



Impact Planning, Evaluation & Audience Research

Randi Korn & Associates, Inc.
118 East Del Ray Avenue
Alexandria, VA 22301

**Summative Evaluation:
Children's Library and Discovery Center
at Queens Central Library**

Prepared for the
Queens Central Library
Jamaica, NY

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EXECUTIVE SUMMARY

INTRODUCTION

This report presents findings from a summative evaluation of the Queens Central Library's newly completed Children's Library and Discovery Center (CLDC). The evaluation included three methodologies: standardized questionnaires administered to drop-in adult visitors, in-depth interviews with various stakeholders, and focused observations of specific areas of the CLDC with short-answer interviews. All data were collected between August and September 2011.

**Selected highlights of the study are included in this summary.
Please consult the body of the report for a detailed account of the findings.**

STANDARDIZED QUESTIONNAIRES

RK&A designed a questionnaire to be administered to the parents at the CLDC. The questionnaire was administered in three languages: English, Spanish, and Bengali. The questionnaire was self-administered and returned to a data collector at the library. A total of 184 questionnaires were collected.

- ◆ 85 percent of respondents are female.
- ◆ Respondents' median age is 36.
- ◆ 44 percent of respondents have a college degree.
- ◆ The largest percentage of respondents identify as African American (38 percent).
- ◆ The largest percentage of respondents said English was their primary language (59 percent). Bengali (20 percent) and Spanish (15 percent) were the next most prominent primary languages.
- ◆ 75 percent of respondents live in Jamaica.
- ◆ 67 percent of respondents said they were visiting the CLDC with their children but with no other adults.
- ◆ The largest percentage of respondents were visiting with one child (versus multiple children) (40 percent).
- ◆ 75 percent of respondents were visiting with at least one child 6 to 12 years old.
- ◆ The largest percentage of respondents said they visit the Queens Central Library every week (44 percent), while many others said they visit the CLDC every month (31 percent).
- ◆ 41 percent of respondents were visiting the new CLDC for the first time.
- ◆ 78 percent of respondents said they or their child used the exhibits that day.
- ◆ The largest percentage of respondents thought the purpose of the exhibits is for children to learn science (52 percent), while many others thought the purpose of the exhibits is for their children to have a hands-on experience (48 percent).

- ◆ The largest percentage of respondents said the exhibits should be changed every 6 months (37 percent), while many others said every 4 months (35 percent).
- ◆ 47 percent of respondents said they or their children looked at books near the exhibits, and 19 percent of respondents said they checked out or borrowed a book near the exhibits.
- ◆ 19 percent of respondents said they or their children attended a program related to the exhibits.
- ◆ When asked how they typically locate books, 73 percent said they ask a librarian.
- ◆ 78 percent of respondents have used the self-checkout machines.
- ◆ When asked to rate eight statements about experiences at the CLDC, “Being in a place that inspires my child to learn about a new subject” was considered most important, and “Using the library to have fun and enjoy ourselves” was considered least important.

IN-DEPTH INTERVIEWS

RK&A conducted telephone interviews with six CLDC librarians, five Discovery Teens, and eleven parents who frequent the CLDC. Interviews were audio-recorded to facilitate analysis.

INTERVIEWS WITH LIBRARIANS

- ◆ Most librarians said they were interested in working in the CLDC because of the library-museum concept, and some pointed out that they were particularly interested in the role of science or interactivity within that concept.
- ◆ When asked what they saw as the primary goals of the new CLDC, most of the librarians talked about a focus on helping children learn, especially about science, math, and technology.
- ◆ All of the librarians interviewed said that they felt the CLDC was successful in meeting its goals. Most said a great number of children and adults utilize the library frequently. Many of them said it is satisfying to see the children enjoying learning and happily using the resources at the CLDC.
- ◆ Librarians said the inquiry method is successful in engaging children and making learning fun. A few said that inquiry was not a new concept, but the training reinforced the inquiry approach.
- ◆ One-half of librarians said that they want additional training to learn more inquiry-based techniques through direct observation of or interaction with museum educators and they expressed a desire for more training on the exhibits.
- ◆ Many of the librarians said that the CLDC does not have enough staff, especially in relation to the large number of customers who need attention and the busy demands of the Reference Desk.

INTERVIEWS WITH DISCOVERY TEENS

- ◆ When asked what motivated them to become a Discovery Teen, all of the interviewees said that they are interested in working with children, science, or both.
- ◆ When asked what they saw as the primary goals of the CLDC, most of the teens discussed the goal to enrich and encourage science learning through books and exhibits.

- ◆ All of the Discovery Teens perceived that the CLDC has been successful in achieving its goals. A few mentioned the high number of customers who regularly attend CLDC programs, while others discussed anecdotal evidence, such as their observation of children and parents making connections between the exhibits and the books.
- ◆ When asked to discuss the most valuable or satisfying aspects of being a Discovery Teen, nearly all of the interviewees talked about how much they enjoy teaching children. The Discovery Teens also discussed ways in which the program has influenced their future career choices and enhanced their experience and skills.
- ◆ The Discovery Teens were asked to describe the kind of training they received from the CLDC, and most of them referenced learning from their supervisor, learning from other Discovery Teens, or visiting the New York Hall of Science. None of them talked about learning about the inquiry method without prompting.
- ◆ When asked to discuss the challenges they face as Discovery Teens, all but one of the interviewees mentioned issues related to the high number of customers. They discussed various aspects of this challenge, such as the need for them to manage many children at once, the ratio of customers to Discovery Teens, and the pressure to serve everyone in a short amount of time.
- ◆ When asked what the CLDC could do to better support them and keep the CLDC strong over time, about one-half of the teens spoke about the need to have regular activities and change the exhibits more frequently in order to keep regular customers engaged.

INTERVIEWS WITH CLDC PARENTS

- ◆ Nearly every parent said they visit the Queens Central Library at least once or twice per week. Many said that a visit usually includes going to the CLDC, reading or participating in reading programs, or borrowing books or other resources.
- ◆ All parents had very positive comments about the CLDC. Many said they most appreciate the physical space or certain aspects about it, describing it as clean, beautiful, exciting, comfortable, kid-friendly, or well laid-out. In addition, about as many parents said they most value the CLDC programs, such as the Saturday Science Lab.
- ◆ The parents who said they use the exhibits were asked to explain what they see as the exhibits' primary purpose. Some said that their purpose is to help children learn, while others said that the exhibits encourage children to explore books to learn more.
- ◆ All of the interviewees said that they borrow books from the library and usually use the self-checkout machines. Most said that they are easy to use, and a couple added that their children use them too.
- ◆ All of the parents interviewed said that their children attend programs at the CLDC. More than one-half of the parents said their children attend the Saturday Science Lab.
- ◆ All of the parents whose children attend the Saturday Science Lab spoke positively about the program. Parents said they like that it is hands-on, diverse in attendance, age-appropriate, and provides different content each week.
- ◆ Parents were asked to discuss challenges related to the CLDC. Several had a variety of suggestions that differed in specifics but were all loosely related to a shared concern: the crowdedness that results from the popularity of the CLDC. They said that there are not enough programs, books, or computers to serve all the customers.

FOCUSED OBSERVATIONS WITH SHORT-ANSWER INTERVIEWS

RK&A observed four specific areas of the CLDC and conducted some short-answer interviews with children and parents.

VISITATION TO DISCOVERY PLAZA 1

- ♦ Observed children spent an average of 9 minutes in the Discovery Plaza 1 area.
- ♦ Many of the children were accompanied by an adult, though the extent of interaction between the adult and child varied. About one-third watched their child use the exhibit, another one-third used the exhibit with the child, and another one-third left the child unattended in the Plaza.
- ♦ Nearly half of the time, observed children used the exhibit with another child and/or watched another child use an exhibit.
- ♦ Nearly all the children used the exhibits as intended, with only about one child misusing any one exhibit.
- ♦ About one-quarter of children perused the books on display near the exhibits; three children actually picked up and flipped through a book. No children were observed reading any books on display.
- ♦ When asked why they thought the CLDC contains exhibits, all the children alluded to learning and fun. Some were more specific, such as one who said, “to learn about science and have fun and experiment,” or another who said, “to explore my senses.”

VISITATION TO DISCOVERY PLAZA 2

- ♦ Observed children spent an average of 5 minutes 30 seconds in the Discovery Plaza 2 area.
- ♦ More than half the time, an adult used an exhibit with their child, while others watched their child or left him/her unattended in the Plaza.
- ♦ Nearly one-third of the time, observed children used the exhibit with another child, while others watched another child, or used an exhibit alone.
- ♦ Nearly all the children used the exhibits as intended, with only about one child misusing any one exhibit.
- ♦ Just one child perused the books on display near the exhibits; one actually picked up and flipped through a book. No children were observed reading any books on display.
- ♦ When asked why they thought the CLDC contains exhibits, all the children said something about learning and having fun or playing. Some were more specific, such as one who said, “to learn about science with the experiments.”

VISITATION TO EARLY CHILDHOOD AREA

- ♦ Observed families spent an average of 30 minutes in the Early Childhood Area.
- ♦ All of the children were accompanied by an adult, though the extent of interaction between the adult and child varied. More than half the time, the adult sat in a comfortable chair and watched their child as he/she used the computers or looked at books or the fish.
- ♦ Some customers, especially children, moved back and forth between the Early Childhood Area and Discovery Plaza 2.

- ◆ When asked why they thought the CLDC contains an Early Childhood Area, most adults provided brief responses, such as, “it’s for the neighborhood,” and “for the community.”

VISITATION TO REFERENCE AND CIRCULATION DESKS

- ◆ There was almost always a line at the Reference Desk. The librarian staffed at the desk frequently left to take customers to a particular book or other section of the CLDC.
- ◆ There was a steady flow of customers using or attempting to use the self-checkout machines at the Circulation Desk. During the observation, most customers experienced some type of technical difficulty so that a librarian had to help.

DISCUSSION

INTRODUCTION

The summative evaluation conducted by Randi Korn & Associates, Inc. (RK&A) for the Queens Central Library's newly-opened Children's Library and Discovery Center (CLDC) sought to understand 1) how its family customers use the new CLDC (and its exhibits) and what they most value about it, and 2) experiences of CLDC staff who interact with the customers. Overall, findings demonstrate that the CLDC is a more-than-welcome addition to Queens Central Library and the community at large; the excitement of customers and staff is almost palpable. When this evaluation began, the CLDC had been open just a month (and anticipated for years), so the exuberance is not surprising. Despite its overwhelming success, the CLDC still faces some challenges, such as the current overcrowding that strains its staff and the fact that customers make little connection between the exhibits and books. This discussion below explores both the successes and challenges.

PROFILE AND VISITATION PATTERNS OF FAMILIES

Findings from the questionnaire demonstrate that, in some ways, the CLDC's audience is relatively homogeneous. For instance, most adult customers are female; reside in Jamaica, Queens; and are visiting the CLDC without any other adults but with one or two children between the ages of six and twelve years. Given the large immigrant population of Queens, it is not so surprising that adult customers at the CLDC are diverse in other ways. African American, Asian/Pacific Islander, or Latino customers constitute the largest proportion of adults. And even though the majority of customers' primary language is English, a sizeable portion primarily speaks Spanish or Bengali. They are also quite diverse in terms of education, with a nearly equal number having a high school diploma, an associate's degree, a bachelor's degree, or post-graduate degree. It is exciting to see that the degree of diversity at the CLDC is reflective of Queens in general because it attests to that fact that the CLDC is a place for the local community at large. This diversity, while a positive attribute, also poses challenges, especially in terms of language barriers. One way the CLDC has addressed the various languages and cultural needs of its customers is to hire Discovery Teens from the community who represent the diverse customer base. Another way to address the language barrier is to consider offering exhibit instructions and interpretations in Spanish and Bengali, possibly in handouts, so parents can carry them around to the exhibits.

Families are faithful and frequent customers of the Queens Central Library and CLDC. In fact, the CLDC seems to function as a community gathering place and a highly prized resource. The majority of families visit once a week or once a month. Further, families engage with the Library in a variety of ways. For instance, many have attended programs, like Summer Reading and Saturday Science Lab, in the CLDC. In interviews, parents named programs as one of the aspects they value most about the CLDC. And even though the CLDC had just opened at the time of this evaluation, most had already used the exhibits multiple times previously. Their frequent visitation to the CLDC speaks volumes about its significance among the community.

