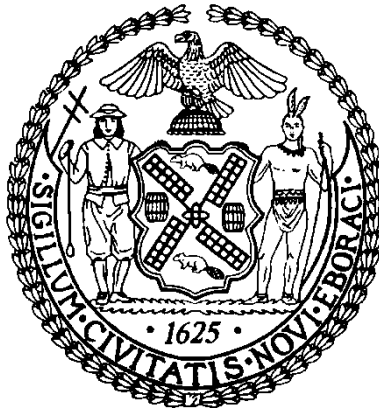


**CITY OF NEW YORK**  
**OFFICE OF THE COMPTROLLER**  
**John C. Liu**  
**COMPTROLLER**

**FINANCIAL AUDIT**  
**Tina Kim**  
**Deputy Comptroller for Audit**



**Audit Report on the Performance of the  
New York City Department of Education's  
Achievement Reporting and Innovation System**

*7111-118A*

**January 23, 2012**



THE CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER  
1 CENTRE STREET  
NEW YORK, N.Y. 10007-2341

John C. Liu  
COMPTROLLER

January 23, 2012

**To the Residents of the City of New York:**

My office has audited whether the Department of Education's (DOE) Achievement Reporting and Innovation System (ARIS) has positively affected student performance, is user-friendly, and met its intended goals. We audit systems such as ARIS as a means of ensuring whether DOE's investment in using technology to enhance educational performance is effective.

The audit found that despite spending more than \$80 million on system design and development, DOE lacks effective measurements for gauging whether ARIS is an effective tool for enhancing and improving student performance. In addition, educators are not using ARIS to the extent for which it was intended. According to our survey of teachers and principals, many educators are not using the ARIS system to collaborate with other teachers as was intended, are using alternative computer systems to obtain information in place of, or in conjunction with, ARIS, and are not utilizing the system to its fullest extent. Therefore, we believe that DOE is not completely attaining all the benefits for which the ARIS system was intended.

The audit recommends that DOE should ensure that information in ARIS is always up-to-date; provide additional training to users of the ARIS system; ascertain why an important ARIS feature (Connect) is not being efficiently utilized by educators; formulate measurements to assess whether ARIS is attaining its goal to improve and enhance student performance; and monitor the frequency and usage of ARIS by system users.

The results of the audit have been discussed with DOE officials, and their comments have been considered in preparing this report. Their complete written response is attached to this report.

If you have any questions concerning this report, please e-mail my audit bureau at [audit@comptroller.nyc.gov](mailto:audit@comptroller.nyc.gov).

Sincerely,



John C. Liu

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***The City of New York  
Office of the Comptroller  
Financial Audit***

**Audit Report on the Performance of the  
New York City Department of Education's  
Achievement Reporting and Innovation System**

**7I11-118A**

**AUDIT REPORT IN BRIEF**

The New York City Department of Education (Department) provides primary and secondary education for more than one million students from pre-kindergarten through grade 12. The Department's "Achievement Reporting and Innovation System" (ARIS) was developed under the Department's "Children First Intensive" professional development program. In 2007, the City awarded an \$81 million contract to the International Business Machines, Corp. (IBM) to develop and implement the ARIS system. ARIS would allow data analysis and collaboration tools to permit knowledge sharing across City schools, track student and school performance, and enable data integration and data quality assurance. Additionally, ARIS was intended to enable New York City educators to improve student performance by viewing student data, exploring instructional resources, sharing effective practices, and collaborating with colleagues within schools and City-wide. The system was placed in service in October 2008. Our audit focused on the utilization of ARIS by educators (principals and teachers) rather than parents.

**Audit Findings and Conclusions**

Despite spending more than \$80 million on system design and development, the Department lacks effective measurements for gauging whether ARIS is an effective tool for enhancing and improving student performance. In addition, educators are not using ARIS to the extent for which it was intended. According to our survey of teachers and principals, many educators are not using the ARIS system to collaborate with other teachers as was intended, are using alternative computer systems to obtain information in place of, or in conjunction with, ARIS, and are not utilizing the system to its fullest extent. Therefore, we believe that the Department is not completely attaining all the benefits for which the ARIS system was intended.

Additionally, ARIS Usage Reports may not be reliable indicators because of discrepancies in the data. Furthermore, we determined that less than 50 percent of educators accessed ARIS from April 1, 2011, to June 30, 2011. The Department, however, has adequate internal controls to preclude unauthorized access to ARIS.

## **Audit Recommendations**

This report makes a total of nine recommendations, including that the Department:

- Ensure that information in ARIS is always up-to-date.
- Provide additional training to users of the ARIS system.
- Ascertain why ARIS Connect is not being efficiently utilized by educators.
- Formulate measurements to assess whether ARIS is attaining its goal to improve and enhance student performance.
- Monitor the frequency and usage of ARIS by system users.

## **Department Response**

In its response, the Department contended that “First, the Comptroller misunderstands ARIS’s goals and the Department’s measurements for gauging whether ARIS has attained those goals. Second, the Comptroller misunderstands the way that ARIS data is compiled and ARIS’s role in providing student information to educators and parents.”

We assert that there is no misunderstanding about the goals of the ARIS system. As described in the ARIS vision statement and stated in a 2010 study contracted by the Department (i.e., the American Institutes for Research, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools”), the goals of ARIS were to “Understand students’ strengths and areas for improvement; Develop, discover, and organize instructional resources and gain access to professional development opportunities; Document, monitor, and discuss teacher practices and student progress; Share effective practices.”<sup>1</sup> Nevertheless, the Department provided measurements for only one of the goals (i.e., understanding student’s strengths and areas for improvement) eight months after the information was requested.<sup>2</sup>

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<sup>1</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 1.

<sup>2</sup> Even for this one goal, the metric (i.e., the percentage of principals who responded that they found ARIS “helpful” or “very helpful” in the Principal Satisfaction Survey (survey)) does not appear to be truly applicable. It is unclear how measuring the percentage of principals who find ARIS “helpful” or “very helpful” for improving student outcomes pertains directly to whether or not teachers and parents understand a student’s strengths and weaknesses. In the survey, the Department asks the same questions of principals regarding progress reports and 65 percent responded “helpful” or “very helpful.” However, progress reports have no individual student level data. As this question also had a 65 percent positive rate, is the Department asserting that a progress report helps teachers and parents understand a student’s strengths and weaknesses? Further, the views of parents or teachers are not measured.

The Department states that “To measure ARIS's impact on increasing student performance, the Department looks at three questions: Does ARIS help educators and parents understand students' strengths and weaknesses? . . . Are educators and parents using ARIS? . . . Is student performance increasing?” However, we question if the Department is asking the right questions as the key metrics provided are unrelated to ARIS’s stated goals, and the key data points provided do not provide any direct evidence regarding whether ARIS has had an impact on increasing student performance. In fact, a “key research report” relied on by the Department quotes a Department official as saying, “. . . although teachers are getting steadily better at analyzing data, data analysis ‘is not yet leading to fundamental change in teacher practice or decision making.’”<sup>3</sup> Department officials further acknowledged in a July 7, 2011, e-mail that “you can never directly tie changes in student achievement to any one program or initiative.”

Moreover, contrary to the Department’s contention that the data shows that both parents and educators are embracing ARIS, we believe the data shows signs that might indicate potential problems ahead. Specifically:

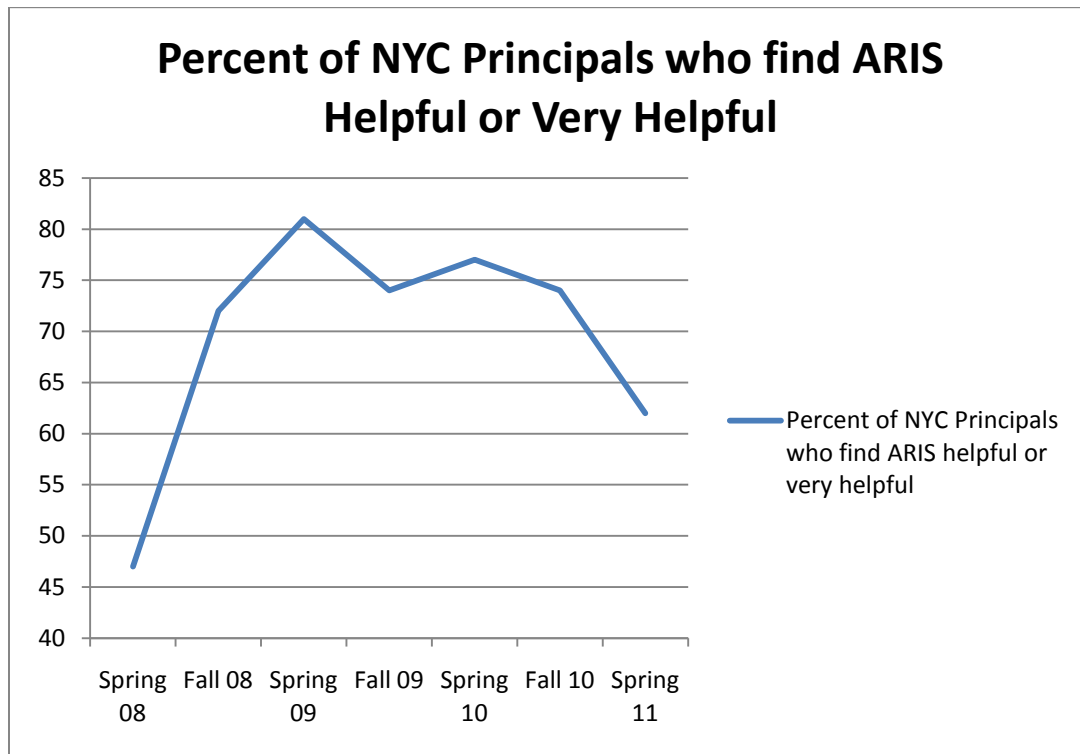
The Department states in its response that “Over 70% of principals who responded to the Department’s November 2010 Principal Satisfaction Survey . . . indicated that ARIS is very helpful or helpful for improving student outcomes.” (See Table 1.) What the Department neglects to mention is that the Spring 2011 survey shows that only 62 percent of principals who responded found ARIS to be very helpful or helpful for improving student outcomes. This is a decrease of 19 percent from a peak of 81 percent in the spring of 2009.<sup>4</sup>

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<sup>3</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 13.

<sup>4</sup> New York City Department of Education, “*ARIS: Key Metrics*,” dated December 12, 2011.

**Table 1**  
Results of Principal Satisfaction Survey



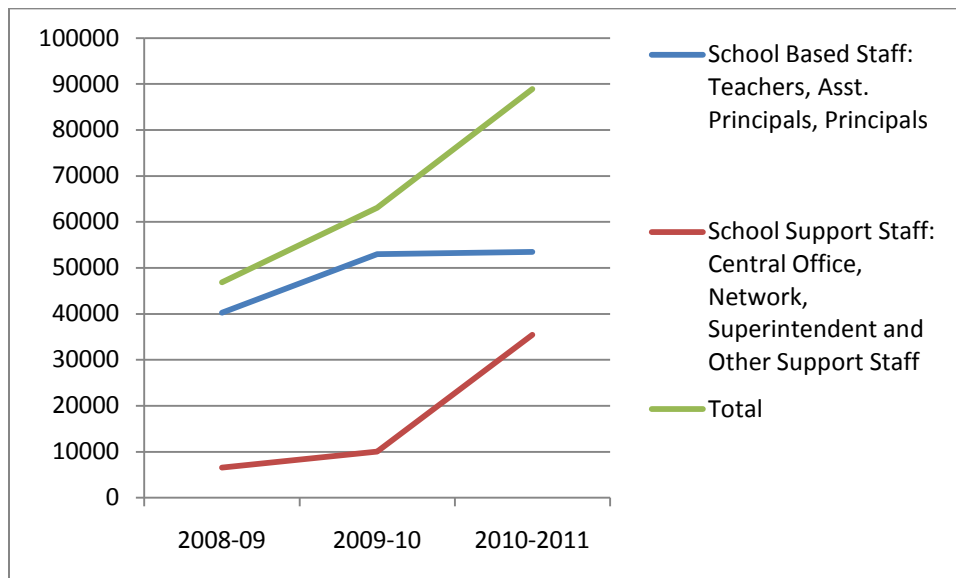
- The Department also states in its response that “The total number of Department staff using ARIS has increased from 46,853 when ARIS was introduced in 2008 to 88,914 in the 2010-2011 school year, equating to a 90% increase in the number of staff using ARIS since its implementation.” (See Table 2.<sup>5</sup>) What the Department neglects to mention is that the ARIS usage reports provided by the Department portray a less rosy picture. When one breaks down the ARIS 2008-2011 Annual Number of Users data into school-based staff (teachers, assistant principals, and principals) and school support staff (central office, network, superintendent and other support staff), school-based staff usage was 40,280 in 2008, 53,008 in 2009-10, and 53,470 in 2010-11—an increase of 31 percent between 2008 (the year ARIS was implemented) and 2009-10, but less than 1 percent between 2009-10 and 2010-11. Based on this data, it appears that, as of last year, approximately up to 42 percent of school-based staff did not access ARIS and ARIS use has reached a plateau. The majority of growth in ARIS use cited by the Department has been in support staff.<sup>6</sup> Further, the 2010-2011 ARIS monthly usage report for school staff appears to indicate that in the peak month of use, November, where Parent-Teacher conferences occur, and Acuity, ELL Assessments, Progress Reports, and School Survey

<sup>5</sup> New York City Department of Education “*ARIS 2008-2011 Annual Number of Users.*”

<sup>6</sup> Based on population data as of April 28, 2011, provided by the Department of Education.

data are made available, only 15,499 of school-based educators or approximately 17 percent of school-based educators used ARIS.

**Table 2**  
**Department Staff Using ARIS**



Additionally, the Department objected to the presentation of our survey data and stated that “The Department further hopes that the final report will cite the Comptroller’s survey data more fairly, rather than grouping “somewhat agree” responses with negative responses.” Specifically, the Department asserted that “The methodology the Comptroller used to analyze the results of its survey—e.g., grouping positive and negative responses—presents survey results unfairly and generates misleading conclusions.” After meeting with Department officials at their invitation, we better understand their objections. Accordingly, we revised the audit report to present the survey data in a manner that is consistent with key research reports provided by the Department. However, it is important to note that these revisions do not meaningfully alter the key findings of our audit report.

The Department also objected to the language in our survey. We would note:

- The key research reports that the Department cited and relied upon in its response appear to use similar language to that of our survey. For example, for our question about the accuracy of ARIS, our most positive answer is “always accurate.” We find that the meaning of the Department’s most positive answer—“error-free—” is consistent with “always accurate.”<sup>7</sup>

<sup>7</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 4.



- We submitted the survey questionnaires to the Department before we sent the surveys to the principals and educators. However, the Department did not have any objections to the questionnaires at that time.
- As a means of ensuring transparency, we attached the survey questionnaires and responses as appendices to this report.

The Department also raised concerns regarding the number of survey responses we received stating, “In any event, only 379 (1.49%) of the 25,515 educators surveyed responded to the Comptroller’s survey—a tiny fraction (0.43%) of the 88,914 Department staff who used ARIS in the 2010-2011 school year.” Concerning this issue, as anyone who is familiar with sampling from a statistical perspective understands, beyond a certain population size as the population increases, the recommended sample size as a percentage decreases in relation to the total population. For example, where the recommended sample size for a population of 4,500 is 301 (6.05 percent) of the population, the recommended sample size for a population of 500,000 would be 322 (.06 percent) of the population (95 percent confidence level plus or minus 5 percent precision).<sup>8</sup> Therefore, the concerns of the Department are misguided.

We further assert that the results of key research provided by the Department generally support the survey’s findings. For example:

- **ARIS Connect:** According to the American Institutes for Research study: “More than 40% of survey respondents who used ARIS noted lack of familiarity with Connect.”<sup>9</sup> According to our survey of teachers, approximately 34 percent were not familiar with the Connect feature.
- **Up-to-Date:** According to the Education Sector Report: “As for ARIS data, teachers say that it can become quickly outdated, preventing them from acting in time to help students who are struggling.”<sup>10</sup> According to the results of our survey (“Is your students’ information up-to-date in ARIS”), only 32.3 percent of teachers stated that it was always up-to-date.
- **Training:** According to the Research Alliance Study, 91 percent of teachers say they need more training to overcome barriers to using ARIS.<sup>11</sup> This is consistent with the response to our survey question “Which of the following best describes your training?” of

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<sup>8</sup> Herbert Arkin, “*Handbook of Sampling for Auditing and Accounting*.”

<sup>9</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 7.

<sup>10</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 7.

<sup>11</sup> *The Research Alliance for NYC Schools*, page 2.

which only 40.68 percent of teachers answered that it was “sufficient and I am comfortable using the system.”

