Management Review and Evaluation of Special Education*, 17.

²³ Dorothy Calaci, "United Federation of Teachers News Stories." *DA Report the Highest Policy-Making Body of the UFT Mulgrew: Be Prepared to be Called in July*. June 23, 2011. <http://www.uft.org/news-stories/mulgrew-prepare-be-called-july> (accessed March 18, 2013).

²⁴ United Federation of Teachers, *Union Resolutions: Resolution on Special Education Student Information System (SEIS) and New Individualized Education Program (IEP)*. New York, April 13, 2011.

²⁵ New York City Department of Education, "SEIS IEP Crosswalk." schools.nyc.gov/documents/d75/related/.../IEP%20Crosswalk.pptx (accessed February 16, 2013).

²⁶ Learning Times. *Learn DOE: Online Training By and For NYCDOE Professionals*. 2010. <http://www.learndoe.org/tesis/category/webcast-recordings/> (accessed February 16, 2013).

²⁷ United Federation of Teachers, *Union Resolutions: Resolution on Special Education Student Information System (SEIS) and new Individualized Education Program (IEP)*. New York, April 13, 2011.

²⁸ *In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 15-16.

²⁹ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 6.

³⁰ *In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 20.

³¹ With a SEIS login, the expired messages announcing the different problems and resolutions can be accessed at <https://tesis.nycenet.edu/comcenter.aspx?announcebox=0> and the different releases can be accessed at <https://tesis.nycenet.edu/whatsnew.aspx>.

³² *In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 6, 8-9.

³³ United Federation of Teachers, *Union Resolutions: Resolution on Special Education Student Information System (SEIS) and New Individualized Education Program (IEP)*. New York, April 13, 2011.

³⁴New York City Department of Education, "Special Education Student Information System School Readiness ." *SEGIS School Readiness Checklist-UA Special Education Support*. December 10, 2010. <http://uaspecialeducationsupport.wikispaces.com/file/view/SpecialEducationStudentInformationSystemSchoolReadiness3.pdf> (accessed May 5, 2013).

³⁵*In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 25.

³⁶Michael Mulgrew, "Testimony Regarding Medicaid Claims for Special Education Services by the Department of Education." *United Federation of Teachers*. March 12, 2012. <http://www.uft.org/testimony/testimony-regarding-medicaid-claims-special-education-services-department-education> (accessed March 18, 2013). Continuing Mulgrew's statement,

What's more, while the system was designed to increase efficiency and improve student service tracking, it actually has had an adverse effect on our members' abilities to provide services due to the complicated, dysfunctional platform and the overwhelming redundant paperwork. Once they're actually able to log on, it can literally take hours each day for service providers to enter attendance and service information for the students they saw that particular day.

³⁷*In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 6-7, 17.

³⁸*Ibid.*, 13,29-30,43.

³⁹Currently, teachers and other service providers are given "P" numbers by the help desk if they cannot resolve the issue to show that the issue was addressed but not solved. Anonymous interview by Judith Nathan. "Your Challenges With SESIS" (February 16, 2013).

⁴⁰Anonymous. "Files With Compliance and Migration Issues." Photo. Brooklyn, January 30, 2013.

⁴¹Philissa Cramer, "Union Urges Vigilance on Glitchy Special Education Data System." *Gotham Schools*. October 14, 2011. <http://gothamschools.org/2011/10/14/union-urges-vigilance-on-glitchy-special-education-data-system/> (accessed March 10, 2013).

⁴²Anonymous interview by Judith Nathan. "Your Challenges With SESIS" (February 16, 2013). In that interview, when I was explained the function of "P" numbers, I didn't realize the implications. When discussing this paper on May 7, 2013 in our workshop, I was made aware of the fact that this process may actually be a violation of the *Jose P.* decision.

⁴³Philissa Cramer, "Union Urges Vigilance on Glitchy Special Education Data System." (accessed March 10, 2013)

⁴⁴Ben Chapman, "\$79 Million Special Ed Program's Technical Difficulties Blamed for Delay in Kindergarten Seating." *New York Daily News*. June 18, 2011. <http://www.nydailynews.com/new-york/education/79-million-special-ed-program-technical-difficulties-blamed-delay-kindergarten-seating-article-1.129525> (accessed March 10, 2013).

⁴⁵Michael Mulgrew, "Testimony Regarding Medicaid Claims for Special Education Services by the Department of Education." *United Federation of Teachers*. March 12, 2012.

⁴⁶Mindy Karten Bornemann, "Speech Chapter Newsbrief, Oct. 2011." United Federation of Teachers. October 21, 2011. <http://www.uft.org/chapter-news/speech-chapter-newsbrief-oct-2011> (accessed March 18, 2013).

⁴⁷ *In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 12.

⁴⁸Carmen Alvarez, "Testimony on Special Education Reform." *United Federation of Teachers*. June 12, 2012. <http://www.uft.org/testimony/testimony-special-education-reform> (accessed April 14, 2013).