While it is exciting that so many families utilize the CLDC frequently, it does lead to crowding at times, as seen in some observations and as expressed by librarians, Discovery Teens, and parents, as noted in

the interviews. This crowding can put a strain on staff and resources. In addition to the crowding, which may decrease over time once the CLDC is not so new, many customers are not self-sufficient when it comes to using the CLDC, and thus, they contribute to the strain. Indicative of this is the fact that most adults noted in surveys that, when they need a resource in the library, they go straight to a librarian for help. Further, adults rated the statement “Having easy access to librarians who can answer my questions” second highest from among a list of what they value about the CLDC. These two findings together demonstrate parents both trust and depend on librarians. Dependence on librarians is not new to the CLDC; anecdotal evidence from years past demonstrates the same behaviors. One promising change toward greater self-sufficiency is that most adults, in questionnaires and interviews, indicated that they had used the self-checkout machines to borrow books and rated them high for ease of use (for both adults and children). The CLDC may want to experiment with other ways to encourage customers to be less dependent on staff for certain tasks.

INTERACTIVE SCIENCE EXHIBITS

Perhaps the most unique feature of the new CLDC is that it contains two Discovery Plazas, which include interactive science exhibits, much like those found in science centers and science museums, and book displays related to the exhibits. Again, the incorporation of exhibits into the CLDC has been anticipated for quite some time, and the Queens Central Library should be commended for its innovative approach to the new CLDC. In fact, it is in keeping with the Institute for Museum and Library Services’ recommendations for the sustainability of libraries and museums through collaborations and the creation of new models and structures that respect the unique mission of libraries (Pastore, 2009).

Findings from each methodology indicate that the exhibits are successful from many perspectives. First, the exhibits are used frequently. Three-quarters of customers used the exhibits on the day they were surveyed, and two-thirds had used them previously. Additionally, observations demonstrate that the exhibits have high dwell time; children spent an average of 9 minutes in Discovery Plaza 1 (which includes 12 exhibits) and an average of 5 minutes 30 seconds in Discovery Plaza 2 (which includes 6 exhibits). As further evidence of their ability to hold children’s attention, focused observations revealed that children who stopped to use any one exhibit typically became engrossed during their use of it, either in a studious way or a fun and playful way. Similarly, there was very little obvious misuse of exhibits (using an exhibit in a random way).

Potentially, the high dwell time of the CLDC exhibits is at least partially a result of the context that surrounds the exhibits. For instance, customers in the library are usually not in a hurry to “see it all” as is often the case in a museum or science center. There is a familiar and relaxed quality among customers in the CLDC, partially because libraries tend to breed quiet contemplation, but also because the CLDC customers feel pride and are intensely comfortable in the library, which they perceive as an essential part of their community. Additionally, seating at the exhibits was conducive to collaborative use of the exhibits and may also account for the exhibits’ high dwell time.

Further, the exhibits also prove successful since children and adults equate the exhibits with learning, and not simply fun. Focused observations and short answer interviews demonstrate that while children did not necessarily learn any complex science concepts, they did take away the message that science is a process of exploration and/or discovery. In part, this success may be attributed to the fact that exhibits are often used in a collaborative way, either among children or between adults and children. The evaluator observed adults and children asking questions of each other or exclaiming at the point of a discovery or surprise. Social interaction and collaboration have long been thought of as a potential asset

of informal education settings like museums and libraries (Bitgood, 2011) and an increasing amount of research shows that, when facilitated properly, social interaction, collaboration, and parent involvement in children’s play and use of exhibits can enhance learning experiences (Puchner, Rapoport, & Gaskins, 2001). Museums often strive to design exhibits that encourage collaboration, but sometimes struggle to attain this phenomenon. Again, the relaxed, familiar context of the CLDC and availability of seating for adults and children may account for some of the collaboration.

Despite the successes thus far, one anticipated challenge of the exhibits is that they may lose their novel appeal due to customers’ frequent use of them. It is too early to know if this will be the case; however, at this point, the exhibits seem to support multiple and sustained use. One way the CLDC plans to address exhibit fatigue is through small programs or facilitated experiences at the exhibits. The Discovery Plazas include white boards and cork boards that allow for changing and updating information. Further, Discovery Teens are trained to facilitate small programs at the exhibits, and these can easily be changed and updated. Given the plans that the CLDC has in place to keep the exhibits fresh, changing exhibits once or twice a year will likely be adequate.

Another challenge to the CLDC is encouraging customers to pursue deeper learning and exploration through books related to the exhibits. While findings from the questionnaire indicate that nearly one-half of adults said they or their children looked at books near the exhibits, it is likely that either courtesy bias affected the response (i.e., they provided a response that they anticipated to be the “right” response or socially acceptable response) or misunderstood the question and meant they looked at books in the vicinity of the exhibits. Observations, which are more objective and conclusive, demonstrate that children or adults using the exhibits rarely looked at the books on display and almost never picked up one. Considering the fact that customers see their experiences with the exhibits as learning experiences, the CLDC had hoped that the exhibits would serve as gateways to further learning and exploration *through books*—which is a key component to the Library’s work. This challenge was explored throughout development of the exhibits in prototype versions. As such, the final design for the Discovery Plazas placed book displays among the exhibits; books were carefully chosen based on their relevance to the exhibit topic, for example magnetism or birds. At one point, librarians developed Pathway Cards for exhibits that suggested further reading, but the formative evaluation showed that they were almost never looked at, and the cards were eventually discontinued.

It is difficult to say what it will require to help customers make that leap from the exhibits to the books. In a 2009 report, the Institute of Museum and Library Services reported a decline in circulation per visit (although increase overall) and discussed the fact that it may be because people are using libraries differently—speaking specifically about people using libraries to access online information (versus print materials) (Henderson, 2009). Potentially, customers are pursuing further learning about the exhibits online, yet the fact remains that they are not doing so through books. For now, facilitated programming is likely the most effective approach to encouraging customers to read and borrow books related to the exhibits. Also, given the affinity and trust customers have for CLDC Librarians and Discovery Teens, the CLDC may consider appealing to this by having Discovery Teens read from *their* favorite books or displaying books that have inspired *librarians’* interest in a particular exhibit topic (similar to “staff picks” that one often sees in bookstores).

STAFF EXPERIENCES

The CLDC is fortunate to have highly motivated staff who enjoy working in the CLDC. Furthermore, CLDC Librarians and Discovery Teens are mostly clear on the goals of the CLDC and its exhibits and value the learning opportunities it provides for children. Overall, staff feel that the CLDC has been

successful in achieving its goals and that their training has prepared them to interact with customers, specifically regarding the exhibits.

However, as mentioned earlier, crowding is a problem that both CLDC Librarians and Discovery Teens think affects their work. Librarians, in particular, spend a lot of time helping visitors at the Circulation and Reference Desk. While one-on-one interaction with customers is important (something that customers value greatly), the CLDC should consider additional ways to alleviate any undue strain from librarians, such as what has been started with the Self-Checkout machines. Helping customers become more self-sufficient will take time, but will hopefully free up staff time in the long-term. Discovery Teens felt similar pressures as librarians regarding crowding. One potential option is to structure programming so that there are group activities facilitated by Discovery Teens as well as activities not requiring facilitation. In this way, the Discovery Teen can work with more manageable subsections of the program attendees. Again, this restructuring may take time for customers to acclimate to, but could pay off in the long-term.

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INTRODUCTION

Queens Central Library contracted Randi Korn & Associates, Inc. (RK&A) to conduct an evaluation of the newly completed Children's Library and Discovery Center (CLDC), partially funded by the National Science Foundation. The much anticipated CLDC opened to the public in July 2011. In addition to traditional children's library resources, the CLDC includes interactive science exhibits, programming space, and an early childhood area.

Specifically, this study was designed to:

- ◆ Identify a profile of CLDC family audience, including demographic information, psychographic information, visitation and program use patterns, and resource borrowing patterns;
- ◆ Identify what families most value about the CLDC, including their use, understanding, and opinion of the Discovery Plazas and exhibits;
- ◆ Determine how families utilize the new model of service featuring RFID technology checkout systems at the Circulation Desk;
- ◆ Examine visitation patterns and opinions of the Early Childhood Area;
- ◆ Explore the nature and qualities of the strong relationship that has formed between CLDC and the core, committed group of families (those who participate regularly and often);
- ◆ Determine perceptions CLDC Librarians and Discovery Teens have of the goals of the CLDC, in particular the relationship they see between the traditional library services and the Discovery Plazas and other new components; and
- ◆ Examine the experience of librarians and teens, including their understanding of inquiry, challenges they face in the new CLDC, and support librarians and teens need to effectively serve customers in the CLDC.

RK&A employed various data collection methods, described below. All data were collected in August and September 2011.

STANDARDIZED QUESTIONNAIRES

Standardized questionnaires were selected for this study so we could collect information from a large sample of people and use statistical analyses to clarify nuances. The questions were specifically designed to collect demographics and background information and explore families' experiences with the CLDC and its exhibits.

METHODOLOGY

RK&A designed a questionnaire to be administered to the parents at the CLDC. The questionnaire was administered in three languages: English, Spanish, and Bengali (see Appendix A). Trained data collectors intercepted visitors exiting the CLDC using a continuous random sampling method. In keeping with this method, data collectors intercepted adult visitors (18 years or older) visiting with at least one child and invited them to complete a questionnaire. The questionnaire was self-administered and returned to the data collector.

ANALYSIS

Questionnaire data are quantitative and were analyzed using SPSS 12.0.1 for Windows, a statistical package for personal computers. The objectives of the study as well as our professional experience were used to inform the analyses, which include descriptive and inferential methods. Appendix B contains a list of all statistical analyses.

DESCRIPTIVE STATISTICS

Frequency distributions were calculated for all categorical variables (e.g., gender and DAM membership). Summary statistics, including the median (50th percentile), mean (average) and standard deviation (spread of scores: “±” in tables), were calculated for variables measured at an interval level or higher (e.g., age and ratings).

INFERENCEAL STATISTICS

Inferential statistics were used to examine the relationship among variables. A 0.01 level of significance was employed to preclude findings of little practical significance.¹

To examine the relationship between two categorical variables, cross-tabulation tables were computed to show the joint frequency distribution of the variables, and the chi-square statistic (X^2) was used to test the significance of the relationship. For example, CLDC visitation was compared by gender to determine if the amount of visitation differs by males and females.

To test for differences in the means of two or more groups, an analysis of variance (ANOVA) was performed and the F-statistic was used to test the significance of the difference. For example, ratings of exhibit experiences were compared by gender to determine if ratings differ by males and females.

IN-DEPTH INTERVIEWS

In-depth telephone interviews were used to explore various stakeholders’ perceptions of and experiences with the new CLDC. In-depth interviews encourage and motivate visitors to describe their experiences, express their opinions and feelings, and share with the interviewer the meaning they construct from an experience. In-depth interviews produce data rich in information because interviewees talk about personal experiences.

METHODOLOGY

RK&A conducted in-depth interviews with three groups of stakeholders: CLDC Librarians, Discovery Teens, and adult CLDC parents (see Appendix C for the three interview guides). The library provided RK&A with the contact information for CLDC Librarians, Discovery Teens, as well as a sample of parents who agreed to participate in an interview. A trained data collector called visitors at an agreed upon time and conducted the interviews using a specially-designed interview guide (see Appendix C). All interviews were audio recorded with visitors’ consent and transcribed to facilitate analysis.

ANALYSIS

The data are qualitative, meaning that results are descriptive. In analyzing the data, the evaluator studied the transcripts for meaningful patterns and, as patterns and trends emerged, grouped similar responses.

¹ When the level of significance is set to $p = 0.01$, any finding that exists at a probability (p -value) ≤ 0.01 is “significant.” When a finding (such as a relationship between two variables) has a p -value of 0.01, there is a 99 percent probability that the finding exists; that is, in 99 out of 100 cases, the finding is correct. Conversely, there is a 1 percent probability that the finding would not exist; in other words, in 1 out of 100 cases, the finding appears by chance.

The objectives of the study as well as our professional experience with art museum visitors informed the analysis.

FOCUSED OBSERVATIONS WITH SHORT-ANSWER INTERVIEWS

Focused observations and short-answer interviews are useful because they concentrate on areas of particular interest to staff; this method also captures the quality of visitors' experiences.