- **Helpful:** According to the Department’s November 2010 Principal Satisfaction Survey, for the periods April 2009 and November 2009, respectively, 81 and 74 percent of respondents agreed that ARIS was helpful for improving student outcomes in their schools.<sup>12</sup> The respective results for the period April 2010 and November 2010 were 77 percent and 74 percent. According to the result of our survey question to principals (“In the long run, the use of ARIS will assist significantly in enhancing student performance”), approximately 72.7 percent agreed.

We note that the Department’s agreement with six of our recommendations (it disagreed with three recommendations) points to the Department’s acknowledgment that deficiencies in the system need to be corrected.

Finally, throughout its response, the Department selectively used data and quotations—leaving out key facts that readers need to have to understand and evaluate their response. For example, the Department uses data from the November 2010 Principal Satisfaction Survey, which shows an over 70 percent positive response to whether ARIS is very helpful or helpful. However, more recent data from the spring of 2011 was available and shows only a 62 percent positive response rate—representing a 12 percent decline from November 2010. In the same paragraph, the Department uses a glowing quote from an Education Sector Report.<sup>13</sup> However, tellingly it excludes the caveat that the author made to this statement. Specifically, in the next paragraph, the author continues:

“But ARIS has been fraught with problems, as well. Developers have confronted a tangle of antiquated systems that can’t talk to each other—information silos that prevented one person from getting a complete picture of a student. And they continue to struggle with making the data timely and accurate and giving educators the time and training they need to use it well.”

The author offers a balanced picture of the pros and cons of “putting data into practice,” not the ringing endorsement that the Department seems to imply. The Department should be careful that it does not misuse data and research because it ultimately undermines the strategy that it is attempting to put forward.

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<sup>12</sup> New York City Department of Education, *Principal Satisfaction Survey* dated November 2010.

<sup>13</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 2.

## INTRODUCTION

### **Background**

The New York City Department of Education (Department) provides primary and secondary education for more than one million students from pre-kindergarten through grade 12. The Department employs approximately 90,000 teachers who prepare students to meet specific standards in reading, writing, and mathematics and prepare high school students to pass State Regents exams and meet graduation requirements.

The Department's "Achievement Reporting and Innovation System" (ARIS) was developed under the Department's "Children First Intensive" professional development. In 2007, the City awarded an \$81 million contract to the International Business Machines, Corp. (IBM) to develop and implement the ARIS system. ARIS would allow for data analysis, collaboration tools permitting knowledge sharing across City schools, tracking student and school performance, and enabling data integration and data quality assurance. The system was placed in service in October 2008.

ARIS is a system that was intended to enable New York City educators to improve student performance by viewing student data, exploring instructional resources, sharing effective practices, and collaborating with colleagues within schools and City-wide.<sup>14</sup> Two important aspects of ARIS are the ARIS Parent Link (APL), which enables parents to obtain information about their child's attendance and school progress, and ARIS Connect, which enables teachers and supervisors to take part in discussions and blogs, find other educators facing similar challenges, create collaborative communities to solve problems together, and support parent-teacher partnership to strengthen student learning. ARIS is a depository of data from other Department "source systems" (i.e., Automate the Schools, High School Scheduling and Transcripts/Student Transcript and Academic Recording System, Galaxy).

Our audit focused on the utilization of ARIS by educators (principals and teachers) rather than parents.

### **Objective**

The objective of the audit was to determine if ARIS has positively affected student performance, is user-friendly, and met its intended goals.

### **Scope and Methodology Statement**

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis

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<sup>14</sup> According to the Department, "educators" are composed of nine categories of users.

for our findings and conclusions based on our audit objectives. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The scope of this audit covers the period from October 2008 to July 2011. Please refer to the Detailed Scope and Methodology at the end of this report for the specific procedures and tests that were conducted.

### **Discussion of Audit Results**

The matters covered in this report were discussed with Department officials during and at the conclusion of this audit. A preliminary draft report was sent to Department officials on November 16, 2011, and discussed at an exit conference on December 5, 2011. On December 22, 2011, we submitted a draft report to Department officials with a request for comments. We received written comments from the Department on January 9, 2012.

In its response, the Department contended that “First, the Comptroller misunderstands ARIS’s goals and the Department’s measurements for gauging whether ARIS has attained those goals. Second, the Comptroller misunderstands the way that ARIS data is compiled and ARIS’s role in providing student information to educators and parents.”

We assert that there is no misunderstanding about the goals of the ARIS system. As described in the ARIS vision statement and stated in a 2010 study contracted by the Department (i.e., the American Institutes for Research), the goals of ARIS were to “Understand students’ strengths and areas for improvement; develop, Discover, and organize instructional resources and gain access to professional development opportunities; Document, monitor, and discuss teacher practices and student progress; Share effective practices.”<sup>15</sup> Nevertheless, the Department provided measurements for only one of the goals (i.e., understanding student’s strengths and areas for improvement) eight months after the information was requested.<sup>16</sup>

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<sup>15</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 1.

<sup>16</sup> Even for this one goal, the metric (i.e., the percentage of principals who responded that they found ARIS “helpful” or “very helpful” in the Principal Satisfaction Survey (survey)) does not appear to be truly applicable. It is unclear how measuring the percentage of principals who find ARIS “helpful” or “very helpful” for improving student outcomes pertains directly to whether or not teachers and parents understand a student’s strengths and weaknesses. In the survey, the Department asks the same questions of principals regarding progress reports and 65 percent responded “helpful” or “very helpful.” However, progress reports have no individual student level data. As this question also had a 65 percent positive rate, is the Department asserting that a progress report helps teachers and parents understand a student’s strengths and weaknesses? Further, the views of parents or teachers are not measured.

The Department states that “To measure ARIS's impact on increasing student performance, the Department looks at three questions: Does ARIS help educators and parents understand students' strengths and weaknesses? . . . Are educators and parents using ARIS? . . . Is student performance increasing?” However, we question if the Department is asking the right questions as the key metrics provided are unrelated to ARIS's stated goals, and the key data points provided do not support that ARIS has had an impact on increasing student performance. In fact, a “key research report” relied on by the Department quotes a Department official as saying, “. . . although teachers are getting steadily better at analyzing data, data analysis ‘is not yet leading to fundamental change in teacher practice or decision making.’”<sup>17</sup>

Moreover, contrary to the Department's contention that the data shows that both parents and educators are embracing ARIS, we believe the data shows signs of potential problems ahead. Specifically:

- The Department states in its response that “Over 70% of principals who responded to the Department's November 2010 Principal Satisfaction Survey . . . indicated that ARIS is very helpful or helpful for improving student outcomes.” What the Department neglects to mention is that the Spring 2011 survey shows that only 62 percent of principals who responded found ARIS to be very helpful or helpful for improving student outcomes. This is a decrease of 19 percent from a peak of 81 percent in the spring of 2009.
- The Department also states in its response that “The total number of Department staff using ARIS has increased from 46,853 when ARIS was introduced in 2008 to 88,914 in the 2010-2011 school year, equating to a 90% increase in the number of staff using ARIS since its implementation.” What the Department neglects to mention is that the ARIS usage reports provided by the Department portray a less rosy picture. When one breaks down the ARIS 2008-2011 Annual Number of Users data into school-based staff (teachers, assistant principals, and principals) and school support staff (central office, network, superintendent, and other support staff), school-based staff usage was 40,280 in 2008, 53,008 in 2009-10, and 53,470 in 2010-11—an increase of 31 percent between 2008 (the year ARIS was implemented) and 2009-10, but less than 1 percent between 2009-10 and 2010-11. Based on this data, it appears that, as of last year, approximately up to 42 percent of school-based staff did not access ARIS and ARIS use has reached a plateau. The majority of growth in ARIS use cited by the Department has been in support staff. Further, the ARIS 2010-2011 ARIS monthly usage report for school staff appears to indicate that in the peak month of use, November, where Parent-Teacher conferences occur, and Acuity, ELL Assessments, Progress Reports and School Survey data are made available, only 15,499 of school-based educators or approximately 17 percent of school based educators used ARIS.

Additionally, the Department objected to the presentation of our survey data and stated that “The Department further hopes that the final report will cite the Comptroller's survey data more fairly, rather than grouping “somewhat agree” responses with negative responses.” Specifically, the Department asserted that “The methodology the Comptroller used to analyze the

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<sup>17</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 13.

results of its survey—e.g., grouping positive and negative responses—presents survey results unfairly and generates misleading conclusions.” After meeting with Department officials at their invitation, we better understand their objections. Accordingly, we revised the audit report to present the survey data in a manner that is consistent with key research reports provided by the Department. However, it is important to note that these revisions do not meaningfully alter the key findings of our audit report.

The Department also objected to the language in our survey. We would note:

- The key research reports that the Department cited and relied upon in its response appear to use similar language to that of our survey. For example, for our question about the accuracy of ARIS, our most positive answer is “always accurate.” We find that the meaning of the Department’s most positive answer—“error-free—” is consistent with “always accurate.”<sup>18</sup>
- We submitted the survey questionnaires to the Department before we sent the surveys to the principals and educators. However, the Department did not have any objections to the questionnaires at that time.
- As a means of ensuring transparency, we attached the survey questionnaires and responses as appendices to this report.

The Department also raised concerns regarding the number of survey responses we received stating, “In any event, only 379 (1.49%) of the 25,515 educators surveyed responded to the Comptroller’s survey—a tiny fraction (0.43%) of the 88,914 Department staff who used ARIS in the 2010-2011 school year.” Concerning this issue, as anyone who is familiar with sampling from a statistical perspective understands, beyond a certain population size as the population increases, the recommended sample size as a percentage decreases in relation to the total population. For example, where the recommended sample size for a population of 4,500 is 301 (6.05 percent) of the population, the recommended sample size for a population of 500,000 would be 322 (.06 percent) of the population (95 percent confidence level plus or minus 5 percent precision).<sup>19</sup> Therefore, the concerns of the Department are misguided.

We further assert that the results of key research provided by the Department generally support the survey’s findings. For example:

- **ARIS Connect:** According to the American Institutes for Research study: “More than 40% of survey respondents who used ARIS noted lack of familiarity with Connect.”<sup>20</sup>

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<sup>18</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 4.

<sup>19</sup> Herbert Arkin, “*Handbook of Sampling for Auditing and Accounting*.”

<sup>20</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 7.

According to our survey of teachers, approximately 34 percent were not familiar with the Connect feature.

- **Up-to-date:** According to the Education Sector Report : “As for ARIS data, teachers say that it can become quickly outdated, preventing them from acting in time to help students who are struggling.”<sup>21</sup> According to the results of our survey (“Is your students’ information up-to-date in ARIS”), only 32.3 percent of teachers stated that it was always up-to-date.
- **Training:** According to the Research Alliance Study , 91 percent of teachers say they need more training to overcome barriers to using ARIS. <sup>22</sup> This is consistent with the response to our survey question “Which of the following best describes your training?” of which only 40.68 percent of teachers answered that it was “sufficient and I am comfortable using the system.”
- **Helpful:** According to the Department’s November 2010 Principal Satisfaction Survey, for the periods April 2009 and November 2009, respectively, 81 and 74 percent of respondents agreed that ARIS was helpful for improving student outcomes in their schools. The respective results for the period April 2010 and November 2010 were 77 percent and 74 percent. According to the result of our survey question to principals (“In the long run, the use of ARIS will assist significantly in enhancing student performance”), approximately 72.7 percent agreed.

Finally, throughout its response, the Department selectively used data and quotations—leaving out key facts that readers need to have to understand and evaluate their response. For example, the Department uses data from the November 2010 Principal Satisfaction Survey, which shows an over 70 percent positive response to whether ARIS is very helpful or helpful. However, more recent data from the spring of 2011 was available and shows only a 62 percent positive response rate—representing a 12 percent decline from November 2010. In the same paragraph, the Department uses a glowing quote from an Education Sector Report.<sup>23</sup> However, tellingly it excludes the caveat that the author made to this statement. Specifically, in the next paragraph, the author continues:

“But ARIS has been fraught with problems, as well. Developers have confronted a tangle of antiquated systems that can’t talk to each other—information silos that prevented one person from getting a complete picture of a student. And they continue to struggle with making the data timely and accurate and giving educators the time and training they need to use it well.”

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<sup>21</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 7.

<sup>22</sup> *The Research Alliance Report*, page 2.

<sup>23</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 2.

The author offers a balanced picture of the pros and cons of “putting data into practice,” not the ringing endorsement that the Department seems to imply. The Department should be careful that it does not misuse data and research as it undermines the strategy that it is attempting to put forward.

The Department’s full response is included as an addendum to this report.



## FINDINGS AND RECOMMENDATIONS

Despite spending more than \$80 million on system design and development, the Department lacks effective measurements for gauging whether ARIS is an effective tool for enhancing and improving student performance. In addition, educators are not using ARIS to the extent for which it was intended. According to our survey of teachers and principals, many educators are not using the ARIS system to collaborate with other teachers as was intended, are using alternative computer systems to obtain information in place of, or in conjunction with, ARIS, and are not utilizing the system to its fullest extent. Therefore, we believe that the Department is not completely attaining all the benefits for which the ARIS system was intended.

The Department has adequate internal controls to preclude unauthorized access to ARIS. In addition, our survey found that over 50 percent of responding educators found the ARIS layout “very easy” or “somewhat easy” to work with and 39 percent found ARIS very easy to use. More than 70 percent of respondents either strongly agreed or somewhat agreed that, in the long run, the use of ARIS will enhance student performance.

These matters are discussed in detail below.

### **ARIS Goals Not Fully Attained**

#### **Lack of Effective Measurements**

By developing ARIS, the Department expected to be able to instill an “innovative culture of data-driven, individualized instruction and learning by students and adults” by “tracking student and school performance and improvement.”<sup>24</sup> The Department has stated that ARIS is “the first of its kind innovation system that applies assessment, analytics and reporting tools with goals of improving student outcomes.” Despite these system goals, Department officials were unable to provide us with written information for measuring the success of ARIS as a tool for improving student performance and outcomes.

#### **Recommendation**

1. The Department should formulate measurements to assess whether ARIS is attaining its goal to improve and enhance student performance.

***Department Response:*** “. . . the Department already has measurements to assess whether ARIS is improving and enhancing student performance. To measure ARIS’s impact on increasing student performance, the Department looks at three questions: whether ARIS helps educators and parents understand students’ strength and weaknesses; whether educators and parents are using ARIS; and whether student performance is increasing. The Department researches these questions extensively by

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<sup>24</sup> According to §2.1 of the Request for Proposals #1C585, included in the Department’s contract with IBM, dated January 7, 2007.

looking to, for example, the results of Principal Surveys conducted annually, the results of the annual New York City School Survey, observations made during Quality Reviews, and internal analyses of ARIS usage and student performance. The Department also relies on information provided by external studies, such as those conducted by Education Sector, the American Institutes for Research, and the Research Alliance for New York City Schools. Although the Department shared most of this research with the Comptroller during the audit, the Reports cites none of it.”

**Auditor Comment:** The Department failed to develop a system of metrics before it launched the ARIS system. Further, the key metrics provided are unrelated to ARIS’s stated goals, and the key data points provided do not provide any direct evidence that ARIS has had an impact on improving student performance. In fact, one of the external studies relied on by the Department quotes a Department official as saying, “. . . although teachers are getting steadily better at analyzing data, data analysis ‘is not yet leading to fundamental change in teacher practice or decision making.’”<sup>25</sup> Department officials further acknowledged in a July 7, 2011, e-mail that “you can never directly tie changes in student achievement to any one program or initiative.”

Accordingly, we disagree with the Department’s contention that it already has measurements by which to assess whether ARIS is improving and enhancing student performance. Instead of formulating its own set of measurements to assess the system’s effectiveness, the Department cobbled together a disparate group of information from various sources (i.e., the results of principal surveys, quality review observations, internal analyses of ARIS usage, and external studies). While these sources may provide some useful information about ARIS, they do not represent authentic written measurements that are geared specifically to ascertaining whether ARIS is fulfilling its goals.

### Use of Alternative Systems

One hundred and ninety-four (64 percent) of the 304 teachers and principals who responded to our survey reported that they used other systems in place of, or in conjunction with, ARIS. Fifty-two (27 percent) of the 194 educators responded that they rarely or never use ARIS. Our review indicates that existing systems (i.e., DataCation, Impact, and Daedalus) provide student data that is similar to ARIS regarding attendance, grades, behavior trends, and demographics. (In recording attendance figures, the alternate systems provide more comprehensive data because attendance is reported for every daily class lesson in contrast to ARIS, which only reports attendance data twice daily.)

In addition, some of the comments we received from the educators were illustrative of the shortcomings of ARIS. For example, one of the educators said, “*IMPACT is faster and updates more frequently, and includes a mastery –based progress report feature and calendar and planning tools.*” In another example, the educator stated, “*Our school is utilizing Datacation*

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<sup>25</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 13.