⁴⁹United Federation of Teachers, *Union Resolutions: Resolution on Special Education Student Information System (SEIS) and new Individualized Education Program (IEP)*. New York, April 13, 2011.

⁵⁰ Gero Weimer and Stefan Seuring, "Performance Measurement in Business Process Outsourcing Decisions: Insights from Four Case Studies." *Strategic Outsourcing: An International Journal*, 2009: 272-292.

⁵¹ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 5.

⁵²Dorothy Calaci, "Landmark Arbitration Victory 30,000 Get \$30 Million in SEIS Backpay." *United Federation of Teachers*. May 2, 2013. <http://www.uft.org/news-stories/landmark-arbitration-victory> (accessed May 5, 2013).

⁵³*New York Teacher*, "Around the UFT: Meet the President: District 21." *United Federation of Teachers*. November 11, 2011. <http://www.uft.org/around-uft/meet-president-district-21> (accessed November 18, 2013).

⁵⁴ New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 13.

⁵⁵Microsoft Support, *Open Database Connectivity Overview*. July 2, 2010, <http://support.microsoft.com/kb/110093> (accessed May 7 2010).

⁵⁶ Anonymous School Assessment Team Secretary, interview by Judith Nathan. The secretary explained that some related services functions within CAP are again accessible. *What's the Difference Between CAP and SEIS?* (May 6, 2013).

⁵⁷ Thomas Hehir, *Comprehensive Management Review and Evaluation of Special Education*, 16.

⁵⁸Paula Burdette, "In Forum: Systems for Reviewing Educational Data, including Special Education Information: Four State Approaches." *Informing the IDEA and ESEA Reauthorization Process: An Annotated Bibliography of Selected Project Forum Documents*. July 2011. <http://projectforum.org/docs/SystemsforReviewingEducationalDataIncludingSpecialEdInfo-FourStateApproaches.pdf> (accessed April 14, 2013), 3.

⁵⁹Tim Brady, Andrew Davies, and David M. Gann, "Creating Value by Delivering Integrated Solutions." *International Journal of Project Management*, 2005: 360-365.

⁶⁰ Association, American Medical Informatics. *Nursing Informatics*. 2013. <http://www.amia.org/programs/working-groups/nursing-informatics> (accessed May 7, 2013).

⁶¹Tim Brady et al., "Creating Value by Delivering Integrated Solutions." *International Journal of Project Management*, 362-363.

⁶²Bengt Goransson, Jan Gulliksen, and Inger Boivie, "The Usability Design Process-Integrating User-centered Systems Design in the Software Development Process." *Software Process Improvement and Practice*, 2003: 111-131.

⁶³ *Ibid.*, 115.

⁶⁴New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 34.

⁶⁵Jason Becker, . *Contracting Techonology in Education*. November 30, 2011. <http://blog.jasonbecker.com/blog/tag/tesis/> (accessed April 21, 2013).

⁶⁶ Leader, Anonymous School Assesment Team, interview by Judith Nathan. *SEIS* (May 6, 2013).

⁶⁷*In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 31.

⁶⁸*Ibid.*, 26.

⁶⁹*Ibid.*, 52.

⁷⁰Eileen Ahearn, "In Forum Brief Policy Analysis: Paperwork in Special Education: Survey Findings". 6. As she noted, "Electronic submission does not always reduce burden. Online electronic data reporting such as *EDFacts* may lessen the paper, but increase the burden hours. Technology makes it tempting to increase the amount of information requested or the amount of detail included because it is so easy to do so resulting in more work and more information than is useful."

⁷¹*In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 17-18.

⁷²Anne Wojner, Polly Rauch, and Marilyn Mokracek, "Collaborative Ventures in Outcomes Management: Roles and Responsibilities in the Service Line Model." *Critical Care Nursing Quaterly*, 1997: 25-40.

⁷³Dorothy Calaci, "Landmark Arbitration Victory 30,000 Get \$30 Million in *SEIS* Backpay."(accessed May 5, 2013).

⁷⁴*New York Teacher*, "Q&A on *SEIS* work and payments." *United Federation of Teachers*. March 21, 2013. <http://www.uft.org/q-issues/qa-tesis-work-and-payments> (accessed May 7, 2013)

⁷⁵New York City Department of Education Division of Contracts and Purchasing, "Request For Proposal RFP #R0587", 6.

⁷⁶*In the Matter of the Arbitration between United Federation of Teachers, Local 2, And New York City Department of Education*. AAA Case No. 13 390 02826 11, 16.

⁷⁷United Federation of Teachers, *Union Resolutions: Resolution on Special Education Student Information System (SEIS) and new Individualized Education Program (IEP)*. New York, April 13, 2011.

⁷⁸Beyerbach, Barbara A., Christine Walsh, and Rachel A. Vannatta. "From Teaching Technology to Using Technology to Enhance Student Learning: Preservice Teachers' Changing Perceptions of Technology Infusion."

Journal Of Technology And Teacher Education 9, no. 1 (January 2001): 105-127. Education Full Text (H.W. Wilson), EBSCOhost (accessed May 7, 2013).