METHODOLOGY

Focused observations with short-answer interviews were used to investigate visitors' experiences with select areas of the CLDC: each of the two Discovery Plazas, the Reference and Circulation Desks, and the Early Childhood Area (see Appendix D for the observation and interview guides). RK&A interviewed a select number of customers after they had been observed (parental permission was required for interviewing children) to understand how they processed their experiences in the various areas. Interview guides were used to focus the interview, and the evaluator also probed as needed.

For the observations, RK&A unobtrusively observed customers as they used one of the four select areas, recorded specific behaviors, and wrote a description of what customers did. All interviews were documented through notes.

ANALYSIS

Focused observations and short-answer interviews were analyzed for behavioral and experiential patterns. RK&A tabulated the occurrences of similar behaviors and experiences.

REPORTING METHOD

Findings from each methodology are presented in separate sections. Sections are organized by themes, and trends in each are presented from most- to least-frequently occurring. Quantitative data are reported in tables with explanatory text; percentages within tables may not always equal 100 owing to rounding. Also, only statistically significant findings that are of practical significance² to the Library are presented in the body of the report (see Appendix B for a complete list of statistical analyses). Qualitative data are reported in narrative, with exemplary quotations, as applicable.

SECTIONS OF THE REPORT:

1. Standardized Questionnaires
2. In-depth Interviews
3. Focused Observations with Short-Answer Interviews

² "Practical significance" is a term used to describe a finding that is statistically significant *and* has decision-making utility. When we run statistical tests on the data, we run several tests with many variables to ensure thorough analysis. However, some statistically significant findings are really not useful to the Library—that is, they are not of practical significance.

STANDARDIZED QUESTIONNAIRES

INTRODUCTION

RK&A designed a questionnaire and administered it to adults 18 years and older at the CLDC at Queen's Central Library. A total of 184 completed questionnaires. All data were collected in August and September 2011.

DATA COLLECTION CONDITIONS

Three-quarters of questionnaires were administered during weekdays and one-quarter of questionnaires were administered during weekends (see Table 1).

TABLE 1
DATA COLLECTION CONDITIONS

DAY (N= 184)	%
Weekend	25
Weekday	75

DEMOGRAPHIC CHARACTERISTICS AND BACKGROUND INFORMATION

Table 2 presents respondents' general demographic characteristics. Adult respondents are largely female (85 percent), and their median age is 36 years.

TABLE 2
GENERAL DEMOGRAPHIC CHARACTERISTICS

GENDER (N= 182)¹	%
Female	85
Male	15
AGE IN YEARS² (N= 178)³	%⁴
18-24	7
25-34	36
35-44	37
45-54	15
55-64	2
65 or older	4

¹ Two respondents did not indicate gender.

² Age: range = 18 – 75; median age = 36; mean age = 37.7 (\pm 10.47)

³ Six respondents did not indicate their age.

⁴Percentages may not total 100 owing to rounding.

EDUCATION

Respondents were asked to identify the highest level of education they had completed. Almost one-half of respondents have a college degree or higher (44 percent) (see Table 3).

TABLE 3
LEVEL OF EDUCATION

EDUCATION (N= 179)¹	%²
Less than 12 years	7
High school graduate	20
Technical school	4
Some college/Associate's degree	26
College graduate/Bachelor's degree	21
Some graduate work	6
Post-graduate work or degree	17

¹ Five respondents did not indicate their highest level of education completed.

² Percentages may not total 100 owing to rounding.

ETHNICITY

Respondents were asked to select the group or groups with which they most identify. More than one-third of respondents identified as African American/Black (38 percent) (see Table 4). About one-quarter identified as Asian/Pacific Islander (26 percent).

TABLE 4
ETHNICITY

ETHNICITY (N= 177)¹	%²
African American/Black	38
Asian/Pacific Islander	26
Hispanic/Latino	22
Multi-ethnic	10
Other ³	9
Caucasian/White	7
American Indian	5

¹Seven respondents did not identify their ethnicity.

²Percentages do not total 100 percent because respondents may have indicated several ethnicities.

³ Other ethnicity (*n* = 16): African, *n* = 1; Bangladeshi, *n* = 2; Bengali, *n* = 2; Black American and Hispanic, *n* = 1; Caribbean, *n* = 1; Caribbean/black, *n* = 1; Guyanese, *n* = 1; Haitian, *n* = 2; Unknown, *n* = 1.

LANGUAGE

Respondents were asked to identify their primary language spoken and they were also given the opportunity to complete the questionnaire in one of several languages (see Table 5). More than one-half indicated English as their primary language (59 percent). About one-fifth of respondents indicated Bengali as their primary language (20 percent). Most respondents completed the questionnaire in English (86 percent).

TABLE 5
LANGUAGE

PRIMARY LANGUAGE (N = 179)¹	%²
English	59
Bengali	20
Spanish	15
Other ³	4
Haitian Creole	2
Tagalog	1
QUESTIONNAIRE LANGUAGE (N = 184)	%
English	86
Bengali	9
Spanish	5

¹Nine respondents did not identify their ethnicity.

²Percentages may not total 100 owing to rounding.

³ Other ethnicity (*n* = 6): French, *n* = 1; Hindi, *n* = 1; Indonesian, *n* = 1; Toruba, *n* = 1; Urba, *n* = 2.

RESIDENCE

Respondents were asked to identify their ZIP code (see Appendix E for a complete list of the ZIP codes and residence analyses). The majority of respondents reside in Jamaica (75 percent), and about one-fifth reside in another area of Queens (19 percent) (see Table 6).

TABLE 6
RESIDENCE

RESIDENCE (N = 171)¹	%
Jamaica	75
Another area in Queens (other than Jamaica)	19
Another area in New York (other than Queens)	4

¹ Twelve respondents did not indicate their ZIP code, and one respondent indicated a ZIP code that did not appear to be a valid.

NYC METRO AREA MUSEUM VISITATION

Respondents were asked which NYC metro area museums they had visited within the last 12 months. More than one-third of respondents had visited the New York Hall of Science (37 percent) (see Table 7). About one-third of respondents had visited either the American Museum of Natural History (30 percent) or had not visited any NYC Metro area museums (27 percent).

TABLE 7
NYC METRO AREA MUSEUM VISITATION

NYC METRO AREA MUSEUM VISITATION (<i>n</i> = 183) ¹	% ²
New York Hall of Science	37
American Museum of Natural History	30
None	27
Brooklyn Children’s Museum	17
Manhattan Children’s Museum	16
Liberty Science Center	11
Long Island Children’s Museum	9
Other ³	6
Cannot recall the name of the museum	6

¹ One respondent did not indicate whether they had visited an NYC metro area museum.

² Percentages do not total 100 because visitors could have visited multiple museums.

³ Other Museums: See Appendix F for a list of other museums visited.

STATISTICALLY SIGNIFICANT FINDINGS

Respondents’ visitation to NYC Metro Area museums was tested by several variables. There is one significant finding³:

- ♦ Respondents who had a college degree (B.A. or higher) were more likely to have visited the New York Hall of Science (49 percent) than respondents with no college degree (28 percent) (see Table 8).

TABLE 8
VISITATION TO NEW YORK HALL OF SCIENCE BY EDUCATION

VISITATION TO NEW YORK HALL OF SCIENCE (<i>n</i> = 178)	HIGHEST LEVEL OF EDUCATION COMPLETED		TOTAL
	NON-COLLEGE EDUCATED	COLLEGE-EDUCATED (B.A. OR HIGHER)	
	%	%	
Visitation to New York Hall of Science ¹	28	49	37

³ Only statistically significant findings that also have practical significance are presented in the body of the report.

¹ $\chi^2 = 7.657; p = .006$

VISIT CHARACTERISTICS

This section describes visit characteristics including details of the visit group (whom the respondent was visiting with), Queen’s Central Library and CLDC visit history, and program participation.

DESCRIPTION OF VISIT GROUP

Approximately two-thirds of respondents were visiting with no other adult (67 percent), and most respondents were visiting the Library with at least two children (60 percent) (see Table 9). Most respondents were visiting the Library with at least one younger child (6-12 years) (75 percent).

TABLE 9
DESCRIPTION OF VISIT GROUP

NUMBER OF ADULTS IN VISIT GROUP (NOT INCLUDING THE RESPONDENT) (n = 180)¹	%²
None	67
One	23
Two	7
Three or more	4
NUMBER OF CHILDREN IN VISIT GROUP (n = 181)³	%
One	40
Two	31
Three	16
Four or more	13
AGES OF CHILDREN IN VISIT GROUP (n = 406)⁴	%⁵
Visiting with at least one child 0-5 years	48
Visiting with at least one child 6-12 years	75
Visiting with at least one child 13-17 years	4

¹ Four respondents did not indicate the number of other adults in their group.

² Percentages may not total 100 owing to rounding.

³ Three respondents did not indicate the number of children in their group.

⁴ Child age: range = 0 – 17; median age = 7; mean age = 6.6 (± 3.29)

⁵ Percentages do not total 100 because visitors could be visiting with children in multiple age groups.

QUEEN’S CENTRAL LIBRARY AND CLDC VISITATION

Less than one-half of respondents reported visiting the Queen’s Central Library at least once a week (44 percent), and less than one-third of respondents reported visiting the Library at least once a month (31 percent) (see Table 10, next page). More than one-half of respondents (59 percent) had visited the CLDC in the past. About one-third of respondents had never visited the CLDC before that day (31 percent) while a similar number of respondents had visited 5 times or more (30 percent).

Of Queen’s Library programs, more than one-third of respondents had attended the summer reading program (38 percent).

TABLE 10
QUEEN’S CENTRAL LIBRARY AND CLDC VISITATION

QUEEN’S CENTRAL LIBRARY VISITATION (n = 180)¹	%²
Everyday	8
At least once a week	44
At least once a month	31
At least a few times a year	17
FIRST VISIT TO NEW CLDC (n = 183)³	%
Yes	42
No	59
QUEEN’S LIBRARY PROGRAM PARTICIPATION (n = 183)⁵	%⁶
Summer reading program	38
Saturday Science Lab	27
Toddler Time	15
Summer Story and Crafts	15
Read and See	14
Discovery Cart Program	9
BOOST	9
Summer Films	9
Timeless Tales	4

¹ Four respondents did not indicate their visitation frequency to the Queen’s Library.

² Percentages may not total 100 owing to rounding.

³ One respondent did not indicate whether this was their first visit to the new CLDC.

⁴ Two respondents did not indicate the number of visits to the new CLDC.

⁵ One respondent did not indicate whether they had attended one of the programs.

⁶ Percentages do not total 100 because visitors could attend more than one program.

EXPERIENCE WITH CLDC EXHIBITS

USE OF EXHIBIT

The majority of respondents had used the exhibits that day (78 percent) (see Table 11, next page). More than one-third of respondents had never used the exhibits in the past (36 percent).

TABLE 11**USE OF EXHIBITS**

TODAY (N= 178)¹	%
No	22
Yes	78
BEFORE TODAY (N= 181)²	%³
Not at all	36
1 - 2 times	25
3 – 4 times	16
5 times or more	24

¹ Six respondents did not indicate whether they used the exhibits today.

² Three respondents did not indicate the number of times they used the exhibits in the past.

³ Percentages may not total 100 owing to rounding.

GENERAL RATING OF CLDC EXHIBITS

Respondents rated three experiences with CLDC exhibits on three scales. Respondents' highest mean rating was on the scale from 1, "The exhibits are only interesting enough to use every once in a while," to 7, "The exhibits are interesting enough to use every time we visit the CLDC" (mean = 5.7) (see Table 12). The two remaining scales, from 1, "The exhibits are difficult to understand," to 7, "The exhibits are easy to understand" and from 1, "The exhibits have not increased my child's(ren's) interest in science and nature," to 7, "The exhibits have increased my child's(ren's) interest in science and nature" each have a mean rating of 5.5).