*which pulls data from the DOE and teachers can add in real time everyday data on the students. It is not just looking at the past – it is more authentic and in my opinion more useful. ARIS tried too hard to become similar to a social network site and failed.”* Finally, one of the educators commented that the reason he uses Datacation is because it provides a communication link for parents, teachers, and counselors on reports issued and enables the users to share information. Parents also receive instant attendance feedback on a daily basis, which helps promote good attendance.

Clearly, the use of alternative systems by educators, which represents an additional cost to school budgets, may indicate that the ARIS system may be falling short of fulfilling its goals. Accordingly, given that a considerable number of educators are using alternative systems, the Department should examine the feasibility of incorporating in ARIS certain features in alternative systems that educators find beneficial.<sup>26</sup>

The development of a major computer system such as ARIS is an expensive and time-consuming undertaking. Because other systems are still being used, the benefits of developing ARIS may have been overstated and may not be cost-effective.

**Department Response:** “The Department disagrees with the Report’s suggestion that ‘[the use of alternative systems by educators . . . may indicate that the ARIS system may be falling short of its goals’ (Report, p. 6) . . . ARIS was intended to provide educators and parents with all of the Department’s centrally collected information about students’ strengths and weaknesses, and does so successfully.”

**Auditor Comment:** In a 2007 press release announcing the selection of IBM as the vendor for ARIS, the Department’s former Chancellor stated “ARIS will give the teachers, principals, and the parents of New York City the critical tools they need to really understand what students know—and don’t know. Armed with this information, our educators will be able to tailor instruction to their students’ needs and parents will be able to get involved in their children’s education like never before.” However, as stated in the Education Sector Report which the Department chides us in its response for not making use of, “From the beginning, ARIS has fallen short of the grandiose promises made about it—that it would transform instruction, that it would provide *all* of the information teachers need, that it would allow parents to get involved.”<sup>27</sup>

According to the Department’s external research, the most critical tools to improving day-to-day student performance are based on micro-level data which, according to Department officials, ARIS is currently unable to provide.<sup>28</sup> The lack of such detailed information and critical tools has led, in part, to the use of alternative systems. The

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<sup>26</sup> A similar conclusion was recommended by the New York City Office of the Public Advocate in its 2009 report entitled “ARIS on the Side of Caution.” That report recommended that the Department conduct a review of all accountability systems used in City-wide public schools to evaluate the strengths and weaknesses of alternative systems so that the Department could incorporate successful elements into ARIS.

<sup>27</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 6.

<sup>28</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 7.

Department's current position that it was never its intent to provide such information is baffling. Not only does it contradict its own prior statements and external studies, but it begs the question of how the Department intended to use ARIS to improve classroom level decision-making without including the data that the Department's own external studies say is critical to making those decisions.<sup>29</sup>

### **Recommendation**

2. The Department should examine the feasibility of incorporating in ARIS certain features in alternative systems that educators find beneficial.

**Department Response:** "The Department agrees with the Comptroller's recommendation and already has incorporated in ARIS certain features in alternative systems that educators find beneficial."

### **Inefficient Use of ARIS Connect**

ARIS contains an important feature, ARIS Connect, whose intent is to enable educators to discuss and share classroom strategies and resources with colleagues within a school and citywide. ARIS Connect was also intended to permit educators to review lesson plans, find curricular materials, and document work. However, 48 (20 percent) of 237 teachers and 15 (27 percent) of 55 principals who responded to our survey reported that the ARIS Connect feature did not help them find lesson plans and curricular materials. Moreover, 91 (31 percent) of 292 respondents noted that they were not familiar with the ARIS Connect feature. In that respect as previously noted, 46 percent of the overall respondents believed that more training was needed in order for ARIS to be effective. Based on these survey results, we conclude that the ARIS Connect feature is not being efficiently utilized.

### **Recommendations**

The Department should:

3. Ascertain whether ARIS Connect is being efficiently utilized by educators.

**Department Response:** "As an initial matter, the Department disagrees with the categorical finding that the 'ARIS Connect feature is not being efficiently utilized' . . . Nevertheless, the Department agrees with the recommendation and . . . already has reviewed external research on educators' use of ARIS Connect . . ."

**Auditor Comment:** The Connect feature was supposed to be a unique feature of the ARIS system. However, although more than three years have elapsed since the inception of ARIS, less than 50 percent of educators who responded to our survey are taking advantage of its capabilities. Further, the Department's own key research study

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<sup>29</sup> Bill Tucker, "Putting Data into Practice," *Education Sector Reports*."

found that that “More than 40% of survey respondents who used ARIS noted lack of familiarity with Connect.”<sup>30</sup> As this population excludes those respondents who do not use ARIS, our position appears to be supported by the Department’s own research. Further, this same study stated that while “most teachers were interested in finding information, materials, and videos about effective practices, they did not use ARIS for that purpose.”<sup>31</sup>

4. Strengthen outreach efforts to familiarize educators with the use of ARIS Connect.

**Department Response:** “The Department agrees and will strengthen outreach efforts to familiarize educators with ARIS Connect.”

**Auditor Comment:** We appreciate the Department’s agreement to strengthen its outreach efforts to familiarize educators with the use of ARIS Connect. We would like to point out, however, that the Department’s concurrence with our recommendation appears to refute the Department’s belief that the ARIS Connect feature is being efficiently utilized, as stated in the response to our recommendation no. 3.

### **Problems with System Use**

The Department maintains Usage Reports that indicate the numbers of educators and parents who access their ARIS accounts and the specific types of information being utilized. However, our review of ARIS Usage Reports (as of April 28, 2011, and May 16, 2011) found that the Department may not be able to depend on the Reports as reliable indicators because of discrepancies in the data.

For example, the ARIS Usage Report for school year 2010 listed 1,843 schools; the reports for 260 (14 percent) of 1,843 schools lacked information about “teachers with access to ARIS.” Similarly, 236 (13 percent) schools lacked data about the number of ARIS Parent Link accounts accessed and 230 schools (12 percent) lacked student enrollment data. Discrepancies in report data hinders the Department from effectively tracking ARIS system activity and determining whether ARIS is used optimally to achieve its intended purpose. For example, the ARIS Parent Link usage report for the Bronx shows a high use of the Parent Link (i.e., 79 percent). However, this percentage may be misleading because for 60 schools there was no data available.

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<sup>30</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 7.

<sup>31</sup> *American Institutes for Research*, “Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools: Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS),” page 6.

In addition, the ARIS Usage Tracking Report as of April 28, 2011, had 1,843 schools whereas the ARIS Usage Data by School Report as of June 30, 2011, had 1,571 schools, a difference of over 272 schools within a two-month period. Furthermore, the ARIS Usage by School report had inconsistent dates for the data fields for “number of educators with access to ARIS” (which was as of July 2, 2011) and the “number of educators that actually accessed ARIS” (which was from April 1, 2011, through June 30, 2011). As a result of inconsistent time periods, we were unable to accurately determine the percentage of educators who actually accessed ARIS for the three-month period. We also did not test the accuracy or reliability of the Department’s reported data, as noted in the Scope section of this report.

Data discrepancies can also hamper efforts in making improvements to the ARIS system. In addition, the Department would be unable to effectively compare trends between ARIS usage and student performance if data in these reports is composed of inconsistent and incomplete data.

ARIS educators may not be using the system to its fullest extent. Our review of the ARIS usage reports, which we used to calculate the number of ARIS sessions per teacher per day at 1,571 citywide schools, showed that between April 1, 2011, and June 30, 2011 (a 64 work-day period), 36,308 school staff accessed ARIS—less than 50 percent of the teaching staff.

**Auditor Comment:** We also calculated that for the 36,308 teachers who accessed ARIS, the overall average frequency of use per teacher was approximately nine times during the three-month period. Minimal use of ARIS by educators may point to a lack of oversight and follow-up of ARIS users by the Department.

### **Recommendations**

The Department should:

5. Ensure that Usage Reports are complete and accurate.

**Department Response:** “. . . the usage reports that Department staff regularly use are not discrepant and are not missing information. Indeed, examples of what the Comptroller claims are discrepancies and omissions in the data were accounted for in the responses the Department provided during the audit . . .”

**Auditor Comment:** We disagree. We provided the Department with a list of schools from ARIS usage reports that lacked usage data and asked for an explanation. In a written response during the audit, the Department accounted for the discrepancies by stating that schools without any usage data were either closed or recently added and not yet opened schools. The Department did not provide any additional information to support its statement. We, therefore, attempted to independently verify the Department’s written explanation. An “unofficial” review of schools that the Department stated were either closed or recently added and not yet opened found that most of the schools were neither recently opened or closed. In November, the Department was informed that its explanation did not adequately account for the discrepancies. However, the Department continued to repeatedly provide the same explanation and did not provide any additional information. (We did not receive any

“official” list of closed or newly-opened schools from the Department. Accordingly, we could not accurately ascertain which of the schools with missing data were actually open or closed. ) We, therefore, reiterate that the Department should ensure that Usage Reports are complete and accurate.

6. Monitor the frequency and usage of ARIS by system users.

**Department Response:** “The Department agrees and will continue its current practice of monitoring the frequency and usage of ARIS by system users.”

**Auditor Comment:** We should note that the Department has attempted to portray usage frequency figures from the survey in a positive light. However, this is disingenuous as the Department does not appear to have a yardstick by which to assess usage and frequency. The Education Sector report, which the Department asks us to rely upon, states in discussing educator and parent usage, “Officials with the Education Department caution that they lack valid comparisons to gauge whether these numbers are high or low.”<sup>32</sup>

### **User Satisfaction**

Only 95 (32.7 percent) of the 291 teachers and principals who responded to our survey reported that the student information in ARIS is always up-to-date (57 did not respond to this question). One hundred and seventy four (58.6 percent) of 297 respondents reported that they would like to see enhancements to the system. In addition, 248 (83 percent) of 300 respondents do not use ARIS very often to collaborate with other educators to help resolve student issues (48 did not respond to this question).

Additionally, 132 (46 percent) of 290 respondents felt they needed additional training in the use of ARIS (58 did not respond to this question). Two hundred and three (67 percent) of 305 respondents used ARIS less than once a week (43 did not respond to this question). Finally, 194 (64 percent) of 304 respondents used other computer systems in conjunction with, or in place of, ARIS.

On the positive side, over 50 percent of responding educators found the ARIS layout “very easy” or “somewhat easy” to work with and 39 percent found ARIS very easy to use.

### **Recommendations**

The Department should:

7. Ensure that information in ARIS is always up-to-date.

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<sup>32</sup> Bill Tucker, “Putting Data into Practice,” *Education Sector Reports*, page 12.

**Department Response:** “. . . the Comptroller fails to recognize that ARIS data is compiled directly from Department source systems and does not itself control data accuracy or freshness. Student information in ARIS can become outdated when school staff members fail to update their students’ information in Department source systems. The Department will continue its current practices to ensure school staff are maintaining accurate student data.”

**Auditor Comment:** As we explained in our audit, “ARIS is a depository of data from other Department “source systems” (i.e., Automate the Schools, High School Scheduling and Transcripts/Student Transcript and Academic Recording System, Galaxy).” Consequently, as the data in ARIS is compiled directly from Department source systems, the Department is responsible for its accuracy, integrity, and timeliness. Therefore, the Department must ensure that information in ARIS is always up-to-date.

8. Conduct periodic surveys of ARIS users to assist in identifying and making enhancements to the system.

**Department Response:** “The Department agrees and will continue its current practice of conducting and reviewing periodic surveys of ARIS users. . .”

9. Provide additional training to users of the ARIS system.

**Department Response:** “The Department agrees and will continue to provide additional training to users of the ARIS system.”



## DETAILED SCOPE AND METHODOLOGY

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The scope of this audit covers the period from October 2008 to July 2011.

To understand the requirements and internal control policies and procedures relevant to planning our audit, we obtained and reviewed:

- Information about ARIS, including publications and independent surveys from various websites.
- The Department's contract with IBM (which included Request for Proposal #1C585) dated January 2, 2007, for the ARIS system.
- ARIS manual, updates to the system, and a list of reports that the system can generate.
- Comptroller Internal Control Accountability Directive #18, *"Guidelines for the Management, Protection and Control of Agency Information and Information Processing Systems."*
- New York City Public Advocate Audit Report *"ARIS on the Side of Caution,"* published August 2009.

To further understand the Department's procedures relating to the operation and capabilities of ARIS, we:

- Conducted walk-throughs with Department personnel involved with the ARIS system and viewed a Department PowerPoint presentation about the ARIS system.
- Conducted walk-throughs of operations pertaining to the Department's methods for evaluating the performance of ARIS.
- Reviewed Department organizational chart and interviewed Department officials, including the Auditor General, ARIS Manager, ARIS Director, Director of Instruction and Data Tools, and the Executive Director of Academic Quality.

- Requested and obtained access to the ARIS website with username and password.

We documented our understanding of operations in memoranda and a flowchart. We asked Department officials to review and confirm the accuracy of our flowchart and memoranda.

To understand the overall objective for the development of ARIS and to understand the method by which the objective would be accomplished, we obtained and reviewed the Department's contract with IBM dated January 2, 2007, which included Request for Proposal #1C585.

To assess whether ARIS has positively affected student performance and is meeting its intended goals, we asked the Department to provide us with its methodology for assessing the success of ARIS as a tool for enhancing student performance and any associated timelines. We requested the overall grade progress reports for all schools for school years 2008 through 2010. In order to verify the number of school staff and parents who had accessed ARIS, we requested and reviewed the Department's reports as of April 28, 2011, and from October 20, 2008, through May 16, 2011. In order to determine the frequency usage of ARIS by educators, we requested and reviewed the Department's report on the number of ARIS sessions from April 1, 2011, to June 30, 2011, for all schools.

To assess the use of ARIS within the school system by educators, we prepared survey questionnaires—one for principals and one for teachers. We first determined the total number of schools and the student population by obtaining from the Department a list of all schools and the student population as of April 28, 2011. We matched this list to the number of schools recorded in the school progress report for school year 2009 that was available on the ARIS website in March 2011. We determined that the number of schools totaled 1,842 and the number of enrolled students totaled 1,007,717. We used these figures to generate a random sample of ARIS users to whom we sent surveys at each of the 32 city school districts. Our audit analysis and results were primarily focused on principals and teachers rather than parents.

For the principal sample, we randomly selected 11 schools for each school district. For the teacher sample, we randomly selected 14 schools for each school district.<sup>33</sup> We conducted our own survey of teachers and principals because the Department had no specific measurements by which to gauge ARIS. We provided a copy of the Survey Questionnaire for Principals and for Teachers to the Department prior to emailing them to the educators. The Department provided us with the email addresses for the distribution of the teacher survey questionnaires. The survey questionnaires were e-mailed to all the principals and teachers at the randomly selected schools. We e-mailed a total of 25,515 surveys to 396 principals and 25,119 educators. We received a total of 337 usable responses (56 from principals and 281 from educators). Table 3 lists the total number of schools and our sample size in each borough.

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<sup>33</sup> For Brooklyn, which had the largest number of school districts, we selected 11 schools per district for the teacher sample. Queens district # 84 had five schools and Brooklyn district #84 had 17 schools, all of which were included in our sample for principals. Only one response was received from the principal survey for Charter schools informing us that ARIS was not used at that school. We did not include it in our analysis of the survey results for principals.

To assess whether ARIS is user-friendly, in addition to our survey questions, we accessed the ARIS website with usernames and passwords provided by the Department. We navigated to various links, including the Connect feature, to determine which resources were available to educators and opened links to discussion blogs to familiarize ourselves with the type of collaborative contributions being posted. We also included questions in our surveys to principals and educators that covered approximately 20 areas relating to ARIS, such as availability, access, information layout, accuracy, reporting capabilities, overall ease of use, overall usage frequency, and the usage of ARIS Connect, a unique feature used for collaborating with other educators. We analyzed and evaluated the survey responses from principals (58 responses) and teachers (321 responses), including their comments that we categorized into three categories—positive, negative, and neutral/suggestions.<sup>34</sup>

**Table 3**  
**Total Number of Schools and Sample Size by Borough**

Borough	District #s	School Population w/o Charter	# of Schools Sampled	# of Principals in Sample	# of Responses Received	Responses with Issues	#of Responses Usable
<b>PRINCIPALS</b>							
MANHATTAN	1, 2, 3, 4, 5, 6, 84	373	77	77	11	1	10
BRONX	7, 8, 9, 10, 11, 12, 84	442	77	77	7	1	6
BROOKLYN	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 32, 84	582	149	149	22		22
QUEENS	24, 25, 26, 27, 28, 29, 30, 84	366	82	82	15		15
STATEN ISLAND	31	79	11	11	3		3
<b>Sub-Total</b>		<b>1,842</b>	<b>396</b>	<b>396</b>	<b>58</b>	<b>2</b>	<b>56</b>
less:	Undeliverable (1)		-20	-20			
less:	email addresses not found (2)		-29	-29			
<b>TOTAL</b>		<b>1,842</b>	<b>347</b>	<b>347</b>	<b>58</b>	<b>2</b>	<b>56</b>

Borough	District #s	School Population w/o Charter	# of Schools Sampled	# of Staff In Sample per ARIS Usage Report	# of Responses Received	Responses with Issues	#of Responses Usable
<b>TEACHERS/STAFF</b>							
MANHATTAN	1, 2, 3, 4, 5, 6	373	97	4,297	58	8	50
BRONX	7, 8, 9, 10, 11, 12	442	86	4,603	35	7	28
BROOKLYN	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 32	582	141	8,114	101	10	91
QUEENS	24, 25, 26, 27, 28, 29, 30	366	102	7,232	95	13	82
STATEN ISLAND	31	79	14	873	22	0	22
<b>Sub-Total</b>		<b>1,842</b>	<b>440</b>	<b>25,119</b>	<b>311</b>	<b>38</b>	<b>273</b>
less:	Undeliverable (1)		36	1,236			
Plus:	Responses from Unknown Borough				6	2	4
	Responses from Multiple Boroughs				4	0	4
<b>TOTAL</b>		<b>1,842</b>	<b>404</b>	<b>23,883</b>	<b>321</b>	<b>40</b>	<b>281</b>

(1) Undeliverable - Survey Questionnaires were emailed and returned "undeliverable."	<b>379</b>	<b>42</b>	<b>337</b>
(2) Email Addresses Not Found - Could not find email addresses on DOE website.			

<sup>34</sup> Some respondents did not answer all questions, and some respondents had multiple comments that were either positive and/or negative and/or neutral/suggestions.

Two principal responses and 40 teacher responses were unusable for evaluation as the respondents were not using ARIS or the survey questionnaire was either returned blank or not attached to the email. Therefore, our analysis of the survey questionnaires was based on 56 principal responses and 281 teacher responses.<sup>35</sup> (Summaries of the survey response analyses are attached as Appendices I, II, and III to this report for principals, teachers, and one which combines responses from both principals and teachers, respectively.)<sup>36</sup>

We compared other existing computer systems used by educators to determine if they provided the same or similar features that ARIS was designed to provide. We evaluated other system features with those of ARIS and compared the costs of other systems to those of ARIS. We also reviewed survey responses regarding the use of other systems in place of, or in conjunction with, ARIS by educators and principals.

We note that the data provided by the Department for conducting our tests was not verified for accuracy because we had no means by which to do so. Therefore, the audit results in the body of the report are based on all data provided by the Department and on our independent survey results on ARIS usage by educators.

We conducted additional analyses of information obtained at the exit conference and as part of the Department's draft report response.

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<sup>35</sup> Twenty-five teachers wrote their comments in their email instead of the survey questionnaire.

<sup>36</sup> Appendix III includes responses to only those questions that were same for both surveys.

# Appendix I

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## Summary of Responses Received for Principal ARIS Surveys

58 Responses

Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses
1	How often do you use ARIS?	A	Daily	6	10.91%
		B	At least once a week	17	30.91%
		C	A few times a month	16	29.09%
		D	Rarely	14	25.45%
		E	Never	2	3.64%
		Total		55	
2	Did you attend all training sessions offered you?	Yes	Yes	29	52.73%
		No	No	26	47.27%
		Total		55	
3	Which of the following best describes your training?	A	Sufficient and I am comfortable using the system	27	50.00%
		B	Sufficient at the time, but I need more now	21	38.89%
		C	Sufficient at the time, but I have learned what I need to know	3	5.56%
		D	Sufficient and I still need more	3	5.56%
		Total		54	
4	How would you describe ARIS's availability (the ability to access the system?)	A	Often available	50	92.59%
		B	Often unavailable	4	7.41%
		Total		54	
5	How do you feel about the layout of the information displayed in the ARIS screens?	A	The information is displayed in an order format that is very easy to work with	18	32.73%
		B	The information is somewhat easy to work with	26	47.27%
		C	The information displayed is not easy to work with but is manageable	8	14.55%
		D	The information displayed is difficult to work with	3	5.45%
		Total		55	
6	How would you describe ARIS' reporting capabilities?	A	The reporting features always meet my needs	6	11.11%
		B	The reporting features usually meet my needs	31	57.41%
		C	The reporting features seldom meet my needs	15	27.78%
		D	Do not need the reporting capabilities	2	3.70%
		Total		54	
7	How would you rate the accuracy of the data in ARIS?	A	Always accurate	15	27.27%
		B	Somewhat accurate	34	61.82%
		C	Somewhat inaccurate	5	9.09%
		D	Often inaccurate	1	1.82%
		Total		55	
8	Is your student's information up-to-date in ARIS?	A	Always up-to-date	19	34.55%
		B	Sometimes up-to-date	30	54.55%
		C	Rarely up-to-date	6	10.91%
		D	Never up-to-date	0	0.00%
		Total		55	

**Appendix I**  
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Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses
9	How would you rate ARIS's overall ease of use?	A	Very easy to use	19	34.55%
		B	Somewhat easy to use, but I would like to see changes made to it	28	50.91%
		C	Somewhat difficult to use, and I would like to see some changes made to it	6	10.91%
		D	Very difficult to use	2	3.64%
		<b>Total</b>		<b>55</b>	
10	Have you reported ARIS problems to Help Desk within the last 60 days?	Yes	Yes	13	23.64%
		No	No	42	76.36%
		<b>Total</b>		<b>55</b>	
11	If yes (to Question #10), how satisfied are you with the resolution of your reported problem?	A	Very satisfied	4	33.33%
		B	Somewhat satisfied	5	41.67%
		C	Somewhat dissatisfied	2	16.67%
		D	Very dissatisfied	1	8.33%
		<b>Total</b>		<b>12</b>	
12	Are the problems resolved in a timely manner? (Related to Question # 10 and 11)	A	Within 24 hours	4	33.33%
		B	Within 48 hours	2	16.67%
		C	Within a week	4	33.33%
		D	Less than a month	0	0.00%
		E	A month or more	0	0.00%
		F	Never resolved	2	16.67%
		<b>Total</b>		<b>12</b>	
13	Has ARIS assisted you in better planning and targeting instructors who need additional professional development/ coaching based on student performance and/or data?	Yes	Yes	27	49.09%
		No	No	28	50.91%
		<b>Total</b>		<b>55</b>	
14	Is student data in ARIS helpful for setting goals for teachers and students?	Yes	Yes	38	70.37%
		No	No	16	29.63%
		<b>Total</b>		<b>54</b>	
15	How often do you use ARIS to collaborate with other principals, staff and network to help resolve certain student issues?	A	Very often	8	14.55%
		B	Sometimes	17	30.91%
		C	Not very often	10	18.18%
		D	Never	20	36.36%
		<b>Total</b>		<b>55</b>	

**Appendix I**  
Page 3 of 3

Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses
16	The Connect feature in ARIS has helped me find lesson plans and curricular materials to address similar student needs.				
		A	Strongly agree	6	10.91%
		B	Somewhat agree	24	43.64%
		C	Disagree	15	27.27%
		D	Not familiar with Connect	10	18.18%
Total				55	
17	In the long-run, the use of ARIS will assist significantly in enhancing student performance.				
		A	Strongly agree	14	25.45%
		B	Somewhat agree	26	47.27%
		C	Disagree	11	20.00%
		D	Strongly disagree	4	7.27%
Total				55	
18	How easy is it to keep up with updates and/or changes in ARIS?				
		A	Very easy	12	22.64%
		B	Somewhat easy	27	50.94%
		C	Difficult	12	22.64%
		D	Very difficult	2	3.77%
Total				53	
19	Do you use any other system in conjunction with ARIS, or in place of ARIS?				
		Yes	Yes	44	80.00%
		No	No	11	20.00%
Total				55	

**Source:** ARIS Survey Questionnaires sent to NYC public school principals.

## Appendix II

Page 1 of 3

### Summary of Responses Received for Teacher ARIS Surveys

321 Responses received

Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses
1	How often do you use ARIS?	A	Daily	15	6.00%
		B	At least once a week	64	25.60%
		C	A few times a month	103	41.20%
		D	Rarely	59	23.60%
		E	Never	9	3.60%
		Total		250	
2	Did you attend all training sessions offered to you?	Yes	Yes	170	69.39%
		No	No	75	30.61%
		Total		245	
3	Which of the following best describes your training?	A	Sufficient and I am comfortable using the system	96	40.68%
		B	Sufficient at the time, but I need more now	60	25.42%
		C	Sufficient at the time, but I have learned what I need to know	32	13.56%
		D	Sufficient and I still need more	48	20.34%
		Total		236	
4	How would you describe the ability to access ARIS? (On a scale of 0 to 4)	0	Often unavailable	0	0.00%
		1		6	2.63%
		2		27	11.84%
		3		56	24.56%
		4	Often available	139	60.96%
		Total		228	
5	How do you feel about the layout of the information displayed in the ARIS screens?	A	The information displayed is very easy to work with	88	36.21%
		B	The information displayed is somewhat easy to work with	98	40.33%
		C	The information displayed is not easy to work with but is manageable	39	16.05%
		D	The information displayed is difficult to work with	18	7.41%
		Total		243	
6	How would you describe ARIS' reporting capabilities?	A	The reporting features meet my needs	152	64.14%
		B	The reporting features seldom meet my needs	69	29.11%
		C	Do not need the reporting capabilities	16	6.75%
		Total		237	
7	How would you rate the accuracy of the data in ARIS?	A	Always accurate	96	40.00%
		B	Somewhat accurate	127	52.92%
		C	Somewhat inaccurate	11	4.58%
		D	Often inaccurate	6	2.50%
		Total		240	
8	Is your student's information up-to-date in ARIS?	A	Always up-to-date	76	32.20%
		B	Sometimes up-to-date	147	62.29%
		C	Rarely up-to-date	7	2.97%
		D	Never up-to-date	6	2.54%
		Total		236	



**Appendix II**  
Page 2 of 3

Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses
9	How would you rate ARIS's overall ease of use?	A	Very easy to use	97	40.08%
		B	Somewhat easy to use, but I would like to see changes made	111	45.87%
		C	Somewhat difficult to use, changes needed	29	11.98%
		D	Very difficult to use	5	2.07%
		Total		242	
10	Have you reported ARIS problems to Help Desk within the last 60 days?	Yes	Yes	10	4.02%
		No	No	239	95.98%
		Total		249	
11	If yes (to Question #10), how satisfied are you with the resolution of your reported problem?	A	Very satisfied	1	10.00%
		B	Somewhat satisfied	2	20.00%
		C	Somewhat dissatisfied	4	40.00%
		D	Very dissatisfied	3	30.00%
		Total		10	
12	Are the problems resolved in a timely manner? (Related to Question # 10 and 11)	A	Within 24 hours	1	10.00%
		B	Within 48 hours	1	10.00%
		C	Within a week	3	30.00%
		D	Less than a month	1	10.00%
		E	A month or more	0	0.00%
		F	Never resolved	4	40.00%
		Total		10	
13	Has ARIS assisted you in better planning your classroom training?	Yes	Yes	133	58.08%
		No	No	96	41.92%
		Total		229	
14	Do you use student reports in ARIS to set quantitative goals for students?	Yes	Yes	140	59.07%
		No	No	97	40.93%
		Total		237	
15	How often do you use ARIS to collaborate with other principals, staff and network to help resolve certain student issues?	A	Very often	44	17.96%
		B	Sometimes	83	33.88%
		C	Not very often	73	29.80%
		D	Never	45	18.37%
		Total		245	

**Appendix II**  
Page 3 of 3

Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses
16	The Connect feature in ARIS has helped me find lesson plans and curricular materials to address similar student needs.	A	Strongly agree	34	14.35%
		B	Somewhat agree	74	31.22%
		C	Disagree	48	20.25%
		D	Not familiar with Connect	81	34.18%
		<b>Total</b>		<b>237</b>	
17	In the long-run, the use of ARIS will assist significantly in enhancing student performance.	A	Strongly agree	59	24.48%
		B	Somewhat agree	122	50.62%
		C	Disagree	44	18.26%
		D	Strongly disagree	16	6.64%
		<b>Total</b>		<b>241</b>	
18	How easy is it to keep up with updates and/or changes in ARIS?	A	Very easy	64	27.59%
		B	Somewhat easy	123	53.02%
		C	Difficult	36	15.52%
		D	Very difficult	9	3.88%
		<b>Total</b>		<b>232</b>	
19	Do you use any other system in conjunction with ARIS, or in place of ARIS?	Yes	Yes	150	60.24%
		No	No	99	39.76%
		<b>Total</b>		<b>249</b>	

**Source:** ARIS Survey Questionnaire Responses Received from NYC public school teachers.

# Appendix III

## Page 1 of 2

Comparison of Principal and Teacher Responses Received for ARIS Surveys  
TOTAL SURVEY RESPONSES FROM PRINCIPALS & TEACHERS = 379

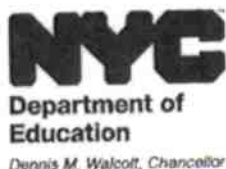
Questions that were on both the Principal and Teacher Survey Questionnaire				Principals		Teachers		Educators (Principals + Teachers)		Reported on Preliminary Draft		
Question #	Question	Response Choice		Number of Times Response Choice was Selected	% of Total Responses	Number of Times Response Choice was Selected	% of Total Responses	Total Times Response Choice was Selected	% of Total Responses	Sub-Total	% of tot. responses	# that did not respond to question
1	How often do you use ARIS?	A Daily		6	10.91%	15	6.00%	21	6.89%	203	66.56%	43
		B At least once a week		17	30.91%	64	25.60%	81	26.56%			
		C A few times a month		16	29.09%	103	41.20%	119	39.02%			
		D Rarely		14	25.45%	59	23.60%	73	23.93%			
		E Never		2	3.64%	9	3.60%	11	3.61%			
		Total		55		250		305				
2	Did you attend all training sessions offered to you?	A Yes		29	52.73%	170	69.39%	199	66.33%			
		B No		26	47.27%	75	30.61%	101	33.67%			
		Total		55		245		300				
3	Which of the following best describes your training?	A Sufficient and I am comfortable using the system		27	50.00%	96	40.68%	123	42.41%	132	45.52%	58
		B Sufficient at the time, but I need more now		21	38.89%	60	25.42%	81	27.93%			
		C Sufficient at the time, but I have learned what I need to know		3	5.56%	32	66.67%	35	12.07%			
		D Sufficient and I still need more		3	5.56%	48	20.34%	51	17.59%			
		Total		54		236		290				
5	How do you feel about the layout of the information displayed in the ARIS screens?	A The information is displayed in an order format that is very easy to work with		18	32.73%	88	36.21%	106	35.57%			
		B The information is somewhat easy to work with		26	47.27%	98	40.33%	124	41.61%			
		C The information displayed is not easy to work with but is manageable		8	14.55%	39	16.05%	47	15.77%			
		D The information displayed is difficult to work with		3	5.45%	18	7.41%	21	7.05%			
		Total		55		243		298				
7	How would you rate the accuracy of the data in ARIS?	A Always accurate		15	27.27%	96	40.00%	111	37.63%	184	62.37%	53
		B Somewhat accurate		34	61.82%	127	52.92%	161	54.58%			
		C Somewhat inaccurate		5	9.09%	11	4.58%	16	5.42%			
		D Often inaccurate		1	1.82%	6	2.50%	7	2.37%			
		Total		55		240		295				
8	Is your student's information up-to-date in ARIS?	A Always up-to-date		19	34.55%	76	32.20%	95	32.65%	196	67.35%	57
		B Sometimes up-to-date		30	54.55%	147	62.29%	177	60.82%			
		C Rarely up-to-date		6	10.91%	7	2.97%	13	4.47%			
		D Never up-to-date		0	0.00%	6	2.54%	6	2.06%			
		Total		55		236		291				
9	How would you rate ARIS's overall ease of use?	A Very easy to use		19	34.55%	97	40.08%	116	39.06%	174	58.59%	51
		B Somewhat easy to use, but I would like to see changes made to it		28	50.91%	111	45.87%	139	46.80%			
		C Somewhat difficult to use, and I would like to see some changes made to it		6	10.91%	29	11.98%	35	11.78%			
		D Very difficult to use		2	3.64%	5	2.07%	7	2.36%			
		Total		55		242		297				
10	Have you reported ARIS problems to Help Desk within the last 60 days?	Yes Yes		13	23.64%	10	4.02%	23	7.57%			
		No No		42	76.36%	239	95.98%	281	92.43%			
		Total		55		249		304				