TABLE 12**GENERAL RATINGS OF CLDC EXHIBITS**

SCALES	n	MEAN	±
The exhibits are only interesting enough to use every once in a while (1) / The exhibits are interesting enough to use every time we visit the CLDC (7)	153	5.7	1.65
The exhibits are difficult to understand (1) / The exhibits are easy to understand (7)	153	5.5	1.85
The exhibits have not increased my child's(ren's) interest in science and nature (1) / The exhibits have increased my child's(ren's) interest in science and nature (7)	151	5.5	1.91

PURPOSE OF EXHIBITS

Respondents were asked to describe the primary purpose of the exhibits in the CLDC. About one-half of respondents reported that the purpose of the exhibits was either “For children to learn science” (52 percent) or “For children to have a hands-on experience” (48 percent) (see Table 13).

**TABLE 13
PURPOSE OF EXHIBITS**

PURPOSE OF EXHIBITS (N= 163)¹	%²
For children to learn science	52
For children to have a hands-on experience	48
To inspire children to read books about the exhibit topics	26
To help children do better in school	22
For children to have fun	16
So children have something to do in the Library	7
Other ³	1

¹ Twenty one respondents did not respond to this question.

² Percentages do not total 100 because visitors could choose one or two purposes for these exhibits.

³ Other purpose (n = 2): To expand their horizons, n = 1; no purpose indicated, n = 1.

STATISTICALLY SIGNIFICANT FINDINGS

Respondents’ perceptions of the primary purpose of the CLDC exhibits were tested by several variables. There is one significant finding⁴:

- ♦ Respondents who visited with at least one child between 6 and 12 years of age were more likely to report that the exhibits were “for children to learn science” than those respondents visiting without children in this age group (see Table 14).

**TABLE 14
FOR CHILDREN TO LEARN SCIENCE BY WITH OR WITHOUT CHILD AGED 6-12 YEARS**

PURPOSE (N= 163)	WITH CHILD AGED 6-12 YEARS		TOTAL
	YES	NO	
	%	%	%
For children to learn science ¹	57	33	52

¹ $\chi^2 = 6.799; p = .009$

⁴ Only statistically significant findings that also have practical significance are presented in the body of the report.

REPLACING EXHIBITS

Respondents were asked about how often they think the CLDC should replace the exhibits with new exhibits. More than one-third of respondents either said “at least twice a year” (37 percent) or “at least three times a year” (35 percent) (see Table 15, next page).

TABLE 15
REPLACING EXHIBITS

REPLACING EXHIBITS (N = 182)¹	%²
At least twice a year (every 6 months)	37
At least three times a year (every 4 months)	35
At least once a year	23
Never	6

¹ Two respondents did not respond to this question.

² Percentages may not total 100 owing to rounding.

USE OF BOOKS NEAR EXHIBITS

Respondents were asked whether they had looked at or borrowed any books located next to the exhibits. About one-half of respondents looked at books near the exhibits (47 percent) (see Table 16). However, fewer respondents actually borrowed books near the exhibits (19 percent).

TABLE 16
USE OF BOOKS NEAR EXHIBITS

LOOKED AT BOOKS (N = 183)¹	%
Yes	47
Did not use the exhibits ²	25
No	14
Not sure	14
BORROWED OR CHECKED OUT BOOKS (N = 178)³	%⁴
No	39
Did not use the exhibits ⁵	29
Yes ⁶	19
Not sure	14

¹ Two respondents did not indicate whether they looked at the books nearby the exhibits.

² Six respondents who indicated that they had used CLDC exhibits today, chose “Did not use the exhibits” for this question.

³ Seven respondents did not indicate whether they borrowed any books nearby the exhibits.

⁴ Percentages may not total 100 owing to rounding.

⁵ Eleven respondents who indicated that they had used CLDC exhibits today, chose “Did not use the exhibits” for this question.

⁶ Topics of borrowed books: See Appendix G for a list of the borrowed book topics.

PROGRAM PARTICIPATION

Respondents were asked if they participated in any programs related to the exhibits. One-half of respondents did not participate in any of these programs (51 percent) (see Table 17, next page).

TABLE 17
PROGRAM PARTICIPATION

PROGRAM PARTICIPATION (N = 179)¹	%
No	51
Did not use the exhibits ²	24
Yes	19
Not sure	6

¹ Five respondents did not indicate whether they participated in a program.

² Four respondents who indicated that they had used CLDC exhibits today, chose “Did not use the exhibits” for this question.

EXPERIENCES WITH OTHER LIBRARY RESOURCES

LOCATING BOOKS IN CLDC

Respondents were asked how they typically locate books within the CLDC. Most respondents reported that they “Ask a librarian” (73 percent) (see Table 18). Few reported that they “Use the computer system to locate the book” (6 percent).

TABLE 18
LOCATING BOOKS

LOCATING BOOKS (N = 172)¹	%
Ask a librarian	73
Wander around until I find it	20
Use the computer system to locate the book	6
Other ²	1

¹ Two respondents did not indicate how they typically locate a book in the CLDC.

² Other locating books (n = 1): Not specified

USE OF SELF-CHECKOUT MACHINES

Respondents were asked if they had ever used the self-checkout machines, if not, their reason for not doing so, and if so, they were asked to rate their experience with these machines on two scales. The majority of respondents had used a self-checkout machine (78 percent) (see Table 19, next page). For those respondents who had not used the machines, one-half of these respondents reported that they

“didn’t know about it” (50 percent) and about one-third reported that “I prefer to talk with a librarian” (34 percent) (see Table 20, next page).

Respondents rated their experiences with the self-checkout machines on two scales. The highest mean rating was on the scale from 1, “The self-checkout machines are difficult for adults to use,” to 7, “The self-checkout machines are easy for adults to use” (mean = 6.1) compared to the of 5.6 mean rating on the scale from 1, “The self-checkout machines are difficult for children to use,” to 7, “The self-checkout machines are easy for children to use” (see Table 21, next page).

TABLE 19
USED SELF-CHECKOUT MACHINES

USED SELF-CHECKOUT MACHINES (N= 179) ¹	%
Yes	78
No	22

¹ Five respondents did not indicate whether they have used a self-checkout machine.

TABLE 20
REASON FOR NEVER USING

REASON FOR NEVER USING (N= 38) ¹	%
Didn’t know about it	50
I prefer to talk with a librarian	34
Other ²	13
Too difficult to use	3

¹ One respondent who indicated that they had never used the self-checkout machines did not indicate a reason for not doing so.

² Other reason for never using (n = 5): First time in CLDC, n = 1; Have not checked out any books yet, n = 1; I don’t have a card, n = 1; Visiting from Sunnyside, n = 1.

TABLE 21
GENERAL RATINGS OF SELF-CHECKOUT MACHINES

SCALES	n	MEAN	±
The self-checkout machines are difficult for adults to use(1) / The self-checkout machines are easy for adults to use (7)	135	6.1	1.60
The self-checkout machines are difficult for children to use (1) / The self-checkout machines are easy for children to use (7)	130	5.6	1.70

DESIRED EXPERIENCES IN CLDC

Respondents rated eight statements about their desired experiences in the CLDC on a scale from 1, “Not important to me,” to 7, “Very important to me,” to determine what respondents desire when utilizing the CLDC.⁵ Overall, respondents rated the eight different purposes somewhat similarly. However, respondents placed the greatest importance on the statement, “Being in a place that inspires my child to learn more about a new subject” (mean = 6.6) (see Table 22, next page). Respondents also placed great importance on the statement, “Having easy access to librarians who can answer my questions” (mean = 6.3). Respondents placed least importance on the statement, “Using the Library to have fun and enjoy ourselves” (mean = 5.9).

TABLE 22
DESIRED EXPERIENCES IN CLDC

SCALE: NOT IMPORTANT TO ME (1) / VERY IMPORTANT TO ME (7)			
DESIRED EXPERIENCES IN CLDC	<i>n</i>	MEAN	±
Being in a place that inspires my child to learn more about a new subject	174	6.6	0.94
Having easy access to librarians who can answer my questions	171	6.3	1.15
Using books and resources <u>in the CLDC</u> to help with school work	167	6.1	1.35
Participating in science-related activities or programs	166	6.1	1.31
Being able to locate resources on my own	167	6.0	1.25
Being able to locate books and resources quickly	175	6.0	1.47
Reading books <u>in the CLDC</u> with my child(ren) for pleasure	172	6.0	1.33
Using the Library to have fun and enjoy ourselves	169	5.9	1.53

⁵ In looking at these rating scales, note that it is useful to interpret mean ratings relative to each other, versus individually, as relative ratings indicate what is most important versus least important to respondents.

IN-DEPTH INTERVIEWS

INTRODUCTION

RK&A conducted in-depth interviews with three groups of CLDC stakeholders: CLDC Librarians, Discovery Teens, and adult parents in the CLDC. All interviews were conducted via telephone between August and September 2011 and audio recorded to facilitate analysis. Interviews with each group of stakeholders are described separately below.

INTERVIEWS WITH LIBRARIANS

RK&A conducted in-depth telephone interviews with six librarians from the Queens Central Library CLDC in August and September of 2011. The librarians' backgrounds varied. Three had been involved in the planning and development of the new CLDC, while the other three had no prior involvement other than having worked at other branches of the Library. All of the librarians interviewed had been working in the new CLDC for roughly two months, or since it opened.

When asked to describe their role at the CLDC, the librarians discussed a variety of regular duties including reading stories, organizing arts and crafts activities, scheduling and leading tours for school groups, touring and explaining exhibits, and staffing the Reference Desk. They also said they work on collection development, ordering books, making connections between books and exhibits, and helping people locate books. The librarians coordinate children's programming for different ages, and one noted that eventually they will focus more on outreach to schools and parents. Throughout the interviews, most of the librarians expressed an understanding of the broader context and connectedness of their duties, especially as they relate to helping children learn and enjoy learning (see the quotation below).

I think my responsibility is to get [children] familiar with this exhibit and help them to learn [through] interactive activities. I help them to find information, encourage them to find information in books, [and get them] interested in books through interactive activities.

PERCEPTIONS OF THE CLDC

The librarians spoke about their perceptions of the CLDC throughout the interviews, responding to specific questions about their motivations to be a librarian at the CLDC, the goals of the CLDC, and the most satisfying or valuable aspects of their work.

MOTIVATIONS

When asked what motivated them to pursue a librarian position at the CLDC, most interviewees said they were intrigued by the library-museum concept, and some pointed out that they were particularly interested in the role of science or interactivity within that concept (see the first quotation below). One-half said that they pursued the position because they were ready for a new professional challenge; for example, one interviewee elaborated on the professional opportunity by mentioning her interest in learning more about the new technology (see the second quotation below). Of the three interviewees who were involved in the development of the new CLDC, all said that their role in the planning process strongly encouraged them to become a librarian at the CLDC.

I think the whole idea of the promoting science [was motivating to me]. I always liked science myself, and I like the idea of helping children with science and other topics. I like the hands on. I like the museum/library hybrid concept. So all of those things really motivated me to want to work here.

I think this [position] is also a great opportunity for me to develop my own potential and to learn more new technology. We use a lot of new stuff, so I always want to learn something new. And I like to see new technology.

PERCEPTIONS OF THE GOALS OF THE CLDC

When asked what they saw as the primary goals of the new CLDC, most of the librarians talked about a focus on helping children learn, especially about science, math, and technology. Some added that the CLDC strives to make a connection between exhibit content and books or literature (see the first quotation below). Several librarians spoke about the role of hands-on learning and interactivity as a means of encouraging a love for learning or making content less intimidating to children and parents; a few of them also discussed how the CLDC differs from a traditional library in this regard (see the second quotation below). Only one librarian mentioned without prompting the role of the CLDC in the community, reiterating that the CLDC strives to be a place for more than just borrowing books (see the third quotation). There seemed to be an overarching sense among the librarians that the CLDC is on the forefront of a necessary new approach to libraries that includes dynamic programming, new technology, and interactivity.

I guess [the primary goal is] to emphasize the math and science agenda... with all the exhibits and stuff. And to bring science and literature together, because where the exhibits are, we always have book displays that pretty much correlate to the exhibits, so I think that [is a primary goal]—pushing the math and science and connecting it with the literature.

Our primary goal in the CLDC is to help kids to learn, explore through the interactive activities, through the science labs, encourage them to read a lot of books. ... Not like a traditional library for just checking out books.

[The CLDC ties] in with the library's evolving role as more of a community center as opposed to just a place that you pick up and drop off books. And that's very much the case in Queens, probably more so than anywhere else in the country ... so I think the idea is to take advantage of the fact that we are community centers and use that...to strengthen kids' science and math skills in a way that [is] fun and exciting.