# Appendix III

## Page 2 of 2

Questions that were on both the Principal and Teacher Survey Questionnaire				Principals		Teachers		Educators (Principals + Teachers)		Reported on Preliminary Draft		
Question #	Question	Response Choice	Number of Times Response Choice was Selected	% of Total Responses	Number of Times Response Choice was Selected	% of Total Responses	Total Times Response Choice was Selected	% of Total Responses	Sub-Total	% of tot. responses	# that did not respond to question	
11	If yes (to Question #10), how satisfied are you with the resolution of your reported problem?	A Very satisfied	4	33.33%	1	10.00%	5	22.73%				
		B Somewhat satisfied	5	41.67%	2	20.00%	7	31.82%				
		C Somewhat dissatisfied	2	16.67%	4	40.00%	6	27.27%				
		D Very dissatisfied	1	8.33%	3	30.00%	4	18.18%				
		<b>Total</b>	<b>12</b>		<b>10</b>		<b>22</b>					
12	Are the problems resolved in a timely manner? (Related to Question # 10 and 11)	A Within 24 hours	4	33.33%	1	10.00%	5	22.73%				
		B Within 48 hours	2	16.67%	1	10.00%	3	13.64%				
		C Within a week	4	33.33%	3	30.00%	7	31.82%				
		D Less than a month	0	0.00%	1	10.00%	1	4.55%				
		E A month or more	0	0.00%	0	0.00%	0	0.00%				
		F Never resolved	2	16.67%	4	40.00%	6	27.27%				
		<b>Total</b>	<b>12</b>		<b>10</b>		<b>22</b>					
15	How often do you use ARIS to collaborate with other principals, staff and network to help resolve certain student issues?	A Very often	8	14.55%	44	17.96%	52	17.33%	248	82.67%	48	
		B Sometimes	17	30.91%	83	33.88%	100	33.33%				
		C Not very often	10	18.18%	73	29.80%	83	27.67%				
		D Never	20	36.36%	45	18.37%	65	21.67%				
		<b>Total</b>	<b>55</b>		<b>245</b>		<b>300</b>					
16	The Connect feature in ARIS has helped me find lesson plans and curricular materials to address similar student needs.	A Strongly agree	6	10.91%	34	14.35%	40	13.70%				
		B Somewhat agree	24	43.64%	74	31.22%	98	33.56%				
		C Disagree	15	27.27%	48	20.25%	63	21.58%				
		D Not familiar with Connect	10	18.18%	81	34.18%	91	31.16%				
		<b>Total</b>	<b>55</b>		<b>237</b>		<b>292</b>					
17	In the long-run, the use of ARIS will assist significantly in enhancing student performance.	A Strongly agree	14	25.45%	59	24.48%	73	24.66%				
		B Somewhat agree	26	47.27%	122	50.62%	148	50.00%				
		C Disagree	11	20.00%	44	18.26%	55	18.58%				
		D Strongly disagree	4	7.27%	16	6.64%	20	6.76%				
		<b>Total</b>	<b>55</b>		<b>241</b>		<b>296</b>					
18	How easy is it to keep up with updates and/or changes in ARIS?	A Very easy	12	22.64%	64	27.59%	76	26.67%				
		B Somewhat easy	27	50.94%	123	53.02%	150	52.63%				
		C Difficult	12	22.64%	36	15.52%	48	16.84%				
		D Very difficult	2	3.77%	9	3.88%	11	3.86%				
		<b>Total</b>	<b>53</b>		<b>232</b>		<b>285</b>					
19	Do you use any other system in conjunction with ARIS, or in place of ARIS?	Yes Yes	44	80.00%	150	60.24%	194	63.82%	194	63.82%	44	
		No No	11	20.00%	99	39.76%	110	36.18%				
		<b>Total</b>	<b>55</b>		<b>249</b>		<b>304</b>					

Source: ARIS Survey Questionnaires sent to NYC public school principals and teachers.



Shael Polakow-Suransky  
Chief Academic Officer and Senior Deputy Chancellor  
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New York, NY 10007

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January 9, 2012

Tina Kim  
Deputy Comptroller for Audit  
The City of New York  
Office of the Comptroller  
1 Centre Street, Room 1100  
New York, NY 10007-2341

Re: Audit Report on the Performance of the New York City  
Department of Education's Achievement Reporting and Innovation System  
7111-118A

Dear Ms. Kim:

This letter, along with the enclosed Response to Findings and Recommendations, constitutes the New York City Department of Education's ("Department") response to the New York City Office of the Comptroller's ("Comptroller") Draft Report 7111-118A dated December 22, 2011 ("Report") on the performance of the Department's Achievement Reporting and Innovation System ("ARIS").

We respectfully submit that the Report reflects two fundamental misunderstandings regarding ARIS: First, the Comptroller misunderstands ARIS's goals and the Department's measurements for gauging whether ARIS has attained those goals. Second, the Comptroller misunderstands the way that ARIS data is compiled and ARIS's role in providing student information to educators and parents.

Below and attached, we address these misunderstandings in turn. In addition, we request an opportunity to meet with the Comptroller's office to discuss the serious misunderstandings and factual errors, as well as the points we highlight in response, before the final report is published. I am available to meet personally with you and your colleagues at your earliest convenience.

#### ***ARIS's Goals and the Department's Measurements for Gauging Their Attainment***

We strongly disagree with the Report's findings and recommendations to the extent they flow from the flawed premise that ARIS alone can increase student performance. ARIS was always intended as one tool designed to support high-quality instruction by helping teachers understand individual students' strengths and weaknesses, enabling them to target and differentiate instruction to meet individual students' learning needs. But parents and teachers know that *quality teaching* is what increases student performance. The Department believes that if educators and parents—armed with ARIS and other tools and intensive training—understand students' strengths and weaknesses and strengthen instruction accordingly, then student performance will continue to increase.

To measure ARIS's impact on increasing student performance, the Department looks at three questions:



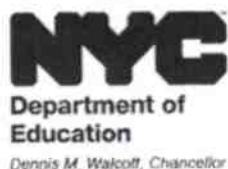
- **Does ARIS help educators and parents understand students' strengths and weaknesses?** Yes. Over 70% of principals who responded to the Department's November 2010 Principal Satisfaction Survey—a major survey with an 88% response rate (notably, the Comptroller's ARIS survey had a mere 1.49% response rate)—indicated that ARIS is very helpful or helpful for improving student outcomes. In addition, Education Sector, an independent think tank, reported that: "Thanks to ARIS, a high school instructor who may have a student for just one period a day can now see how that student is progressing across all courses, and can identify students at risk of academic failure. Teachers are now also able to spot long-term learning trends, even for students who have moved often among schools and who have only just arrived in their class." Finally, 86% of educators surveyed by the Comptroller indicated that ARIS is very or somewhat easy to use.
- **Are educators and parents using ARIS?** Yes. The total number of Department staff using ARIS has increased from 46,853 when ARIS was introduced in 2008 to 88,914 in the 2010-2011 school year, equating to a 90% increase in the number of staff using ARIS since its implementation. Moreover, 72% of educators surveyed by the Comptroller use ARIS a few or more times per month (notably, based on the frequency with which new assessment data is loaded into ARIS, the Department expects many educators to access ARIS one to three times per month).

We note that the Report's finding that the Department "may not be able to depend on the [ARIS usage] Reports as reliable indicators because of discrepancies in [usage data] and missing information" (Report, p. 7) reveals a misunderstanding of the Department's system for usage reporting. The usage reports that Department staff regularly use are not discrepant and are not missing information. Indeed, many of what the Comptroller claims are discrepancies and omissions in the data were accounted for in the responses the Department provided during the audit, as detailed in the enclosed Response to Findings and Recommendations. For example, in observing that "the ARIS Usage Report for school year 2010 listed 1,843 schools whereas the ARIS Progress Report for that year listed 1,726 schools" (Report, p. 7), the Comptroller fails to recognize that some schools did not receive a Progress Report in 2009, which explains why fewer schools received Progress Reports than were listed on the ARIS usage report. And in observing that "the reports for 260 (14 percent) of 1,843 schools lacked information about 'teachers with access to ARIS'" and that "236 (13 percent) schools lacked data about the number of ARIS Parent Link accounts accessed and 230 schools (12 percent) lacked student enrollment data" (Report, p. 7), the Comptroller fails to recognize that schools that closed since ARIS launched or were recently added to the Department system but not yet opened do not list the number of current school staff with ARIS access.

- **Is student performance increasing?** Yes. Since ARIS launched in 2008, student performance has increased: New York City students' average scale score increased in ELA by 9 points and in math by 15 points from 2007 to 2011<sup>1</sup>, and New York City's graduation rate increased 12.3 percentage points from 2007 to 2010. Moreover, as the Report points out (Report, p. 5), more than 70% of educators who responded to the Comptroller's survey strongly or somewhat agree that in the long run, the use of ARIS will enhance student performance.

We further disagree with the Report's suggestion that "[t]he use of alternative systems by educators . . . may indicate that the ARIS system may be falling short of fulfilling its goals" (Report, p. 6). Before ARIS, educators did not have online access to diagnostic information about students' strengths and weaknesses. ARIS was intended to

<sup>1</sup> These are the New York State standardized tests for students in Grades 3-8.



provide educators and parents with all of the Department's centrally collected information about students' strengths and weaknesses, and does so successfully.

By introducing educators to diagnostic data, ARIS paved the way for schools to demand more data and tools. Thousands of teachers across the city assign many different projects and assessments, and therefore generate multiple different types of data, which they use to examine their students' understanding of content. However, because these different types of classroom data come in different formats, they are very difficult to standardize for purposes of providing central access to educators and parents in ARIS. To meet the demand for access to diverse classroom data, some schools have invested in systems to supplement ARIS. Just as Excel and PowerPoint are designed to meet different needs, so, too, are ARIS and the different systems schools have purchased. This is a positive outcome of ARIS usage: these schools have recognized the power of using information about students to support quality teaching and improve student performance, and are leading the Department's effort to expand parent and educator access to student data.

While no single system can meet 100% of educators' and parents' diverse needs, the Department has made enhancements in ARIS to meet more than initially anticipated. For example, in response to the results of a survey the Department administered to determine which types of school-based assessment data are most important to capture, the Department enhanced ARIS to include classroom data from the Reading Tracker—a new tool that captures and analyzes data from classroom reading growth assessments—side-by-side with state test results, formative assessment data, and other student data. The Department also has enhanced the Acuity platform— an assessment system that allows students to take assessments, review results online, and find the specific skills they need to strengthen—to improve schools' ability to capture and track other prioritized classroom data, including rubric-based assessments, curriculum assessments, and teacher-created tests.

### ***Student Information in ARIS***

We disagree with the Report's findings and recommendations to the extent that they flow from a misunderstanding of the way ARIS data is compiled and of ARIS's role in providing student information to educators and parents. In recommending that the Department "[e]nsure that information in ARIS is always up-to-date" (Report, p. 8), the Comptroller fails to recognize that ARIS data is compiled directly from Department source systems and does not itself control data accuracy or freshness. The Department is indeed responsible for centrally loading most state assessment data (for which the release date is controlled by the state) and certain components of formative assessment data. Schools, however, are responsible for updating and correcting student demographic, biographical, and certain academic information (such as course grades and Regents exam scores). Therefore, student information in ARIS can become outdated when school staff members fail to update their students' information in the Department source systems on which ARIS relies.

Because it is essential that student and school data be accurate and up-to-date, the Department sets clear guidelines for schools' responsibility for data maintenance and verification. The Department also regularly checks data accuracy, indicates to school staff when data need to be corrected, and provides training and tools for data maintenance and verification. ARIS data are reported with an "as of" date to indicate to users when each data element was last refreshed.

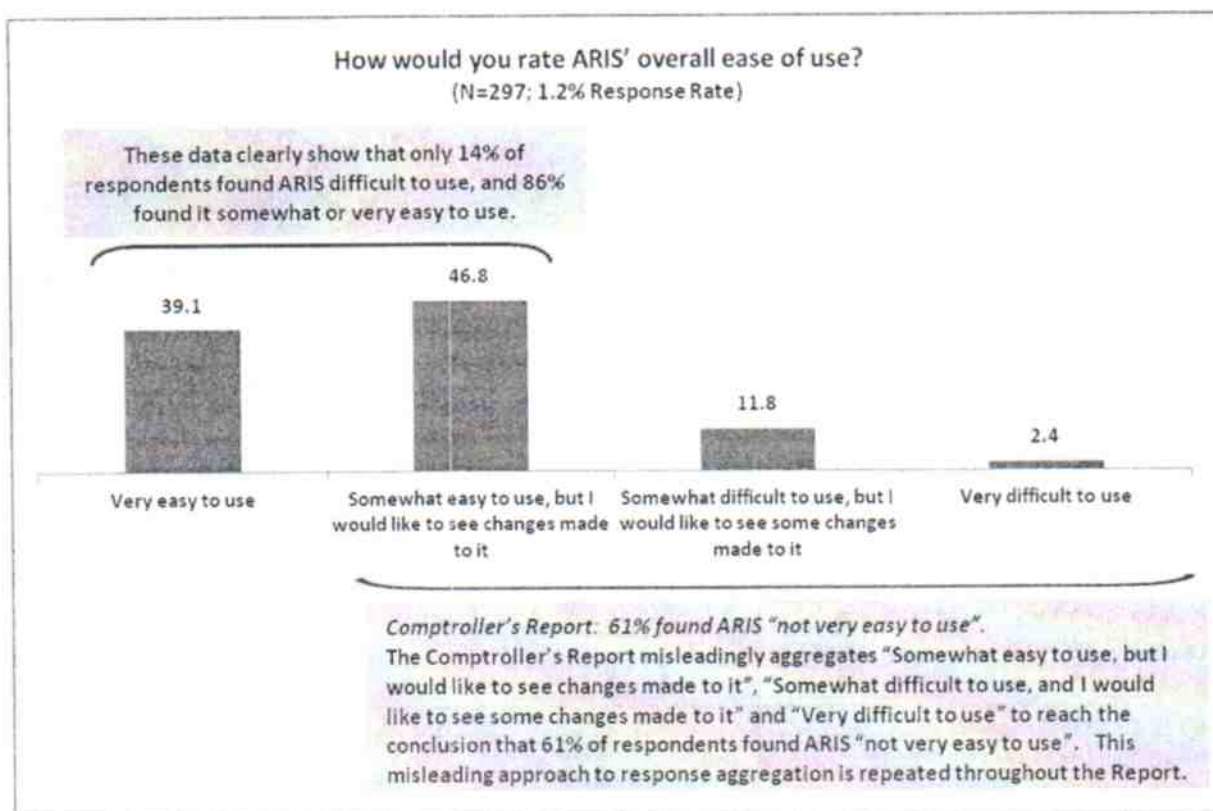
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As a result of these fundamental misunderstandings (among others described in the enclosed Response to Findings and Recommendations), we believe that the Comptroller has not accurately evaluated whether "ARIS has



positively affected student performance, is user-friendly, and met its intended goals" (Report, p. 3). The Report fails to take into account material information the Department provided throughout the audit about ARIS's goals and evidence that those goals have been fulfilled, as well as ARIS's role in providing student information to educators and parents.

Moreover, the methodology the Comptroller used to analyze the results of its survey—*e.g.*, grouping positive and negative responses—presents survey results unfairly and generates misleading conclusions. For example, the Comptroller states that 181 (61%) of respondents reported that ARIS was not very easy to use (Report, p. 8). Included in that 61% are the 139 (46.8%) respondents who selected the answer choice, "Somewhat easy to use, but I would like to see changes made to it". As illustrated below, by grouping the responses, "Somewhat easy to use, but I would like to see changes made to it" with the responses, "Somewhat difficult to use, and I would like to see some changes made to it" and "Very difficult to use", the Comptroller clearly misrepresents his respondents' selections.



The Comptroller's approach to response aggregation is especially troubling given the fact that the survey, as designed, established "somewhat" and "sometimes" as the second-most positive of four response options for most questions.

Indeed, the Report largely ignores ample survey data showing that ARIS is an effective and useful tool for educators, and may well omit positive feedback from the open-ended survey responses that the Comptroller refused to share with the Department. In any event, only 379 (1.49%) of the 25,515 educators surveyed responded to the Comptroller's survey—a tiny fraction (0.43%) of the 88,914 Department staff who used ARIS in





the 2010-2011 school year. It is irresponsible of the Comptroller to use such a minuscule sample size to infer any significant conclusions; it is still more troubling that the Comptroller's primary (only) basis for developing many of the Report's conclusions is the results of such a survey.

Although we welcome constructive recommendations that flow from an understanding of the subject matter and fair survey methodology, we cannot accept findings and recommendations that rest on flawed premises, misleading data, and erroneous observations.

Sincerely,

A handwritten signature in black ink, appearing to read "Shael Polakow-Suransky". The signature is written in a cursive, flowing style.

Shael Polakow-Suransky  
Chief Academic Officer

## RESPONSE TO FINDINGS AND RECOMMENDATIONS

Along with the January 9, 2012 cover letter from Shael Polakow-Suransky to Deputy Comptroller Tina Kim, the following detailed response to findings and recommendations constitutes the New York City Department of Education's ("Department") response to the New York City Office of the Comptroller's ("Comptroller") Draft Report 7111-118A dated December 22, 2011 ("Report") on the performance of the Department's Achievement Reporting and Innovation System ("ARIS").

### Background on ARIS

#### *The Need for ARIS*

The Department introduced ARIS as part of the Children First reforms, which gave principals greater autonomy over curriculum and resources in exchange for accountability for student outcomes. This exchange was premised on the idea that the educators closest to students know best what students need to achieve academic success. When educators understand their students' learning needs and have the autonomy to address them, they strengthen instruction and increase student achievement. ARIS is one important element of a series of tools and supports designed to help educators better understand their students' learning needs and strengthen instruction accordingly.

As part of the Children First reforms, the Department instituted a research-based, internationally recognized professional development strategy through which teams of teachers engage in a cycle of inquiry: assessing students' learning needs, examining student data and work, making changes to instruction, and monitoring and revising their practice.

Experts believe and research shows that effective schools engage in inquiry. A study by the Morrison Institute of Public Policy at Arizona State University stated, "Successful schools place a relentless focus on individual performance—a vital cycle of instruction, assessment, and intervention, followed by more instruction, assessment, and intervention. Over time, this leads to an educational program tailored to each student, to help maximize his or her success."<sup>1</sup> Education expert Mike Schmoker wrote that a "focus on learning, on assessment results, becomes the leverage for improvements in teaching, which is only as good as its impact on student learning. When leadership is focused on results, on urging a formal, frequent review of the impact of instruction, teaching improves. . . ."<sup>2</sup>

And, a study by Learning Point Associates concluded, "What does it take to close achievement gaps? Our findings suggest that it comes down to how schools use data. Teachers in gap-closing schools more frequently use data to understand the skill gaps of low-achieving students. . . . When data points to weakness in students' academic skills, gap-closing schools are more likely to focus on that area, making tough choices to ensure that students are immersed in what they most need."<sup>3</sup>

As New York City teachers began engaging in this data-informed instruction they gathered as much information as they could find about their students—including class assignments, results of diagnostic assessments and state tests, and information from previous teachers. To meet this demand and support data-informed instruction, the Department

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<sup>1</sup> Morrison Institute of Public Policy (with guidance from Jim Collins), "Why Some Schools with Latino Children Beat the Odds. . . and Others Don't", Arizona State University (2006).

<sup>2</sup> Schmoker, Mike, *Results Now: How We Can Achieve Unprecedented Improvements in Teaching and Learning* (2006) at 717-78.

<sup>3</sup> Symonds, Kiley Walsh, *Perspectives on the Gaps: Fostering the Academic Success of Minority and Low-Income Students*, Learning Point Associates (2004) at 15.

invested in two key resources for teachers: Periodic Assessments, which are formative assessments that teachers use to diagnose students' strengths and learning needs, and ARIS, through which teachers can access all the information the City has about their students.

### **ARIS Functionality**

#### Transition to ARIS

Before ARIS, educators did not have regular access to student data: blue emergency contact cards for students were stored inside metal boxes containing biographical information; teachers could access student data only if the principal shared hard copy assessment results and transcripts with them; collaboration and resource-sharing often was limited to teachers down the hall from each other; and parents were unaware of school performance and student biographical and performance records unless they came to the school to inquire. Though some schools created and administered their own formative assessments, use of such assessments was not consistent across schools, and most schools did not have a means of aggregating and sharing results to make it available for team work.

When the Department introduced ARIS, educators and parents for the first time gained access to all of the Department's centrally collected data about students' strengths and weaknesses. In order to provide that access without jeopardizing families' privacy rights, ARIS keeps student data secure by ensuring, in compliance with federal law, that only those educators with instructional responsibility for a particular student have access to that student's information. Increasing transparency while protecting student privacy rights is an essential component of ARIS functionality and, indeed, required a substantial investment in data infrastructure by the City. We thank the Comptroller for recognizing that the Department has adequate internal controls to preclude unauthorized access to ARIS.<sup>4</sup>

#### ARIS Features

ARIS provides educators and parents with access to centrally collected student information through the following features and Department source systems:

- **"My Students"** provides teachers with a list of their students and data highlights, including basic biographical information (e.g., age, ethnicity, and contact information), whether the student is an English language learner (ELL) or has an individualized educational program (IEP), and students' most recent state and formative assessment scores. These data elements originate from Automate the Schools (ATS) and Student Transcript and Academic Reporting System (STARS) (course enrollment); ATS (biographical information); the state (state test scores), and assessment vendors (periodic assessment scores), among other systems. Teachers can also create groups of students based on a particular line of progress that they wish to track (e.g., reading groups and students identified to be the focus of inquiry team work).
- **"Student Profile"** provides teachers with additional information (beyond the highlights included in the "My Students" view) about individual students, including course enrollment, course grades, parent contact information, home language, and the student's historical assessment results. These data elements originate from ATS (biographical information), STARS (course grades for middle and high schools), the state (state test scores), and assessment vendors (periodic assessment scores).

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<sup>4</sup> Report, p. 2.



- **“Reports”** enable educators to analyze data using comparison functions. For example, teachers can compare the performance of different groups of students on one assessment (e.g., performance of ELL students compared to performance of all students on last year’s state tests), or they can compare the performance of one group of students on different tests (e.g., performance of a group of struggling students on last year’s state tests compared to performance of that group on this year’s first periodic assessment). Principals can use this feature to assess how different classes in their school performed on a particular assessment, and Central users and school support staff can run reports comparing performance data across different schools.
- **“ARIS Connect”** enables educators to take the next step in the data analysis process: acting on the wealth of information in ARIS by collaborating with other educators within their school and across the City to strengthen instruction. Through Connect, educators can share documents, search and download curriculum materials, and hold online discussions about instructional practice. “Inquiry Spaces”, also part of Connect, provides inquiry team members with a place to document and publicize their work (including, for example, how they identified students to track, what approaches they are taking to improve student achievement, and the success of those efforts), enabling teams facing similar struggles to share lessons learned and find educators to connect with offline to deepen their learning.
- **“ARIS Parent Link”<sup>5</sup>** enables parents to view, in ten different languages, the same information that teachers can access through the “Student Profile” feature (i.e., course enrollment, course grades, parent contact information, home language, and the student’s historical assessment results), enabling teachers and parents to develop a common language around student performance. Parent Link also provides online tutorials designed to educate parents about the significance of the information they are viewing, what that information can tell them about their child, and steps parents can take to help their child succeed. An ancillary but powerful benefit of Parent Link is increased data accuracy, as parents typically call schools to update any outdated information from the school’s files that they see when they log in.

#### Enhancements to ARIS

When the Department launched ARIS in November 2008, ARIS included some, but not all, of the data and features it currently provides. Employing an iterative approach to design consistent with best practices in software and web development, the Department gathered feedback from users throughout ARIS’s first year of implementation and made adjustments (e.g., adding data and features) responsively. Once the scope of the ARIS project had been fulfilled, the Department continued to gather feedback from educators on what would help support their formative assessment practice and inquiry work. In response to this feedback, the Department refined and enhanced features in ARIS, for example, by adding ELL and Teachers College assessment data, adding strand-level data detail (i.e., scores at each of the sub-topic levels within ELA and Math) for 3-8 state assessments, and improving upon certain features in ARIS Connect. The Department continues to solicit user feedback in an effort to make ARIS as useful as possible to educators and parents.

Examining the formative and summative data in ARIS has led educators to seek out opportunities to analyze other sources of diagnostic information about their students. Thousands of teachers across the city have assign many different projects and assessments, and therefore generate multiple different types of data, which they use to examine their students’ understanding of content. Because these different types of classroom data come in different formats, they are very difficult to standardize for purposes of providing central access to educators and parents in ARIS. To meet the demand for access to diverse classroom data, some schools have invested in systems to supplement ARIS. Just as

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<sup>5</sup> The Department launched ARIS Parent Link in May of 2009.

Excel and PowerPoint are designed to meet different needs, so, too, are ARIS and the different systems schools have purchased. This is a positive outcome of ARIS usage: these schools have recognized the power of using information about students to support quality teaching and improve student performance, and are leading the Department's effort to expand parent and educator access to student data.

While no single system can meet 100% of educators' and parents' diverse needs, the Department has made enhancements in ARIS to meet more than initially anticipated—particularly in areas where educator demand is high and data can be standardized for purposes of providing central access. For example, in response to the results of a survey the Department administered to determine which types of school-based assessment data are most important to capture, the Department enhanced ARIS to include classroom data from the Reading Tracker—a new tool that captures and analyzes data from classroom reading growth assessments—side-by-side with state test results, formative assessment data, and other student data. The Department also has enhanced the Acuity platform—an assessment tool that allows students to take assessments, review results online, and find the specific skills they need to strengthen—to improve schools' ability to capture and track other prioritized classroom data, including rubric-based assessments, curriculum assessments, and teacher-created tests.

### ***Training and Professional Development***

Recognizing that many educators had been unaccustomed to using computers and online tools when ARIS was introduced, the Department accompanied ARIS's launch with an extensive training program designed to help educators navigate the new technology. In the 2008-2009 school year, the principal and two teachers from each school attended two ARIS trainings. For teachers who wanted further training, the Department offered additional individual trainings centrally and made trainers available upon request to provide schools with customized trainings onsite. The Department also provided extensive ARIS training to Network staff so that schools could access additional and ongoing support from their Network achievement coaches.

When the Department launched ARIS Parent Link, parent coordinators, having been trained by the Department, led trainings for the parent community during parent meetings and through sessions held in every borough. Parent coordinators continue to lead trainings on a regular basis, sometimes during existing school events and sometimes during "ARIS Parent Link Nights" which coordinators schedule around parent-teacher conference times when parents are logging in to prepare for conversations with teachers and Parent Link usage tends to spike.

### ***Impact of ARIS***

#### **Increasing Student Performance and Enabling a Culture Shift in Schools**

In the three and a half years that ARIS has been available to educators and parents, ARIS has had a tremendous impact on quality of instruction and student performance. To measure ARIS's impact on increasing student performance, the Department looks at three questions: whether ARIS helps educators and parents understand students' strengths and weaknesses; whether educators and parents are using ARIS; and whether student performance is increasing. As discussed further herein (pp. 8-9), internal and external research—as well as the results of the Comptroller's survey—show that the answer to all of these questions is yes.

Moreover, since ARIS's launch, the Department has seen significant growth in teachers' skills around inquiry work and formative assessment practice, both of which are now embedded in school culture across the City. Indeed, this culture shift itself is evidence of ARIS's profound impact on instruction beyond what ARIS usage reports reveal. For example, educators who participate in inquiry teams benefit both from the culture ARIS has created and from group discussion



and analysis of ARIS data without necessarily logging in themselves. And principals and teachers can download reports and materials from ARIS and share them with other educators who may be less comfortable with technology.

Through its accountability system, the Department has taken important steps to sustain this new culture of inquiry and reinforce the importance of using data to inform instruction. For example, Quality Reviews—multi-day school visits to New York City schools in which experienced educators evaluate whether the school is engaged in effective methods of accelerating student learning—provide the Department with an opportunity to assess the extent to which educators use ARIS data to understand students' strengths and weaknesses and target instruction accordingly. In conducting Quality Reviews, evaluators examine whether schools are gathering and analyzing information on student learning outcomes to identify trends, strengths, and areas of need at the school level; whether teams of teachers and individual teachers use tools (including ARIS) so that trends in student performance inform curricular and instructional decisions; and whether school leaders and faculty have structures to support families in using tools (including ARIS Parent Link) in a timely way to understand student performance such that a majority of families utilize these tools.<sup>6</sup> In addition, the annual New York City School Survey—the results of which are part of schools' grades on the Progress Report—includes questions designed to probe the prevalence of inquiry and assessment practice in schools. Specifically, the survey asks teachers to opine on whether their school has clear measures of progress for student achievement throughout the year; whether their school makes it a priority to help students find the best ways to achieve their learning goals; whether most teachers in their school work together on teams to improve their instructional practice; whether teachers in their school use student achievement data to improve instructional decisions; and whether they received helpful training on the use of student achievement data to improve teaching and learning.<sup>7</sup>

#### Educator Response to ARIS

Usage data and anecdotal evidence show that educators have embraced ARIS as a tool to aid their instruction. In terms of sheer numbers, the total number of Department staff using ARIS has increased from 46,853 when ARIS was introduced in 2008 to 88,914 in the 2010-2011 school year.<sup>8</sup> Moreover, educators have provided extensive positive feedback on ARIS through emails to Department staff and during trainings<sup>9</sup>:

- "I found it absolutely amazing, to have all this background information on my students. It will allow us to be preemptive in our plans and strategies for correctly programming students and for providing the emotional and guidance support as well as attendance intervention. We can get a picture of the whole child not just a class grade or test score in isolation."
- "I finally got some time to look at the reports [in ARIS Reports] and they are honestly beyond the scope of what I knew was possible. Can I do a mini-session with you next week where you can walk me through some really creative and thoughtful uses of the reports? The participants will love this!"

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<sup>6</sup> See *Quality Review Criteria Rubric 2011-2012*, available at <http://schools.nyc.gov/NR/rdonlyres/7EEB3889-6DC1-4867-9EC6-D684ADC31DD8/0/201112QRRubricwheader.pdf>.

<sup>7</sup> See *Citywide Question-By-Question Survey Results for Community Schools*, available at [http://schools.nyc.gov/NR/rdonlyres/776ED7EA-82CE-4DBE-A037-08ACD250BB44/0/2011\\_citywide\\_gened.pdf](http://schools.nyc.gov/NR/rdonlyres/776ED7EA-82CE-4DBE-A037-08ACD250BB44/0/2011_citywide_gened.pdf).

<sup>8</sup> ARIS usage report (December 9, 2011).

<sup>9</sup> The Report appears to selectively quote from open responses to the Comptroller's survey, and the Department has no way to gauge whether the quoted responses are representative of all responses received since the Comptroller refused to share this material with the Department. In the interest of fairness, the Department is sharing with the public some of the positive comments educators have made about ARIS through the years.

- “I just want to thank you for introducing me to ARIS and helping me obtain access to my schools. I have found the information on ARIS helps to facilitate dialogue with myself and my staff when determining if a student’s disability is really [a]ffecting their academic function. . . . I am now using ARIS more often with my staff when reviewing evals, re-evals and annual review reports.”
- “I would like to take this opportunity to compliment you and your staff on the GREAT work done on ARIS. I use ARIS a lot and one of our initiatives this year is to really get our staff to use this tool. In the past, we used PD360, ASCD and other resources that cost us precious funds. We’ll be very selective in the future, but I envision ARIS (particularly ARIS Learn) as our main source for on-line PD, reflection and other work. FYI- I have completed 20 modules in ARIS Learn.”

### New York City in the Lead

Building on the strong foundation of inquiry work and formative assessment practice that teachers developed by using ARIS, New York City has embraced the Common Core learning standards years before these standards will be fully implemented by the state. New York City schools are ready to take on this new national challenge far earlier than other districts across the country precisely because our educators—aided by tools like ARIS—developed a facility with inquiry work, formative assessment practice, and data usage, enabling improvements in instruction and, in turn, student performance.

Perhaps most indicative of ARIS’s widely-recognized success is that in the time since ARIS’s launch, other districts and organizations throughout the country—aided by the Department’s coaching and lesson-sharing—have invested in tools similar to ARIS. For example, the Gates Foundation is developing a data platform called the Shared Learning Infrastructure which will enable ARIS-like tools to be expanded across the state and the country. Moreover, the federal government has recognized the critical importance of “[b]uilding data systems that measure student success and inform teachers and principals how they can improve their practices”<sup>10</sup>, making this one the four areas of effective education reform strategies that the Race to the Top competition seeks to highlight and replicate. In fact, the state won Race to the Top funding in 2010 due in part to New York City’s advanced work in this area.

### **The Comptroller’s Report**

The Department respectfully submits that the Report reflects two fundamental misunderstandings regarding ARIS: First, the Comptroller misunderstands ARIS’s goals and the Department’s measurements for gauging whether ARIS has attained those goals. Second, the Comptroller misunderstands the way that ARIS data is compiled and ARIS’s role in providing student information to educators and parents. As a result of these misunderstandings, among others described herein, the Department believes that the Comptroller has not accurately evaluated whether “ARIS has positively affected student performance, is user-friendly, and met its intended goals”<sup>11</sup>.