PERCEPTIONS OF SUCCESS IN MEETING GOALS

All of the librarians interviewed said that they felt the CLDC was successful so far in terms of meeting its goals. As evidence of its success, most described the many children and adults that utilize the Library and their high or frequent usage of the resources and programs (see the first quotation below). When describing successful aspects of the CLDC, several librarians talked about the happy facial expressions of people entering the CLDC or recounted visitors' positive comments about the facility. Some explained specific aspects of the CLDC that have helped contribute to or exemplify its early success, including the Discovery Team and its programs, the CLDC's accessibility to people with special needs or low-income audiences, and the effectiveness of the exhibits at engaging children and their parents (see the second and third quotations).

The most satisfying aspect is seeing how much the children love [the CLDC] and how they really are making use of all the exhibits, all the resources, and there's still more to come. That has

been very exciting. I don't think we could ask for more than the response we've gotten from the children and the parents.

The Discovery Team [is] great. They've got their program up and underway, and they get big groups of kids...every Saturday and then during the week. The Discovery Team young people are well trained and great. I think they're amazing, and the programs are good and interesting, and the kids love them. So I think...they're a big success.

I can see the way the exhibits are really being used, I mean even kids that come in every day—they never stopped using them. They hold an attraction for them and I see that parents...like in a museum...are sitting and explaining the stuff to the kids. And I think that's the best way that the CLDC is making its goals.

MOST VALUABLE ASPECTS

The librarians also discussed what was most satisfying to them about their work, and as part of this, they elaborated on the most valuable aspects of the CLDC. Many of them spoke about how satisfying it is to see the children enjoying learning and happily using the resources at the CLDC. In particular, they discussed the Saturday Science Lab, which is very well attended, perhaps because it is hands-on and ever changing (see the first quotation below). They also mentioned the high-quality resources, such as the early childhood stations, the computers, and the expansive collection of books (see the second quotation). Several of the librarians voiced appreciation that the facility is visually appealing, noting that the space is bright and comfortable, which makes it more pleasant for visitors and employees (see the third and fourth quotations).

They have the science lab just on Saturdays, and over 70 children come...every Saturday. I think that's wonderful. It's usually hard to get children to come to programs every single week. But these kids come to the program every single week because every week they have something new; they can touch it...it's hands on. So they're able to...touch and feel while they're learning. That's really important to me.

There are lots of books and there's lots going on. I feel like it's a really amazing resource for the community, and it feels good to be able to be a part of this.

[Customers] just love the library. [It is] so comfortable. It's very bright and colorful. We have big windows. It's good for reading.

[The CLDC is] a very pleasant space to work in. [It's] light, bright, and open. It feels very new and modern. So the space itself is very visually appealing.

TRAINING AND SUPPORT

The librarians were asked to describe the training and support they received and continue to receive at the CLDC. In response, three librarians specifically mentioned inquiry training (using the terminology "inquiry"), while two other librarians described inquiry-based methods but could not remember the term, and one did not reference or describe inquiry at all (see the first quotation below). The librarians said that the inquiry training and visits to children's museums were helpful and have been utilized at the CLDC (see the second quotation). A few said that the role-playing exercises in particular, during which they acted out the perspective of children of different ages, were the most helpful part of their training.

We went to the Brooklyn Children's Museum, and we saw how they ran their operation. We also went to the Queens Museum [New York Hall of Science], and we got training on using the

inquiry-based method in programming and stuff. So that was the training [we received]...pretty much a lot of inquiry-based training.

We've had visits to children's museums and [a few sessions of] training in the inquiry method. And the visits to museums were a part of that as well – to see how museums do this kind of informal education. So we were able to understand how that works, and we've been able to change our programs to bring more of that informal education aspect to them.

When asked to elaborate on the helpfulness of the inquiry training, the librarians described the ways in which they incorporate inquiry in their work at the CLDC. A few of them said that although the ideas were not necessarily new or eye-opening, the training has helped reinforce the inquiry approach and remind them to use it when interacting with children (see the first quotation below). There was a general sense among the librarians that the inquiry method is successful in engaging children and making learning fun (see the second quotation).

(Why was the inquiry-based training helpful for you?) Well, it wasn't so much that the information was new...You could have thought it through on your own. But it just sort of forced me to think about that kind of thing. And so now as I interact with the children at the exhibits, I kind of keep it in mind. So a little reminder about how things should work and how we should help the children sort of reach their own conclusions about what they're looking at.

The most helpful thing is understanding the process of using the question and answer method or the inquiry method to involve children rather than just presenting information to them. Using this method to involve them and engage them as well as hands-on activities, various hands-on materials that we have. It makes the program much more enjoyable for everybody.

In terms of continued support, several librarians appreciated that they are consistently encouraged to pursue professional development opportunities, such as workshops or conferences (see the first quotation below). They also expressed a general sense that the librarians are well supported by the managers if they have questions or need additional training on library resources (see the second and third quotations).

Whenever we have a chance, they send us out to different kinds of workshops and trainings and different kinds of conferences... I think I learn a lot from these kinds of activities, trainings. Benefit a lot from them.

The managers are very supportive...so I always feel there's somebody I can ask here. [There is] no fear of not being able to ask.

There is training all the way down the line. Right now we're beginning to introduce some of the new technology; we just had a smart board installed, and the Library is going to provide training for all of us on how to use it. We have the early literacy stations and the early childhood center, and we had training on how to use those. So we're getting support for using all the new equipment that's coming in, and there's constant staff development, training sessions, webinars, all sorts of things like that.

When asked if any aspects of their training was lacking, the librarians' responses were split, with about one-half saying that no aspects were lacking, while the other one-half said that they want or would have liked more training. Those who wanted more training elaborated on two specific areas of need. First, they expressed a desire to learn more inquiry-based techniques through direct observation of or

interaction with museum educators (see the first quotation below). Second, they expressed a desire for more training on the exhibits, with one librarian admitting that she did not fully understand the science behind some of the exhibits (see the second quotation).

The only thing that I would have liked is perhaps to have a chance to observe professional museum educators or professional informal educators doing their job in their own setting. Instead of getting the information only from workshops, it would have been very helpful to observe the methods in action.

We could use a little more training in terms of what the exhibits are trying to teach. Because we actually haven't had anyone [explain] the science behind the exhibits. [For example,] the exhibit about the eye is one I don't really understand.... If you close one eye, it looks like...a sunken face image, like it's three-dimensional. I have no idea why that is, and we haven't really learned that. I feel like we could probably use some more very specific training on what the actual exhibits are teaching.

CHALLENGES

Although their perceptions of the CLDC were generally positive, the librarians discussed several areas in need of improvement. Many of the librarians said that their work is somewhat challenging due to the simple fact that everything is very new, from the facility to the systems (see the first quotation below). For those who had not yet worked in the Central Library, the sheer size and number of books can be overwhelming, and learning where everything is located is a challenge (see the second quotation). They conveyed a sense of understanding that these were temporary, transitional, or “startup” issues rather than long-term or mission-related.

I think the fact that [the CDLC is] new and the systems of how things are going to work have not yet been in place [has been challenging]. It's like moving into a new house. Stuff is in boxes and people have been in conferences, so a lot of the day-to-day stuff that you take for granted about how things work within the Library haven't been decided yet.

It's a big change from the [children's library] room that I came from, so I think getting used to where things are—that logistics kind of stuff. That's probably the biggest challenge for me.... I mean we spend a lot more time on the floor [now] than before we moved into here.

Many of the librarians said that the CLDC does not have enough staff, especially in relation to the large number of customers who need attention and the busy demands of the Reference Desk (see the first quotation below). The lack of sufficient staff also affects the librarians' logistical needs such as ordering office supplies (see the second quotation). In addition, the work of the current staff is made even more challenging due to unclear division of labor or task delegation (see the third quotation).

We're short staffed. That means people are spending most of their day on the Reference Desk and everyone has to multitask, do all their other work while being interrupted. The whole problem with it is that customer service seems to be an interruption because everybody's trying to do their other work while at the Reference Desk. It's very hard to give full attention to customers when you're trying to do something else at the same time. Everybody's enjoying it and doing a good job of it, but it's very hard that way. It would be much better if we had more librarians as well as a better workspace.

We're not fully staffed yet, so that's been a challenge as far as scheduling...and it trickles down to other things. Like we don't have a supervising clerk who would normally order office

supplies. Very simple things that we do on a day-to-day basis, [like] processing a book correctly, we may not have the right labeling. Or the other day I was trying to withdraw some books, and we couldn't find an extra inkpad.

In the past, I've been the only children's librarian, but now we're trying to figure out who does this and who does that [in terms of programming]. And sometimes you might be assigned one responsibility but maybe the other librarian didn't realize it. So then they're doing that responsibility instead of you. So that can be a little frustrating.

A couple of the librarians, who had also been involved in the planning and development of the CLDC, noted some challenges related to the building design and layout of the space. One said that aspects of the display space could be improved to facilitate the locating of books by customers and staff (see the first quotation below). Another said that the staff workspace is insufficient and that there are not enough computer stations (see the second quotation).

There are certain aspects of the display space...certain ways of shelving books, which could have been better. Instead of just having the books like on shelves spine out, it's sometimes better to put them face out, so the cover's out, and it's easier for the customers. It's also easier for us.... I know that we made these suggestions and I'm not sure you know, how much they were listened to.

Speaking strictly about the staff space, I think that there really should have been more computers for staff since we do use a lot of computers in our work. And it's very difficult for a lot of the librarians who don't have their own computer at their disposal. So I think it would be an improvement, especially since now the computers are shared between full-time and part-time staff. I think it would be better for staff if there were more personal workspace, maybe even cubicles instead of just working at one large shared counter.

SUGGESTIONS OR NEEDED SUPPORT

The librarians were asked what the CLDC could provide to better support the librarians or customers, and they offered a variety of suggestions for improvement. Many of them said that the exhibits and programs should change frequently, about every few months, so that regular customers could experience a greater variety of resources (see the first quotation below). They also felt that the exhibits should be kept in good working order and the collection should remain current. Some librarians connected the need for changing exhibits with the need for the CLDC to be innovative, relevant, and open to new ideas (see the second quotation). Others repeated the issue of potentially confusing content of the exhibits, suggesting that the exhibits have better explanations or that the librarians have more training on using them (see the third quotation).

We do get a lot of regular people, so I [suggest] switching around the exhibits [and] making sure the exhibits are in working order and clean... I'd just like to continue what we're doing with the activities and ...we don't have to change every week, but every few months or something. Just keeping it fresh. Just like the big museums do.

For the customers, I think we have to continue to provide programs that are interesting and relevant, and if the community changes, it's important to track those changes and keep the programming and the resources relevant and new, to bring in new things as they become available, to try new ideas, to be flexible and open-minded.

I would suggest we have new exhibits ... [also] just more explanations on the exhibits. People probably don't get it. They think they know how to play with it, [but] they don't know why it's doing this, why it's doing that.

Other suggestions offered by the librarians addressed a range of different topics, but several of them narrowed in on issues related to how the staff works together. One librarian thought that the CLDC should do more to creatively connect literature and science, also saying that they could take better advantage of this opportunity to innovate and collaborate if the staff were organized more effectively (see the first quotation below). Another librarian had similar thoughts about the need for greater staff alignment, especially since the librarians came from different branches with different policies to work together on such a big project. Another interviewee discussed professional development needs, saying that the librarians should be better informed about issues of importance to the field, including education, technology, and special needs populations (see the second quotation).

At this point we need to have the opportunity to interact with each other and plan how we're going to do things differently with the Library. ... Right now ... we're still setting things up and some things [haven't] been determined yet [regarding] who's in charge of what. So I think it's an organizational issue, and hopefully we'll be given a chance to be innovative and work together to do some different kinds of things.

I think it's important to keep the librarians informed about changes in the library world and in education because there's a strong link between what we're doing here and what's happening in the schools. I think [we should] keep everybody informed about changes in technology and education and serving the increasing special needs population.

INTERVIEWS WITH DISCOVERY TEENS

RK&A interviewed five Discovery Teens from the Queens Central Library CLDC. Three of the teens had been involved with the Queens Central Library prior to becoming a Discovery Teen at the CLDC. The other two teens had no formal prior involvement with the Queens Central Library other than having borrowed books, and both had been Discovery Teens for about six months.

When asked to describe their role at the CLDC, nearly all of the Discovery Teens talked about working at the Saturday Science Labs and running daily discovery cart activities that align with the interactive exhibits (see the first quotation below). Some of the teens talked about how the exhibits relate to the books and explained that they have a collection of books for the discovery cart activities. When asked for more details about how they interact with families, the teens said that they answer questions from children and parents about the exhibits and that the parents often stay to observe the Saturday Science Lab. The one interviewee who had been a Discovery Teen for three years gave a slightly more nuanced explanation of the position, describing the goal to make science and math relevant in children's everyday life (see the second quotation).

I'm a Discovery Teen member and what we do is that we teach kids about the exhibits and all the interactive exhibits and we have our Saturday Science Lab that we do every Saturday and it's all science projects and we do daily cart activities. We have at least one cart activity for the day.

I've been working with Discovery Teen for three years. My job is basically to [explain] content [about] science, technology, engineering, and math [to kids,] and just to make it helpful and useful in their everyday life and show them concepts through science material.

PERCEPTIONS OF THE CLDC

The Discovery Teens spoke about their perceptions of the CLDC throughout the interviews, responding to questions about their motivations to work there, the goals of the CLDC, and the most satisfying or valuable aspects of being a Discovery Teen.

MOTIVATIONS

When asked what motivated them to become a Discovery Teen, all of the interviewees said that they are interested in working with children, science, or both. Regarding their work with children, some of the teens explained that the CLDC offers a healthy alternative to television or improves children's lives by providing learning opportunities, which makes them proud to be a Discovery Teen. Others said that they enjoy or feel skilled working with children, or that they like helping people (see the three quotations below). Of the teens that expressed an interest in science as a motivating factor, a few said they are seriously pursuing an academic or professional career in the sciences (see the third quotation).

[The Discovery Teen program is] an opportunity to learn and teach kids, and that's what I like. I like teaching kids and showing them something that I know will affect their life better.

[The Discovery Teen role is] centered around science, and that's pretty much my favorite subject in school, so I knew [it] would be good for me. I babysit and work with kids a lot, so I knew that I would also be really great for this job. So I thought it would be a really good thing for me to do, because it involves two things that I really enjoy.

I was interested [in the Discovery Teen program] because in school I always had a passion for science, and my dream is to become a physician assistant, and I really love helping people.

PERCEPTIONS OF THE GOALS OF THE CLDC

When asked what they saw as the primary goals of the CLDC, most of the teens discussed the goal to enrich and encourage science learning through books and exhibits (see the first quotation below). Some of them described the library-museum hybrid approach, acknowledging the uniqueness or accessibility of the CLDC as a place for learning that goes beyond the traditional library (see the second quotation). A few of the teens said that the goal of the CLDC was to make learning fun through interactive and hands-on activities.

[The primary goal of the CLDC is] to get kids more interested in science. We try to put books next to the exhibits that relate to the exhibit so we definitely get them interested in science, but also to get them to check out books that interest them.

The primary goal [is] to enforce library materials or books, but I think they're also trying to...show people that it's an educational institute more so than just a library. That you can learn a whole bunch of things in the library and not only read. So that's why they have the Discovery Team.

PERCEPTIONS OF SUCCESS IN MEETING GOALS

All of the Discovery Teens gave positive responses when asked whether they thought the CLDC had been successful so far in achieving its goals. They give different examples of evidence for its success. A few mentioned the high number of customers who regularly attend CLDC programs, such as the Saturday Science Lab, or utilize the exhibits (see the first quotation below). Others discussed anecdotal evidence, such as their observation of children and parents making connections between the exhibits

and the books and enhancing their understanding of the material through these resources (see the second quotation).

Yes, it is. [The CLDC is] achieving its goals. Everyday you see a lot of kids in there.

The books are right there where the exhibits are, so sometimes I see kids when they start playing with the exhibits, they look at the books and see what they don't understand or take the books with them. So they're relating and [the books are] helping the kids understand more... Not just the exhibit.

MOST VALUABLE ASPECTS

When asked to discuss the most valuable or satisfying aspects of being a Discovery Teen, nearly all of the interviewees talked about how much they enjoy teaching children. They elaborated by saying that it is especially rewarding when the learning is fun for the children, when the material learned is particularly challenging, or when the children make progress in their science learning (see the first quotation below). Some of the teens spoke about more specific aspects of their work at the CLDC, such as the focus on interactivity, the advanced technological resources at their disposal, or the one-on-one learning encouraged by cart activities (see the second quotation).

We see regular kids and just seeing that they're progressing in the science field [is satisfying]. Some of the kids never even had a passion for science, and because we helped them, ...they're constantly learning things. [Their] progression really is amazing.

Because we are funded by grants, we can have so many cool gadgets and gizmos.... We have microscopes and art supplies; we have a CSI kit. We have all these like cool little things I wouldn't even think of working with ... [When we] bring out a microscope, the kids are like, "Oh, let me play, let me with it!" and it's great.

The Discovery Teens also discussed ways in which the program has been valuable for them personally or for their careers. Three of the teens said that working at the CLDC had encouraged them to pursue teaching or library work as a possible career, even if they had come to the program with a different career interest (see the first quotation below). Two of the teens expressed an increased interest in pursuing a science related career. Some discussed specific skills they had gained as a Discovery Teen, such as public speaking, communication, or leadership (see the second quotation).

Now I'm actually thinking about being a librarian. Or a science teacher. A librarian or a science teacher. I still want to stay in the medical field, but I'm thinking about a science teacher or medical librarian.

My number one goal in life is just to become something in the field [of] science. So coming into this job, I not only learned there was so much more I could learn in science, I'm able to communicate with kids much better. ... and I've become more of a leader, I've gained responsibility.

UNDERSTANDING AND USE OF INQUIRY

The Discovery Teens were asked to describe the kind of training they received from the CLDC, and most of them referenced learning from their supervisor, learning from other Discovery Teens, or visiting the New York Hall of Science (see the first quotation below). None of them talked about learning about the inquiry method without prompting. When asked if they learned about inquiry, most had very vague recollections of inquiry or no recollection at all, while one teen demonstrated an

understanding of inquiry but only after prompting from the interviewer (see the second quotation). A few of the teens mentioned that the CLDC provides helpful professional development and continued support to the Discovery Teens.

The [training] that really helped me was at the Queens Hall of Science. It helped me because they basically do the same thing we do, but we do it on a different level. We listened to other people explain their stations and exhibits, and that actually helped us prepare for our exhibits as well.

(Did you learn much about the Inquiry Method?) What do you mean? (It's the idea of asking questions to help children learn. Starting with questions.) Oh, yeah. That's what we do most. That's what we want to do, get the kids involved, not just telling them, but asking them to see if they know or if they can find the answer by themselves.

When asked if their training was lacking in any way, the teens' responses were split, with about one-half saying that the training was sufficient, while two teens said they would like more training. One, who was also the only teen to show an understanding of inquiry (see above), expressed a desire for more training on science activities and interacting with children (see the first quotation below), and later mentioned that she would like more training on how to deal with the large number of customers. The other teen expressed a desire for training on working with children with special needs (see the second quotation).

I would like to have [more training on] science activities; how can we make them better? How can we interact with the kids?

I would like a little training on...kids with disabilities....We did do a small workshop about...kids that are deaf or blind. We have one girl in Saturday Science Lab who is deaf, so we went to this workshop to help her get a better experience out of it, but maybe...[we would benefit from] another workshop.

CHALLENGES

When asked to discuss the challenges they face as Discovery Teens, all but one of the interviewees mentioned issues related to the high number of customers. They discussed various aspects of this challenge, such as the need for them to manage many children at once, the ratio of customers to Discovery Teens, the crowdedness of the space, and the pressure to serve everyone in a short amount of time (see the quotations below). One teen said that it is challenging to explain the exhibits because some of them are too complicated for younger children, who play with them but don't really understand them.

The most challenging part [is] learning to control the number of kids. I mean we reach numbers from 50 [kids] to one day we had about 80 or 70 kids.

[The CLDC is] really, really popular, and we have a lot of people who come in every day. We have a fair amount of people on the Discovery Team, but now people are going back to school and starting college so there's really not as many of us, and sometimes we're a little bit outnumbered by the people in the Library.

(What has been most challenging about being a Discovery Teen in the new CLDC?) The space. The space and the amount of kids that we have every day. We used to be in an area...it was crowded, but now, it's really small. And when we talk, it bounces into the walls and we hear each other, and the kids are talking and we are talking, and it's just complicated.

SUGGESTIONS OR SUPPORT NEEDED

The Discovery Teens provided a range of suggestions when asked what the CLDC could do to better support them and keep the CLDC strong over time. About one-half of the teens spoke about the need to have regular activities and change the exhibits more frequently in order to keep regular customers engaged (see the first quotation below). One teen suggested that the CLDC should do more outreach to the schools and families in other boroughs. Another teen suggested both that the programming room be bigger and also that there be a designated workspace for the Discovery Teens so they do not have to share with the librarians (see the second quotation).

I really like having activities regularly... having those activities will keep the people coming in. And changing the exhibits ... once a year [or] every six months [because] there's a lot of people that go every single day...so I think like changing the exhibits...would be great.

I think there should be a bigger programming room...because the attendance in the Saturday Science Lab is picking up ... (Okay, and what should the CLDC provide for Discovery Teens?) Basically just workspace. Because...we do a lot of researching and experiments. We have to try out experiments before we do them, and we don't like to use the workspace that the librarians are also using and make a mess.

INTERVIEWS WITH CLDC PARENTS

RK&A interviewed eleven parents who frequently visit the Queens Central Library CLDC. Library staff, who considers them to be regular customers, provided their names and contact information. About one-half of the parents interviewed could not speak or understand English clearly enough to fully participate in even a simplified version of the interview, but general responses could be gathered from them. The number and quality of responses ranged widely due to the language barrier.

When asked how often they visit the Queens Central Library, nearly everyone who understood the question said they visit the Library at least once or twice per week, with a couple parents saying they visit every day or almost every day. Parent interviewees were also asked to describe what a typical visit to the Library includes for them. Many said that a visit usually includes going to the Discovery Center, reading or participating in reading programs, or borrowing books or other resources (see the first quotation below). Several parents said they attend the Saturday Science Lab, and a few referenced other programs, such as the toddler programs or summer reading program (see the second quotation).

[Our visits now] include going to the Discovery Center. My son really likes all the interactive activities. He's six [years old]. And my daughter loves to just look through the books and we generally take out about 15 books or so per visit, [or] per week.

I try to go to the Discovery Center... and she goes to the Science Program over there. Also we spend time in the book section, looking for a book.

PERCEPTIONS OF THE CLDC

Parents shared their perceptions of the CLDC throughout interviews. In general, they had very positive comments, noting how much their children love to go to the CLDC, how beautiful and nice it is, and how good it is to have the CLDC in the neighborhood or community (see the quotations below).

I'm just very pleased and happy to be a part of [the CLDC,] and I'm very grateful that in my community, they have this type of library set up for kids as well as parents... The Queens Library has developed itself into a learning machine for children.

I really am impressed that they put something of such high quality right where they put it because the neighborhood [and] community really needs it. [The CLDC] shows the best efforts of the people who put it together. I think it's [an] excellent, excellent, excellent addition to the Library.

MOST VALUABLE ASPECTS

Parents elaborated on their perceptions by explaining what they value the most about the CLDC. Many said they most appreciate the physical space or certain aspects about it, describing it as clean, beautiful, exciting, comfortable, kid-friendly, well furnished, or well laid-out (see the first and second quotations below). About as many parents said they most value the books, noting the wide selection or effective organization of the collection (see the second and third quotations below). One interviewee appreciated the fact that books in her language, Bengali, were available at the Library.

The space is nice and clean, and it's [a] nice place for the kids and they can find nice people to play around.

The strongest asset [of the CLDC] is the organization of the books and the furniture. It's so child friendly. It's really just the greatest example of a library experience for a child that I've seen. ... The furniture is absolutely perfect in size and shape, comfort, color. It's all very appealing.

I value the selection of books that they have. I value the reading levels that they have for her age. She's now seven [years old], and they're easy-to-read books.