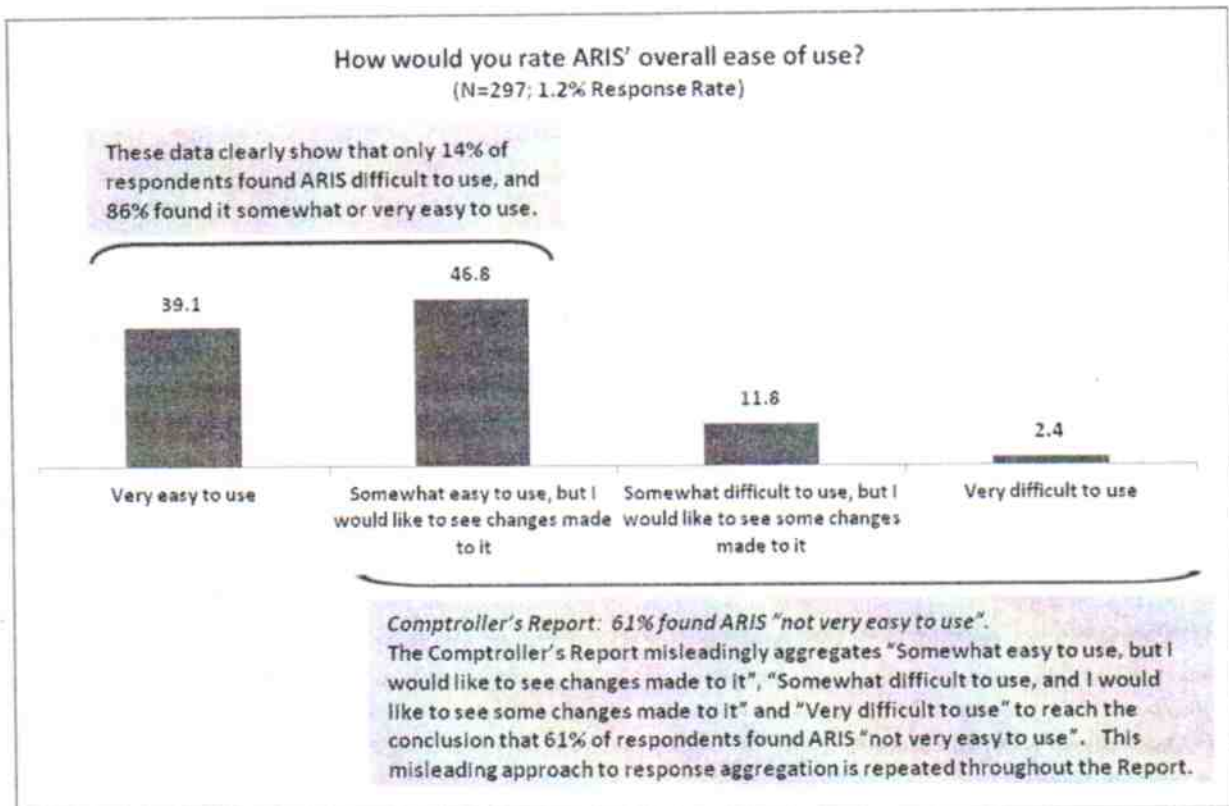
As an initial matter, the Report fails to take into account material information the Department provided throughout the audit and during the Exit Conference about ARIS’s goals and evidence that those goals have been fulfilled, as well as ARIS’s role in providing student information to educators and parents. Moreover, the methodology the Comptroller used to analyze the results of its survey—*e.g.*, grouping “somewhat agree” responses with negative responses—presents survey results unfairly and generates misleading conclusions. For example, the Comptroller states that 181

<sup>10</sup> See “President Obama, U.S. Secretary of Education Duncan Announce National Competition to Advance School Reform” (July 24, 2009), available at <http://ed.gov/news/pressreleases/2009/07/07242009.html>

<sup>11</sup> Report, p. 3.



(61%) of respondents reported that ARIS was not very easy to use.<sup>12</sup> Included in that 61% are the 139 (46.8%) respondents who selected the answer choice, "Somewhat easy to use, but I would like to see changes made to it". As illustrated below, by grouping the responses, "Somewhat easy to use, but I would like to see changes made to it" with the responses, "Somewhat difficult to use, and I would like to see some changes made to it" and "Very difficult to use", the Comptroller clearly misrepresents his respondents' selections.



The Comptroller's approach to response aggregation is especially troubling given the fact that the survey, as designed, established "somewhat" and "sometimes" as the second-most positive of four response options for most questions. Furthermore, the Comptroller reports that 59% of respondents "would like to see enhancements to the system" even though the question asked only about ARIS's overall ease of use. The "somewhat easy" and "somewhat difficult" response categories were combined to obtain this result because both responses included "but I would like to see changes made to it", even though there was no option for respondents to indicate that ARIS was "somewhat easy" or "somewhat difficult" to use without also indicating the desire to see changes to it. The way that the response options were worded led to a confounding of information regarding ARIS's ease of use and whether the system should be changed, which indicates the poor quality of the Comptroller's survey.

Indeed, the Report largely ignores ample survey data showing that ARIS is an effective and useful tool for educators, and may well omit positive feedback from the open-ended survey responses that the Comptroller refused to share with the Department. In any event, only 379 (1.49%) of the 25,515 educators surveyed responded to the Comptroller's survey—a tiny fraction (0.43%) of the 88,914 Department staff who used ARIS in the 2010-2011 school year. It is irresponsible of the Comptroller to use such a minuscule sample size to infer any significant conclusions; it is still more troubling that the Comptroller's primary (only) basis for developing many of the Report's conclusions is the results of such a survey.

<sup>12</sup> Report, p. 8



### ***ARIS's Goals and the Department's Measurements for Gauging Their Attainment***

As described above, ARIS was always intended as one tool designed to support high-quality instruction by helping teachers understand individual students' strengths and weaknesses, enabling them to target and differentiate instruction to meet individual students' learning needs. But parents and teachers know that *quality teaching* is what increases student performance. The Department believes that if educators and parents—armed with ARIS and other tools and intensive training—understand students' strengths and weaknesses and strengthen instruction accordingly, then student performance will continue to increase.

#### The Department's Measurements for Gauging the Attainment of ARIS's Goals

To measure ARIS's impact on increasing student performance, the Department looks at three questions:

- **Does ARIS help educators and parents understand students' strengths and weaknesses?** Yes. Over 70% of principals who responded to the Department's November 2010 Principal Satisfaction Survey—a major survey with an 88% response rate (notably, the Comptroller's ARIS survey had a mere 1.49% response rate)—indicated that ARIS is very helpful or helpful for improving student outcomes. In addition, Education Sector, an independent think tank, reported that: "Thanks to ARIS, a high school instructor who may have a student for just one period a day can now see how that student is progressing across all courses, and can identify students at risk of academic failure. Teachers are now also able to spot long-term learning trends, even for students who have moved often among schools and who have only just arrived in their class."<sup>13</sup> Finally, 86% of educators surveyed by the Comptroller indicated that ARIS is very or somewhat easy to use,<sup>14</sup> 77% indicated that the information displayed in the ARIS screens is very or somewhat easy to work with, and 79% indicated that it is very or somewhat easy to keep up with updates and/or changes in ARIS.
- **Are educators and parents using ARIS?** Yes. The total number of Department staff using ARIS has increased from 46,853 when ARIS was introduced in 2008 to 88,914 in the 2010-2011 school year, equating to a 90% increase in the number of staff using ARIS since its implementation.<sup>15</sup> Moreover, 72% of educators surveyed by the Comptroller use ARIS a few or more times per month. Based on the frequency with which new assessment data is loaded into ARIS, the Department expects many educators to access ARIS one to three times per month—not daily or even weekly.<sup>16</sup> Indeed, ARIS usage analysis indicates that educators tend to access ARIS at key points during the school year when new data (e.g., the results of different assessments that students take throughout the school year) become available in ARIS.
- **Is student performance increasing?** Yes. Since ARIS launched in 2008, student performance has increased: New York City students' average scale score increased in ELA by 9 points and in math by 15 points from 2007 to

<sup>13</sup> Tucker, Bill, *EDUCATIONSECTOR REPORTS*, "Putting Data Into Practice: Lessons From New York City" (October 2010) at 2.

<sup>14</sup> The Comptroller misleadingly reports that "[o]ne hundred and eighty-one (61 percent) of 297 respondents reported that overall, ARIS was not very easy to use and 174 (59 percent) of these respondents reported that they would like to see enhancements to the system" (Report, p. 8). These figures were calculated by aggregating the response, "Somewhat easy to use, but I would like to see changes made to it" with the responses, "Somewhat difficult to use, and I would like to see some changes made to it" and "Very difficult to use". In fact, 255 (86%) of 297 respondents reported that ARIS is very or somewhat easy to use and 139 (47%) of these respondents reported that they would like to see changes made to the system.

<sup>15</sup> ARIS usage report (December 9, 2011).

<sup>16</sup> The Report notes that "[t]wo hundred and three (67 percent) of 305 respondents used ARIS less than once a week" (Report, p. 8), implying that such usage frequency is suboptimal.

2011<sup>17</sup>, and New York City's graduation rate increased 12.3 percentage points from 2007 to 2010<sup>18</sup>. Moreover, as the Report points out<sup>19</sup>, more than 70% of educators who responded to the Comptroller's survey strongly or somewhat agree that in the long run, the use of ARIS will enhance student performance.

The Department researches these questions extensively by looking to, for example, the results of Principal Satisfaction Surveys conducted annually, the results of the annual New York City School Survey, observations made during Quality Reviews, and internal analyses of ARIS usage and student performance. Notably, since ARIS's launch, there has been significant improvement in the areas on the New York City School Survey—a major survey with an 82% teacher and an 83% student response rate in 2011—concerning the use of student data to improve instruction. Between the 2007-2008 and 2010-2011 school years, the percentage of teachers who reported that their school has clear measures of progress for student achievement throughout the year increased from 88 to 92; the percentage of teachers who reported that their school makes it a priority to help students find the best ways to achieve their learning goals increased from 82 to 87; the percentage of teachers who reported that most teachers in their school work together on teams to improve their instructional practice increased from 83 to 89; the percentage of teachers who reported that teachers in their school use student achievement data to improve instructional decisions increased from 89 to 96; and the percentage of teachers who reported that they received helpful training on the use of student achievement data to improve teaching and learning increased from 70 to 74.<sup>20</sup>

The Department also relies on information provided by external studies, such as those conducted by Education Sector (which studied how New York City schools use data to improve student performance), the American Institutes for Research (which studied how ARIS was used during its first two years of implementation), and the Research Alliance for New York City Schools (which is currently studying when and how middle school educators use ARIS data). Although the Department shared most of this research with the Comptroller during the audit, the Report cites none of it.

#### Use of Alternative Systems Shows that ARIS Has Taught Schools the Power of Using Student Data to Support Quality Teaching and Improve Student Performance

The Department disagrees with the Report's suggestion that "[t]he use of alternative systems by educators . . . may indicate that the ARIS system may be falling short of fulfilling its goals"<sup>21</sup>. Before ARIS, educators did not have regular access to student data: blue emergency contact cards for students were stored inside metal boxes containing biographical information; teachers could access student data only if the principal shared hard copy assessment results and transcripts with them; collaboration and resource-sharing often was limited to teachers down the hall from each

<sup>17</sup> See NYC 2011 Mathematics and English Language Arts Citywide Test Results Grades 3-8 ([http://schools.nyc.gov/NR/rdonlyres/ED4CED1F-1D56-4D61-A314-A00A6D76D20B/0/2011\\_MATH\\_ELA\\_Press\\_Conference\\_Web.pdf](http://schools.nyc.gov/NR/rdonlyres/ED4CED1F-1D56-4D61-A314-A00A6D76D20B/0/2011_MATH_ELA_Press_Conference_Web.pdf)). These are the New York State standardized tests for students in grades 3-8.

<sup>18</sup> See NYC Graduation Rates Class of 2010 (2006 Cohort).

<sup>19</sup> Report, p. 5.

<sup>20</sup> These figures aggregate "strongly agree" and "agree" responses.

<sup>21</sup> Report, p. 6. The Report also notes that "existing systems (*i.e.*, DataCation, Impact, and Daedalus) provide student data that is similar to ARIS" (Report, pp. 5-6), implying that these systems—and the notion that they provide "more accurate data" than ARIS—render ARIS redundant and ineffective. Once again, the Comptroller draws conclusions based on fundamental misunderstandings of the Department's data systems. Other data systems (DataCation, Impact, Daedalus) largely provide *different* assessment data and tools from ARIS. ARIS includes assessment information that the Department collects centrally. Some schools choose to supplement these centrally-provided resources with classroom-specific, school-selected resources, while other schools use supplemental data and tracking systems to record and view these data. ARIS has evolved to meet some of these needs, but does not include all the unique data elements in use in all New York City schools.



other; and parents were unaware of school performance and student biographical and performance records unless they came to the school to inquire. When the Department introduced ARIS, educators and parents for the first time gained access to all of the Department's centrally collected data about students' strengths and weaknesses.

With the introduction of ARIS and formative assessments, teachers learned the power of diagnostic assessments and took the inquiry cycle and assessment practice to a new level. Over 65% of New York City's teachers now participate in "inquiry teams," groups of teachers who collaborate to help students based on shared information.<sup>22</sup> According to Education Sector,

ARIS provides [inquiry teams] with a common set of data, including state and interim assessment results, attendance records, and course grades. The teams use this information to collaborate on instructional interventions, not just for single students but for whole groups of students. The data helps teachers identify students' strengths and learning gaps and inform parents of their children's progress. Teachers can also use the data to customize progress reports. Educators looking for patterns of performance are no longer limited to what they see in their own classrooms. They can easily group and track students receiving specific help or identify students with a particular learning challenge.<sup>23</sup>

In addition, examining the formative and summative data in ARIS has led educators to seek out opportunities to analyze other sources of diagnostic information about their students. Thousands of teachers across the city assign many different projects and assessments, and therefore generate different types of data, which they use to examine their students' understanding of content. In a survey of data specialists, the Department found that teachers are also interested in capturing, examining, and acting on the following classroom data types: reading levels (from running records); rubric-based assessments; math curriculum-based/unit chapter tests; science curriculum-based/unit chapter tests; social studies curriculum-based/unit chapter tests; teacher-created quizzes/exams; and homework completion and grades. Because these different types of classroom data come in different formats, they are very difficult to standardize for purposes of providing central access to educators and parents in ARIS.

To meet the demand for access to diverse classroom data, some schools have invested in systems to supplement ARIS. This is a positive outcome of ARIS usage: these schools have recognized the power of using information about students to support quality teaching and improve student performance, and are leading the Department's effort to expand parent and educator access to student data.

While no single system can meet 100% of educators' and parents' diverse needs, the Department has made enhancements in ARIS to meet more than initially anticipated—particularly in areas where educator demand is high and data can be standardized for purposes of providing central access. For example, in the summer of 2011, responding to the results of a survey the Department administered to determine which types of school-based assessment data are most important to capture, the Department launched the Reading Tracker in 400 schools to capture and analyze data from reading growth assessments. The Department enhanced ARIS to include classroom data from the Reading Tracker side-by-side with state test results, formative assessment data, and other student data. This information is now available to both educators and parents and updated regularly. In addition, throughout the spring of the 2010-2011 school year, the Department enhanced the Acuity platform—an assessment tool that allows students to take assessments, review results online, and find the specific skills they need to strengthen—to improve schools' ability to capture and track other prioritized classroom data, including rubric-based assessments, curriculum assessments, and teacher-created tests. The Department loaded content from core New York City curricula into the Acuity platform,

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<sup>22</sup> Tucker, Bill, *EDUCATIONSECTOR REPORTS*, "Putting Data Into Practice: Lessons From New York City" (October 2010) at 2.

<sup>23</sup> *Id.* at 4.

enabling teachers to create and customize classroom assessments that align with their curriculum, scan in the results of those assessments, and analyze them for trends in student performance and progress. The Department also guided the development of a performance task tool in Acuity which has enabled educators to access DOE-provided performance tasks, rubrics, and instructional support documents or to create their own performance tasks and rubrics, enter student scores, and view those results for individual students. Educators can now view aggregated reports on performance tasks by class, making it easier to identify class and group trends in student learning.

### ***Student Information in ARIS***

#### Comptroller Survey Results Regarding Data Freshness and Accuracy

Ninety percent of educators surveyed by the Comptroller responded that ARIS is always or sometimes up-to-date, and 92% responded that the data is always or somewhat accurate. Nevertheless, the Comptroller appears to find fault with the freshness and accuracy of ARIS data.