In addition, about as many parents said they most value the CLDC programs, such as the Saturday Science Lab, usually mentioning how much their children enjoy them (see the first quotation below). A few parents said they find the focus on interactivity or play to be one of the most valuable aspects of the CLDC (see the second quotation). A few other specific aspects of the CLDC were mentioned by individual parents as being especially valuable, such as the Discovery Teens, the map of Queens on the floor, and the "hands-on display."

The more programs they have for the kids are better because the kids like the Library so they go. And the more programs they have – not only science programs, [other] programs also, like the movies...for when you get tired of reading – those programs, they really enjoy.

[I value] that it's interactive... Because I'm an architect and I teach architecture to kids, and I believe that by doing, kids understand better than by being taught at. So the hands-on portion of it is very important.

EXPERIENCES IN THE CLDC

Parents were also asked to describe their experiences with the CLDC discovery plazas and exhibits, resources and checkout systems, and programs.

DISCOVERY PLAZAS AND EXHIBITS

When asked if they use the exhibits when they visit the CLDC, many of the parents did not understand the word "exhibit," even after it was explained, so they could not answer the question. Of those who

did understand, all said they use the exhibits and like them very much (see the first quotation below). Several of the parents went on to describe specific exhibits that they or their children particularly enjoy, such as the lights and sounds, the fish, the magnet wheels, and the words in colors. Most of these parents said that rather than a specific exhibit, what they especially value is the variety of the exhibits and the degree to which they engage their children in interactivity, questioning, learning, or discovery (see the second quotation). One parent said that she likes the fact that the exhibits are eco-friendly and help her children see the world in a new way, giving examples of real-world questions her children had asked as a result of something they learned from the exhibits.

(Have you and your children used the exhibits much?) Yeah, we always use them. I think they are great. Most of them are informative and user-friendly.

We've used a lot of [the exhibits]...the lights, the sounds. He's very fascinated by the fish exhibit. Then he does a lot of the optic[al] illusions part of it also. He has a variety. He likes to discover, and so then he really likes anything that he has to work at. He doesn't have any preference per se, but he just likes to be there and do.

The parents who said they use the exhibits were asked to explain what they see as the exhibits' primary purpose. Some of them said that their purpose is simply to help children learn, while others made deeper connections between the exhibits and the books, saying that the exhibits help further encourage children to explore books to learn more (see the first and second quotations below). Three of the parents commented on how often they think the exhibits should change. One said they should change every six months, and the other two said that the exhibits should change based on the emergence of new ideas or changes in current events, in order to stay relevant and keep people interested (see the third quotation).

(What do you see as the primary purpose of the exhibits?) It's a good tool for getting kids engaged in abstract concepts that you could not [otherwise] get them to be interested [in]. Seeing and doing [gets] them motivated to go learn more and pull out a book that talks about light or sound and just increases their understanding of what exactly happened at that exhibit.

The children love [the exhibits]. I think the children learn more when they go. They look at it and [then] read more information about it, and they learn more doing that.

(How often do you think the exhibits should change?) [I like] the way the exhibits are there. It all depends [on] what other ideas they have coming out. New ideas are always good, you know? The ones that they have now [are] not that bad, [but] kids—they like new things. We also like to see [new things]. [It grows] more interest.

USE OF RESOURCES AND CHECKOUT SYSTEMS

All of the interviewees said that they check out books from the Library and usually use the self-checkout machines to do so. When asked what they thought of the machines, most of the parents said that they are good and easy to use, and a couple of them added that their children use them, too (see the first quotation below). A couple of parents indicated that they had some problems with the self-checkout machines, such as that the machines are unreliable or that it is difficult to remember their PIN number (see the second quotation).

(Have you used the new self-checkout machines?) Yes, yes. I now allow [my daughter] to get familiar with checking out books with her own personal library card that she [got] last year. She's getting familiar with that and she's checking out her own books.

I find [the self-checkout machines to be] easy to use. It's just that sometimes they're not reliable. Some of them you have to scan and you run into problems. So that's why I don't always use the self-checkout.

Although they were not asked directly by the interviewer about the computers, several of the parents, especially those for whom English was their second language, mentioned that their children often use the computers at the Library. For several parents interviewed, this seemed to be a significant part of their family's library usage. While they appreciated having the computers as a resource, a few parents mentioned some challenges related to them, such as that the computers are too frequently unavailable for use or that their children play too many games on them (see the quotation below).

(And what part of the Library does she like the best?) She use[s the] computer. She like[s it] too much. (She likes the computer too much?) Yeah, yeah. (Why do you say that?) It's good not to have a lot of games to play [on] them.

PROGRAMS

All of the parents interviewed said that their children attend programs at the CLDC. More than one-half of the parents said their children attend the Saturday Science Lab. Of those whose children do not attend the Saturday Science Lab, most said it is because their child is too young for the program. Some parents named other programs that their children attend, such as the toddler programs, tutor programs, and reading programs.

All of the parents whose children attend the Saturday Science Lab spoke positively about the program. When asked why they like the program, parents responded with a range of positive attributes, such as that it is hands-on, diverse in attendance, age-appropriate, and provides different content each week (see the first and second quotations below). Several parents also spoke enthusiastically about their appreciation for the Discovery Teen members who lead the Saturday Science Lab. These parents said that the teens are great with the children and show a natural interest in science, which makes them better teachers and role models (see the third and fourth quotations).

Well, the children love [the Saturday Science Lab]. They love the science lab and when they go in there and learn and explore, [they] do more science, [and] they love it.

[The Saturday Science Lab is] presented in a way so that the kids of all ages can learn...so I think it's a great opportunity, and we can learn about a lot of different things. Every week they have new projects.

I love that [the Saturday Science Lab] is taught by students, people who are actually interested in science and have more knowledge than the knowledge they share with the kids. So when kids ask questions that springboard off of whatever they're doing, they're able and interested in answering. And they answer questions about themselves and their scientific ambitions and pursuits. I love the diversity of the group that teaches as well because it really shows the kids...all the possibilities there are in science.

I tell you, the people that facilitate the Science Lab exhibit, they're excellent, they're good with the kids. They have hands-on involvement with the children and let the children be a part of whatever they're telling them about each week. It is excellent.

CHALLENGES AND SUGGESTIONS FOR IMPROVEMENT

Parents were asked to discuss shortcomings or challenges related to the CLDC and make suggestions for improvement. Several interviewees said they did not have any suggestions for improvement (see the first quotation below). In line with this, one parent said that the only suggestion for improvement she could think of is to encourage other people from around New York City to experience the CLDC because it is so unique (see the second quotation).

[The CLDC] really is one of the best places I've seen for kids. I would say that if I had to find a shortcoming, I'm actually pretty much stumped on that. I don't think there is one.

I think that people should...come from other boroughs and other areas in Queens and see what's going on [at the CLDC] and be inspired. I haven't seen anything that great in Manhattan.

More than one-half of the parents gave specific suggestions for improvement, many of which were idiosyncratic in nature. For example, one parent said that the security guards are rude, while another said that she needs to be able to bring food and drink into the Library, and a third said that he does not like the new system of organizing books by age level because it makes it harder to find books for his children.

There were a variety of suggestions that differed in specifics but were all loosely related to a shared concern: the crowdedness that results from the popularity of the CLDC. One parent said simply that it was too crowded, while others said that there are not enough programs, books, or computers to serve all the customers (see the first quotation below). A few parents suggested that it would be better for the CLDC to have more computers, since they are very popular and sometimes out of service (see the second quotation). The most common suggestion given was for the CLDC to offer more programs or provide more room for programs (see third quotation). This suggestion seemed to arise from the overwhelming popularity of programs such as the Saturday Science Lab or the toddler program. A couple of parents spoke about specific new programs they would like to see, such as storytelling events or more hands-on activities connected to the exhibits (see the fourth quotation).

One parent's taking a lot of books. I have one child, so I can't select a book. They don't have books. Every book, they took, some parent. So if we put a limit, 10 books for one child, so then we can get more, every child.

Sometimes computers are always out of service so...[the CLDC needs] more computers; then all children get chance to play... Some children [take a] long time [on the] computer, three [to] four hours, [for] one child.

[The CLDC should offer] more toddler programs, more often. Because it's [only] once a week... People try to line up like 6:00 in the morning... a lot, a lot, a lot of people. One time I went there at 8:00am, [and] I didn't get tickets... So maybe more room... They are always short.

It would be nice to couple the exhibit with a real hands-on [activity], someone doing something.... If you had the light and electricity, maybe they could just have...a hands-on

activity where more kids can discover, 'How can I make a light bulb?' or something like that [to] go along with the exhibit, like an activity they can actually do.

FOCUSED OBSERVATIONS WITH SHORT-ANSWER INTERVIEWS

INTRODUCTION

Queens Central Library identified specific areas of the CLDC in which they were interested in exploring customer visitation and behavioral patterns. These areas included Discovery Plaza 1, Discovery Plaza 2, Early Childhood Area, and Reference/Circulation Desks. RK&A observed the four areas for between two and three hours each (usually in 30 minute increments) and conducted short-answer interviews with a select number of customers. Data were collected over the course of four days: one week day and one weekend day in August 2011 (during summer break), and one weekend and one week day in September 2011 (once school had started).

VISITATION TO DISCOVERY PLAZA 1

RK&A conducted a total of three hours of observations in the area of Discovery Plaza 1 (the exhibit area to one's right upon entering the CLDC). We observed 36 children, including 18 girls and 18 boys, and interviewed eight of them with the permission of a parent or other adult guardian. Children ranged in age from about 3 years old up to 17 years old, with a median age of 8 years old. Most observed children spoke English while using the exhibits, but a few spoke Bengali or Spanish.

OBSERVATIONS

Children were observed in the entire Discovery Plaza 1 area, which includes 12 stand-alone exhibits, book displays, and bench-style seating.

- ◆ Observed children spent an average of 9 minutes in the Discovery Plaza 1 area.
- ◆ Many of the children were accompanied by an adult, though the extent of interaction between the adult and child varied. About one-third watched their child use the exhibit, another one-third used the exhibit with the child, and another one-third left the child unattended in the Plaza.
- ◆ Observed interactions between children and their accompanying adults were often excited. For example, children made comments like, "Look, look!" and "Look over here; this is my favorite!" Adults were seen encouraging children to try different exhibits, with one grandmother was overheard saying, "Did you try this one over here [Closer Look exhibit]?"
- ◆ Many of the observed children were accompanied by other children, most often one other child. Nearly half of the time, observed children used the exhibit with another child and/or watched another child use an exhibit. In other cases children used exhibits alone.
- ◆ Some interactions (between adults and children and among children) demonstrated shared learning. For instance, a brother and sisters were seen asking each other questions, testing the exhibits, and prompting one another in the Theater. Some adults were observed reading exhibit instructions for children and asking questions.
- ◆ During the observations, just one child interacted with a librarian; none interacted with a Discovery Teen or participated in any programming.

- ◆ Nearly one-half of the children used the Closer Look exhibit. About one-third used Electricity or Pendulum. About one-quarter of children used Birds, Seasons, Mirror Shapes, Sound Puzzles, Color House, and Mirror Views. A few children used Fossils, Flipped, and Time.
- ◆ As children used exhibits, their demeanors ranged from studious and absorbed to excited and playful. Few children were observed goofing around or bored.
- ◆ Nearly all the children used the exhibits as intended, with only about one child misusing any one exhibit.
- ◆ About one-quarter of children perused the books on display near the exhibits; three children actually picked up and flipped through a book. No children were observed reading any books on display.
- ◆ Observations during after school hours showed that some children did not use the exhibits but rather used the area to do homework or hang out with friends; although in some cases, children gathered in social groups around the exhibits and used them as intended. Few adults, other than library staff, were present.

INTERVIEWS

- ◆ When asked why they thought the CLDC contains exhibits, all the children alluded to learning and fun. Some were more specific, such as one who said, “to learn about science and have fun and experiment,” or another who said, “to explore my senses.”
- ◆ When asked to identify their favorite exhibit, responses were mostly idiosyncratic, with no one exhibit rising to the top. A couple children said they liked the exhibits with mirrors because they were fun and challenging. One girl liked the exhibit about birds because she appreciated listening to the bird sounds. Other favorites named included Closer Look, Pendulum, and Theater. Some demonstrated what they learned when they named their favorite exhibit such as the one child who said, “I liked this one [points to the Theater]. You don’t know what it is, but you have to feel around to guess. . . you can make observations from touching and using your other senses.”
- ◆ Most children did not like anything least in the Discovery Plaza, although a couple said the exhibits with mirrors were too difficult.
- ◆ One child said she looked at a book associated with the exhibits, pointing to a book near Sound Puzzles. The other children said they did not look at the books.