Notably, the Comptroller misleadingly reports that “[o]ne hundred and ninety-six (67 percent) of the 291 teachers and principals who responded to our survey reported that the student information in ARIS is not always up-to-date”<sup>24</sup>, figures calculated by aggregating the response, “Sometimes up-to-date” with the responses, “Rarely up-to-date” and “Never up-to-date”. The Comptroller also misleadingly reports that “[o]ver 50 percent of educators who responded to our survey of ARIS users stated that they did not always find student data to be accurate”<sup>25</sup>, a figure calculated by aggregating the response, “Somewhat accurate” with the responses, “Somewhat inaccurate” and “Often inaccurate”. Given the fact that ARIS compiles dozens of data points on approximately 1.1 million students, and many of those data points rely on timely and accurate data entry by school level staff at approximately 1,700 different schools, it is remarkable that over 30% of educators responded that the data in ARIS was “always accurate” or “always up-to-date”. Perhaps if the Comptroller had included an option for “generally accurate/up-to-date” or “usually accurate/up-to-date” between “always” and “somewhat/sometimes”, it would have a stronger basis for viewing the “somewhat” responses as marginally negative. Instead, “somewhat” was the most positive answer available short of absolute perfection.

#### Data Maintenance and Verification

The Department disagrees with the Report’s findings and recommendations to the extent that they flow from a misunderstanding of the way ARIS data is compiled and ARIS’s role in providing student information to educators and parents. In recommending that the Department “[e]nsure that information in ARIS is always up-to-date”<sup>26</sup>, the Comptroller fails to recognize that ARIS data is compiled directly from Department source systems and does not itself control data accuracy or freshness. The Department is indeed responsible for centrally loading most state assessment data (for which the release date is controlled by the state) and certain components of formative assessment data.<sup>27</sup> Schools, however, are responsible for updating and correcting student demographic, biographical, and certain academic information (such as course grades and Regents exam scores). Therefore, student information in ARIS can become outdated when school staff members fail to update their students’ information in the Department source systems on which ARIS relies.

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<sup>24</sup> Report, p. 8.

<sup>25</sup> Report, p. 1.

<sup>26</sup> Report, p. 8.

<sup>27</sup> The state controls the release of the Grades 3-8 ELA and math exam results and the results of the NYSAA and NYSESLAT. While the Department centrally loads most aspects of formative assessment results, schools are often asked to provide certain formative assessment data elements (e.g., open-ended responses).



Because it is essential that student and school data be accurate and up-to-date, the Department sets clear guidelines for schools' responsibility for data maintenance and verification. The Department also regularly checks data accuracy, indicates to school staff when data need to be corrected, and provides training and tools for data maintenance and verification. ARIS data are reported with an "as of" date to indicate to users when each data element was last refreshed.

### ***The Department's System for Reporting ARIS Usage Data***

The Report's finding that the Department "may not be able to depend on the [ARIS usage] Reports as reliable indicators because of discrepancies in [usage data]"<sup>28</sup> reveals a misunderstanding of the Department's system for usage reporting. Additionally, many of what the Comptroller claims are discrepancies and omissions in the data were accounted for in the responses the Department provided during the audit, as detailed herein.

As an initial matter, the reports that Department staff regularly use are not discrepant and are not missing information. The raw usage data file reports that the Comptroller examined during the audit are technical reports, generated based on specific queries. The Comptroller fails to recognize that it is possible to generate different usage reports using different queries, which may yield different results. For example, as detailed below, a report that includes *all* Department schools generally will include more schools than a report that includes *only* those schools in which staff accessed ARIS over a particular time period; similarly, a report that reflects the number of educators with access to ARIS may show a higher number than a report reflecting the number of educators who *actually* accessed ARIS.

The Comptroller also fails to recognize that a key parameter in the Department's system for usage reporting is how teachers and students are attributed to schools and classes. ARIS attributes teachers and students to schools and classes based on their current location. As students and teachers move between schools and classes over time, the ARIS data model displays their most current location so that the visible data is up-to-date. As a result, historical usage reports display historical usage data based on current attribution. As the Department uses usage reports for targeting professional development, helpdesk services, and product enhancements, the Department considers these attribution changes in its analyses.

The Report cites several examples to support its conclusion about the unreliability of ARIS usage reports<sup>29</sup>, none of which evinces discrepant or missing data. The Department has repeatedly provided the Comptroller with the following explanations for these non-examples:

- **Regarding the observation that "the ARIS Usage Report for school year 2010 listed 1,843 schools whereas the ARIS Progress Report for that year listed 1,726 schools":** Some schools did not receive a Progress Report in 2009, which explains why fewer schools received Progress Reports than were listed on the ARIS usage report. Schools exempt from receiving a Progress Report in 2009, for example, included those that taught prekindergarten through grade 3 and no other grades, Young Adult Borough Centers (YABC) evening academic programs, and schools and programs in Districts 75 and 79.
- **Regarding the observation that "the reports for 260 (14 percent) of 1,843 schools lacked information about 'teachers with access to ARIS':"** Schools that closed since ARIS launched or were recently added to the Department system but not yet opened do not list the number of current school staff with ARIS access. For these schools, "N/As", or zero data, are displayed across all fields in the ARIS usage report.

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<sup>28</sup> Report, p. 7.

<sup>29</sup> Report, pp. 7-8.

- Regarding the observation that **“236 (13 percent) schools lacked data about the number of ARIS Parent Link accounts accessed and 230 schools (12 percent) lacked student enrollment data”**: “N/As”, or zero data, are displayed across all fields in the ARIS usage report for schools that closed since ARIS launched or were recently added to the Department system but not yet opened. In addition, some schools may have accessed ARIS but do not have any ARIS Parent Link (APL) accounts that have been accessed by parents. For these schools, ARIS usage reports will display “N/As”, or zero data, for “Number of ARIS Parent Link accounts that have been accessed” during the report period.
- Regarding the observation that **“the ARIS Parent Link usage report for the Bronx shows a high use of Parent Link (i.e., 79%); however, this percentage may be misleading because for 60 schools there was no data available”**: Four hundred forty-two Bronx schools are listed in the ARIS usage report that the Department provided to the Comptroller on August 4, 2011. Three hundred eighty-four (87%) of these 442 schools list the number of APL accounts as 210,155, total, with 166,735 (80%) of parents having accessed APL. With respect to the 60 schools for which no data was available, most of these schools had closed since ARIS launched or were recently added to the Department system but not yet opened; for these schools, “N/As”, or zero data, are displayed across all fields in the ARIS usage report.
- Regarding the observation that **“the ARIS Usage Tracking Report as of April 28, 2011, had 1,843 schools whereas the ARIS Usage Data by School Report as of June 30, 2011, had 1,571 schools, which is a difference of over 272 schools within a two-month period”**: The Comptroller requested (1) a list of *all* Department schools, regardless of whether their staff accessed or used ARIS (provided in the April 28, 2011 ARIS usage report) and (2) usage reports including *only* those schools in which staff accessed or used ARIS (provided in the form of ARIS usage reports for April-June 2011). The April 28, 2011 report and the June 30, 2011 report include different sets of data, which explains the 272+ school difference between these reports.
- Regarding the observation that **“the ARIS Usage by School report had inconsistent dates for the data fields for ‘number of educators with access to ARIS’ (which was as of July 2, 2011) and the ‘number of educators that actually accessed ARIS’ (which was from April 1, 2011, through June 30, 2011)”**: These fields reflect different data points and are calculated in different ways. The “number of educators with access to ARIS” presents a snapshot of a given point in time, which is necessary to capture a precise number. The “number of educators that actually accessed ARIS” is calculated based on a requested time period and reflects the number of educators who accessed ARIS during that period.
- Regarding the observation that **“between April 1, 2011, and June 30, 2011, (a 64 work-day period), 36,308 school staff accessed ARIS—which is less than 50 percent of the teaching staff”**: As explained above (p. 8), usage activity fluctuates throughout the year, with educators tending to access ARIS more frequently when new data (such as test results) become available in ARIS. Thus, usage activity represented in the April-June 2011 time period is not representative of usage over the entire year.

In addition, usage reports—which merely track the users who log into ARIS—do not reveal the full picture of ARIS’s impact on educator practice. Usage reports do not, for example, include staff at the network, cluster, and Central office levels who use ARIS data and collaboration tools to help support schools. Nor do they reflect the fact that educators who participate in inquiry teams benefit both from the culture ARIS has created and from group discussion and analysis of ARIS data without necessarily logging in themselves. Indeed, Department staff have observed inquiry teams gathering in a room with a computer and a projector to examine student learning while one educator logs into her ARIS account for all to see; this instance represents only one “log in” to ARIS, but describes a team of teachers engaging in the practice of student achievement data analysis.



Similarly, principals and teachers can download reports and materials from ARIS and share them with other educators who may be less comfortable with technology.

The Report ignores all of these explanations, offering no justification for why the Comptroller relies on observations that reflect misunderstandings about ARIS usage data.

### **The Comptroller's Recommendations and Department Responses**

#### ***Comptroller's Recommendation:***

1. The Department should formulate measurements to assess whether ARIS is attaining its goal to improve and enhance student performance.

#### ***Response to Recommendation:***

As explained above, the Department already has measurements to assess whether ARIS is improving and enhancing student performance. To measure ARIS's impact on increasing student performance, the Department looks at three questions: whether ARIS helps educators and parents understand students' strength and weaknesses; whether educators and parents are using ARIS; and whether student performance is increasing. The Department researches these questions extensively by looking to, for example, the results of Principal Surveys conducted annually, the results of the annual New York City School Survey, observations made during Quality Reviews, and internal analyses of ARIS usage and student performance. The Department also relies on information provided by external studies, such as those conducted by Education Sector, the American Institutes for Research, and the Research Alliance for New York City Schools. Although the Department shared most of this research with the Comptroller during the audit, the Report cites none of it.

#### ***Comptroller's Recommendation:***

2. The Department should examine the feasibility of incorporating in ARIS certain features in alternative systems that educators find beneficial.

#### ***Response to Recommendation:***

The Department views schools' investment in supplemental systems as a positive outcome of ARIS usage: these schools have recognized the power of using information about students to support quality teaching and improve student performance, and are leading the Department's effort to expand parent and educator access to student data.

The Department agrees with the Comptroller's recommendation and already has incorporated in ARIS certain features in alternative systems that educators find beneficial. For example, the Department enhanced ARIS to include classroom data from the Reading Tracker—a new tool that captures and analyzes data from reading growth assessments—side-by-side with state test results, formative assessment data, and other student data. The Department also has enhanced the Acuity platform—an assessment tool that allows students to take assessments, review results online, and find the specific skills they need to strengthen—to improve schools' ability to capture and track other prioritized classroom data, including rubric-based assessments, curriculum assessments, and teacher-created tests. Though, for the reasons explained above, it would be impossible to meet 100% of educators' and parents' diverse needs in ARIS or any other single system, the Department will continue to invest in further enhancements to meet schools' growing demand for classroom data.

***Comptroller's Recommendation:***

3. The Department should ascertain whether ARIS Connect is being efficiently utilized by educators.

***Response to Recommendation:***

As an initial matter, the Department disagrees with the categorical finding that the "ARIS Connect feature is not being efficiently utilized"<sup>30</sup>. The American Institutes for Research (AIR) conducted an external study of ARIS using focus groups, interviews, and surveys. Regarding ARIS Connect, AIR's study found that more than 90% of inquiry team members reported looking up resources posted by teams citywide in ARIS Connect's "Inquiry Spaces".<sup>31</sup> The study also found that over 76% of teachers familiar with ARIS Connect felt that the "Communities" and "Inquiry Spaces" features were easy to use, and 81% of teachers surveyed found that most of the instructional resources in ARIS Connect were high quality (e.g., accurate, complete, and innovative).<sup>32</sup> Although the Department provided AIR's report to the Comptroller during the audit, the Report ignores it. Moreover, the Report neglects to point out that 46% of teachers and 55% of principals surveyed by the Comptroller strongly or somewhat agree that ARIS Connect has helped them find lesson plans and curricular materials.

Nevertheless, the Department agrees with the recommendation and, as explained above, already has reviewed external research on educators' use of ARIS Connect. The Department also regularly solicits feedback from educators regarding various features of ARIS. Responding to this feedback and usage analyses, the Department has made numerous improvements to ARIS Connect in the past couple of years. For example, in 2010, the Department enhanced ARIS Connect's notification system by providing ARIS users with the option to be notified of updates to their content via email, rather than solely via the "Subscriptions" title on their ARIS Connect homepage. In 2011, the Department redesigned the "Community" homepage in ARIS Connect, making it easier for community members and visitors to find content and giving moderators latitude to design user communities in user-friendly ways. Also in 2011, the Department improved the "resource landing page" feature in ARIS Connect to ensure that users are able to see relevant metadata and descriptions that will help them decide whether to review or download a resource.

***Comptroller's Recommendation:***

4. The Department should strengthen outreach efforts to familiarize educators with the use of ARIS Connect.

***Response to Recommendation:***

The Department agrees and will strengthen outreach efforts to familiarize educators with ARIS Connect.

***Comptroller's Recommendation:***

5. The Department should ensure that Usage Reports are complete and accurate.

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<sup>30</sup> Report, p. 7.

<sup>31</sup> American Institutes for Research, *Facilitating Collaborative Inquiry Using Data and Technology in New York City Schools, Year 2 Final Report on the Implementation of the Achievement Reporting and Innovation System (ARIS)* (October 2010) at 6-7.

<sup>32</sup> *Id.*



***Response to Recommendation:***

As explained above, the usage reports that Department staff regularly use are not discrepant and are not missing information. Indeed, examples of what the Comptroller claims are discrepancies and omissions in the data were accounted for in the responses the Department provided during the audit, as detailed herein.

***Comptroller's Recommendation:***

6. The Department should monitor the frequency and usage of ARIS by system users.

***Response to Recommendation:***

The Department agrees and will continue its current practice of monitoring the frequency and usage of ARIS by system users.

***Comptroller's Recommendation:***

7. The Department should ensure that information in ARIS is always up-to-date.

***Response to Recommendation:***

As explained above, the Comptroller fails to recognize that ARIS data is compiled directly from Department source systems and does not itself control data accuracy or freshness. Student information in ARIS can become outdated when school staff members fail to update their students' information in Department source systems. The Department will continue its current practices to ensure school staff are maintaining accurate student data.

***Comptroller's Recommendation:***

8. The Department should conduct periodic surveys of ARIS users to assist in identifying and making enhancements to the system.

***Response to Recommendation:***

The Department agrees and will continue its current practice of conducting and reviewing periodic surveys of ARIS users (such as Principal Surveys, the annual New York City School Survey, and research surveys like the survey that led to the development of the Reading Tracker and the survey conducted by the Research Alliance for New York City Schools which examined when and how middle school educators use ARIS data) to assist in identifying and making enhancements to the system. In fact, aided by responses to a study of schools' grade book tools and a series of educator and parent interviews and focus groups, the Department is exploring offering online grade book functionality that will allow educators and parents to track student completion of and performance on classroom-based assignments on a real-time basis while facilitating reflection in school and at home on students' strengths and weaknesses.

***Comptroller's Recommendation:***

9. The Department should provide additional training to users of the ARIS system.

***Response to Recommendation:***

The Department agrees and will continue to provide additional training to users of the ARIS system. Currently, the Achievement Support Initiatives (ASI) team is available to provide ARIS training to any school that requests it. These trainings cover ARIS Reports, ARIS views, ARIS Connect, ARIS Parent Link, and the more general practice of using student data to make instructional decisions. The ASI team also provides training on features new to the ARIS suite, including the Reading Tracker and Acuity. For example, from September through November of 2011, the ASI team conducted 36 Reading Tracker workshops, reaching 622 participants (300 unique participants that attended an average of 2.1 sessions each) in 194 schools and 48 networks.

In addition, the Department is conducting a Talent Management Pilot with nearly 100 schools in which ARIS is featured as a tool for examining student performance in relationship to teacher practice. School leaders and teachers from these schools have received a series of trainings throughout the 2011-2012 school year designed to familiarize them with ARIS and how it can support good teaching practice.

**Closing Remarks**

Although the Department welcomes constructive recommendations that flow from an understanding of the subject matter and fair survey methodology, it cannot accept findings and recommendations that rest on flawed premises, misleading data, and erroneous observations. The Department hopes that in drafting the final report, the Comptroller will consider the information the Department provided throughout the audit about ARIS's goals and evidence that those goals have been fulfilled, as well as ARIS's role in providing student information to educators and parents. The Department further hopes that the final report will cite the Comptroller's survey data more fairly, rather than grouping "somewhat agree" responses with negative responses. Finally, the Department urges the Comptroller to correct the erroneous statements in the Report concerning ARIS usage data.

In short, the Report fails to recognize that ARIS is an effective tool for supporting quality teaching and, as a result, has had a profound impact on increasing student performance.