VISITATION TO DISCOVERY PLAZA 2

RK&A conducted a total of 2.5 hours of observations in the area of Discovery Plaza 2 (the exhibit area to one’s left upon entering the CLDC). We observed 22 children, including 6 girls and 16 boys, and interviewed six of them with the permission of a parent or other adult guardian. Children ranged in age from about 4 years old up to 12 years old, with a median age of 8 years old. Most observed children were speaking English while using the exhibits, and one child each spoke Bengali, Spanish, and an unidentified language.

OBSERVATIONS

Children were observed in the entire Discovery Plaza 2 area, which includes six stand-alone exhibits, book displays, and bench-style seating.

- ◆ Observed children spent an average of 5 minutes 30 seconds in the Discovery Plaza 2 area. In general, Discovery Plaza 2 functions somewhat like a corridor as opposed to a destination; quite a few visitors were observed touching a few exhibits on their way to another area of the Library.
- ◆ Many of the children were accompanied by an adult, though the extent of interaction between the adult and child varied. More than half the time, an adult used an exhibit with their child, while others watched their child or left him/her unattended in the Plaza.
- ◆ Many of the observed children were accompanied by other children, most often one other child. Nearly one-third of the time, observed children used the exhibit with another child, while others watched another child, or used an exhibit alone.
- ◆ During the observations, no children interacted with a librarian or Discovery Teen, and none participated in any programming.
- ◆ Nearly all observed children used the Bug Viewer. About one-third used Fish Phone, Color Words, or Watch Closely. A few children used Plant Cell or Animal Cell.
- ◆ Bug Viewer instigated the greatest amount of interaction and shared learning among customers. For instance, the following is a paraphrased interaction between a child and his mother:

The boy calls his mother over to look at the bugs. He says, “They give you life cycles.” The mother reads the questions written on the white board above the exhibit. The boy guesses which bug has the shortest life cycle then he looks at the bugs in the magnifying glass and says that honey bees have the longest life cycle with nine stages. Later, the mother asks, “What are you doing?” He responds, “I’m discovering,” and the mother says, “Ok, five more minutes of discovery then I’ll read you a story.”
- ◆ As children used exhibits their demeanors ranged from studious and absorbed to excited and playful. Few children were observed goofing around or bored; although as mentioned above, Discovery Plaza 2 seems to have more visitors “just passing through” than in Discovery Plaza 1.
- ◆ Nearly all the children used the exhibits as intended, with only about one child misusing any one exhibit.
- ◆ Just one child perused the books on display near the exhibits; one actually picked up and flipped through a book. No children were observed reading any books on display.
- ◆ Observations during after school hours showed that some children did not use the exhibits but rather used the area to do homework or hang out with friends; although in some cases children gathered in social groups around the exhibits and used them as intended. Few adults, other than library staff, were present.

INTERVIEWS

- ◆ When asked why they thought the CLDC contains exhibits, all the children said something about learning and having fun or playing. Some were more specific, such as one who said, “to learn about science with the experiments.”
- ◆ When asked to identify their favorite exhibit, a couple children named the Fish Phone, a couple named Watch Closely, and a couple name Bug Viewer. Some children demonstrated learning when they talked about their favorite exhibit. For example one said, “I like bugs so I wasn’t grossed out and it was exciting. I learned about life stages. My mom asked me this question [pointing to exhibit]. I had to find the bug with the most life stages.” Another

child said, “[I liked] Watch Closely. I looked at the pictures and each time it blinked something changed. I learned that you have to look hard to see the changes.”

- ◆ When asked what they liked least, several children name Bug Viewer because they said it was “gross.” One said the Animal Cell exhibit contained too many words.
- ◆ None of the children said they looked at a book associated with the exhibits.

VISITATION TO EARLY CHILDHOOD AREA

RK&A conducted a total of two hours of observations in the Early Childhood Area. We observed nine family groups, all with a female head-of-household figure, and interviewed five adults. Children ranged in age from about 9 months up to 12 years old, with a median age of 4 years old. Most observed customers were speaking English, and a few spoke Bengali, Spanish, or Portuguese.

OBSERVATIONS

Families were observed in the entire Early Childhood Area, which includes low seating and computers for children, comfortable seating for adults, a large fish tank, and book displays.

- ◆ Observed families spent an average of 30 minutes in the Early Childhood Area.
- ◆ All of the children were accompanied by an adult, though the extent of interaction between the adult and child varied. More than half the time, the adult sat in a comfortable chair and watched their child as he/she used the computers or looked at books or the fish. Nearly half interacted with their child, including those who used the computer with their child or read a book to their child. An example of adult child interaction is below:

The child runs to the Early Childhood Area and sits down at the computer. Adult with the child sits with him on the cushions and picks up cell phone, says “Can’t talk right now...” Adult leaves the child with another child and adult in the area. The child says to another child on the computer, “Look...this way. I’m gonna teach you how to play.” The adult companion returns and the boy says to her, “This is the fish that cleans the tank.”

- ◆ Of those children who were mostly watched by their adult, about one-third independently used a computer and a few read/looked at a book.
- ◆ No adults were observed reading a book to themselves.
- ◆ Some customers, especially children, moved back and forth between the Early Childhood Area and Discovery Plaza 2.
- ◆ The tone of this area ranged from quiet and relaxed to loud and excited, often dependent on the number of customers sharing the space at any one time (i.e., the more customers, the more noise).
- ◆ During the observations, no children interacted with a librarian or Discovery Teen, and none participated in any programming.
- ◆ Observations that occurred during after school hours showed that the Early Childhood Area was used by pre-teens to do homework.

INTERVIEWS

- ◆ When asked why they thought the CLDC contains an Early Childhood Area, most adults provided brief responses, such as, “it’s for the neighborhood,” and “for the community.”
- ◆ When asked what they did in the area, most talked about their child using the computers and/or looking at the fish tank.
- ◆ When asked what works best for the space, some said that is comfortable and/or enclosed. One talked about how much she appreciates the computers and seating that are designed for small children. For example, she said, “my daughter loves everything Dora (laughs) and Sesame Street. She likes the computer games with the colors and alphabet. It’s good for her to learn the computer. It’s my second time here. I like [that] there’s a lot of stuff for my daughter to do and see (indicates to the fish tank and to her daughter who is reading a book to herself on the couch).”
- ◆ When asked what they liked least, a couple parents said the area needs more computers.

VISITATION TO REFERENCE AND CIRCULATION DESKS

RK&A conducted a total of two hours of observations of the Reference and Circulation Desks. Customers tended to spend a short time in this area, so rather than observe individuals for a period of time, we observed the area overall, noting the various activities, behaviors, and verbal exchanges. Again, due to the nature of activity in this area, no interviews were conducted (questionnaire results provide adult opinions of this area).

OBSERVATIONS

Customers were observed at both the Reference and Circulation Desks which flank each side of the CLDC entrance.

- ◆ There was almost always a line at the Reference Desk. The librarian staffed at the desk frequently left to take customers to a particular book or other section of the CLDC.
- ◆ The librarian at the Reference Desk fielded various questions from customers (that were mostly not audible), such as questions related to where and when various programming take place or recommendations for books.
- ◆ There was a steady flow of customers using or attempting to use the self-checkout machines at the Circulation Desk. During the observation, most customers experienced some type of technical difficulty so that a librarian had to help.
- ◆ Some customers used the self-checkout machines easily, without any problems. Children seemed to enjoy the experience.
- ◆ Lines rarely formed at the Circulation Desk (as compared to the Reference Desk).

APPENDICES

APPENDIX A: QUESTIONNAIRE

REMOVED FOR PROPRIETARY PURPOSES

APPENDIX B: QUESTIONNAIRE STATISTICS

DESCRIPTIVE STATISTICS

FREQUENCY DISTRIBUTION

Language of questionnaire
 Data collection conditions
 Queens Central Library visitation
 First visit to new CLDC
 New CLDC visitation
 Use of exhibits today
 Number of times used exhibits in past
 Primary purpose of exhibits
 Replacing exhibits
 Looked at books by exhibits
 Borrowed or checked out books by exhibits
 Exhibit-related program participation
 Locating books
 Use of “self checkout machines”
 Reason for not using self-checkout machines
 General program participation
 NYC museum visitation
 Gender
 Age
 Number of children, boys
 Number of children, girls
 Children’s ages
 Number of other adults
 Education
 Zip code
 Language
 Ethnicity

SUMMARY STATISTICS

RANGE, MEDIAN, MEAN, AND STANDARD DEVIATION

Age
 Children’s ages
 Experiences with exhibits (Q6)
 Experiences with self-checkout machines (Q15)
 Desired experiences in CLDC (Q16)

INFERENTIAL STATISTICS

CROSSTABS

Queens Central Library visitation		Gender
New CLDC visitation		Age
Primary purpose of exhibits	by	Ethnicity
NYC museum visitation		Education
Language of questionnaire		Children’s ages

INFERENTIAL STATISTICS

ANOVAS

Experiences with exhibits (Q6)		Gender
Experiences with self-checkout machines (Q15)		Age
Desired experiences in CLDC (Q16)	by	Ethnicity
		Education
		Children's age
		Queen's Central Library visitation
		New CLDC visitation
		Use of exhibits(today or past)
		NYC museum visitation
		Language of questionnaire

APPENDIX C: INTERVIEW GUIDES

REMOVED FOR PROPRIETARY PURPOSES

APPENDIX D: FOCUSED OBSERVATIONS

REMOVED FOR PROPRIETARY PURPOSES

APPENDIX E: ZIP CODES AND RESIDENCE BY BOROUGH AND NEIGHBORHOOD

TABLE A
ZIP CODES

ZIP CODES (N= 171)¹	<i>n</i>	ZIP CODES	<i>n</i>
11104	1	11417	1
11207	1	11418	4
11211	1	11419	2
11221	1	11420	5
11228	1	11421	4
11355	1	11422	1
11364	1	11423	11
11365	1	11427	1
11366	1	11428	1
11368	1	11429	3
11370	1	11432	52
11373	1	11433	17
11375	2	11434	11
11411	3	11435	22
11412	5	11436	2
11413	4	11507	1
11414	1	11560	1
11415	3	11758	1
11416	1		

¹Twelve respondents did not indicate their zip code and one respondent indicated a zip code that did not appear to be a valid zip code.

TABLE B**BOROUGH AND NEIGHBORHOOD**

BOROUGH (N= 171)	<i>n</i>
Queens	161
Astoria	1
Bayside Hills	1
Bellerose	2
Cambria Heights	3
Corona	1
East Elmhurst	1
Elmhurst	1
Flushing	1
Forest Hills	2
Fresh Meadows	2
Howard Beach	1
Jamaica	128
Kew Gardens	3
Ozone Park	2
Richmond Hill	4
South Ozone Park	5
South Richmond Hill	2
Woodhaven	4
Brooklyn	4
Nassau	3
Albertson	1
Locust Valley	1
Massapequa	1

APPENDIX F: OTHER MUSEUMS VISITED

TABLE C

OTHER MUSEUMS VISITED

OTHER MUSEUMS VISITED (N= 11)	<i>n</i>'
Aviation Museum	1
Metropolitan Museum of Art	2
Guggenheim	1
Museum of Modern Art	1
Whitney	1
Barrio	1
Intrepid	1
Queens Museum of Art	1
Transit and Police Museum	1
Not specified	3

¹ Respondents may have attended multiple museums.

APPENDIX G: TOPICS OF BORROWED BOOKS

TABLE D
TOPICS OF BORROWED BOOKS

TOPICS OF BORROWED BOOKS (<i>N</i> = 33)	<i>n</i> ¹
4th grade chapter books	1
ABCs	1
Baby book Sesame Street	1
Birds	2
Blood cells	1
Brain	1
Christian/music	1
Electricity	1
Engineering	1
Fiction	1
Fossils	1
Hurricane	1
loud sound	1
Nature	1
Sharks	1
Simple machines	1
Solar system	1
Transparent and opaque	1
Weather	2
Not specified	21

¹ Respondents may have borrowed more than one book.