CLIMBING THE LADDER FROM NINTH GRADE TO COLLEGE: A CAREER LADDER PROGRAM AT THE SCIENCE MUSEUM OF VIRGINIA

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The Career Ladder Program is one component of a greater youth development project conducted by the Science Museum of Virginia in partnership with Capital One Leadership Grants Program. This project is part of the Museum's strategic goals, driven by its mission to ensure that every Virginia student achieves science literacy leading to success in a career and the rewards of lifelong learning. This particular program, modeled in part on the National Science Foundation's YouthAlive initiative, provides guidance, support, and academic mentoring for middle and high school students, ages fourteen to eighteen from inner-city, low-income backgrounds; college attendance (or post-high school education) of participating children is the ultimate goal. The Career Ladder Program is in its third year of operation under the sponsorship of Capital One through its Capital One Leadership Grants Program. Capital One pledged "to improve the lives of our children today to support their development as leaders of tomorrow." Since its creation in fall 1997, approximately 44 students have participated in this project.

The Career Ladder Program provides support and encouragement for at-risk students and guides them to a new level of understanding of their full potential. The successful Career Ladder graduate will value high academic achievement, set a goal of earning a college degree, and ultimately gain successful employment—all within a culture that may not encourage such ambitions. The targeted student population has a high percentage of single-parent families, a high percentage of poverty and dependence on public assistance, and a high dropout rate from public education. For example, one high school in central Virginia served by the program has a 66% dropout rate for young males[1]. Of those families living in Richmond's East End, an area also served by the Career Ladder Program, 23% receive public assistance, 60% of the children live below the poverty line (85% of these children live in single-parent households), and 59% of the children live in single-parent homes[1]. These factors, especially in combination, may contribute to students engaging in, and suffering the consequences of, at-risk behavior; such as, failing and/or dropping out of school, substance abuse, teen pregnancy, and juvenile delinquency. By providing

[1] All statistics are courtesy of Richmond Public Schools. Specific values are for the 1996-97 year, the planning year for the project.

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at-risk children with the tools and support needed for academic success, we hope to reduce the chances that these students will drop out of school and to increase the chances that they will enjoy fulfilling, well-paying careers.

In order to engage in continuous academic support for children as they move into middle and high school, the Career Ladder Program builds on the Museum's successful Science Connections Program (formerly titled "Science After School"), designed to engage elementary students in hands-on science lessons correlated to the Virginia Standards of Learning for science. Once they reach middle school, students have the opportunity to become Career Ladder Program volunteers. When these students reach high school, they can then move further up the "career ladder" to become paid high school interns. Together, the Science Connections Program and Career Ladder Program provide a vertical integration system of learning and mentoring.

In order to clearly develop and organize the program, we established four goals, each matched with objectives, appropriate activities, and evaluation tools. Evaluation is designed to follow the Evaluation Logic Model in reference to program goals, objectives, and activities. The Virginia Commonwealth University Survey Evaluation and Research Lab (VCU SERL), under contract with the Capital One Leadership Grant, conducts additional program evaluations that focus on student demographics and the influence of at-risk factors. This team has reported detailed data on attendance, but information on the program's effect on students' attitudes and behavior has not yet been released. This aspect of the study makes use of student survey responses dealing with such issues as decision-making, social competence, and relationship building.

Program Goals

(1) Provide workforce training

Objective: Students will develop the necessary skills to obtain jobs and master the appropriate work habits and attitudes of model employees.

Activities: Students will receive skills training. On-the-job training will enhance the workshop activities and will consist of any of the following jobs: teacher's aide, completing office duties, serving as science activity presenters, and/or greeting and directing museum guests.

Evaluation Tools: Pre- and post-program test assessments administered for employability skills, as well as monthly on-the-job training evaluations.

(2) Provide academic and career guidance

Objective: Students will develop an educational commitment to learning; will graduate to the next grade level; will research, set, and plan appropriately for future career goals; and, will master the college application process.

Activities: Students will attend study skills workshops; will attend career and goal setting workshops; will tour colleges; will schedule their own tutoring time with in-house tutors; and juniors and seniors will receive SAT preparation training, as well as attend college application and financial aid workshops.

Evaluation: Student report cards monitored every nine weeks, in line with the school's academic reporting periods. Pre- and post-program career goal assessments administered.

(3) Provide basic life-skill training, including conflict resolution, prevention of substance abuse, and communication skills

Objective: Students will be prepared to make informed decisions as consumers; will develop skills to make appropriate decisions in social situations; will understand the physical consequences of substance abuse; and will make healthy life-choices to promote well-being.

Activities: Life-skill training components include: the personal and household budget, the employment application and interview, communication and relationships in the school and workplace, abuse prevention and health training.

Evaluation: Pre-and post-program assessments will be administered on life skills. Pre- and post-program surveys will be administered for attitudes on conflict resolution, substance abuse prevention, and health issues.

(4) Provide leadership experiences

Objective: Students will gain self-confidence and self-esteem; obtain in-depth topics; and act as mentors for younger students who participate in Science Connections and other museum programs.

Activities: Students will engage in volunteer activities in Museum programs, in family homeless shelters, in entrepreneurial projects for the development of web pages. The participating students will serve as members of the Capital One Leadership Grant's Student Community Advisory Board.

Evaluation: Pre- and post-program assessment attitudinal surveys administered for leadership skills.

Eligibility and Requirements

Students must be at least fourteen years old for middle school volunteer positions, and at least sixteen years old for paid high school intern positions.

Students must be in good standing with a "C" or better. If a student earns a "D" in a class, they must obtain tutoring and achieve at least a "C" by the next reporting period.

Middle school students must commit approximately 180 hours a year (one to two hours per week) to the program and will receive an educational stipend of $100 at the end of their service commitment. The paid high school intern component moves participants into a much more intensive commitment of 426-500 hours (average of three to seven hours per week) a year. The stipend translates into an hourly wage of approximately $5.75 with a $.25 raise for each returning year.

The budget breakdown is as follows:

	1997-98	1998-99	1999-00	2000-01
Capital One Grant (annual)	$47,000	$70,058	$109,175	$111,338
Student Participation	12	15	17	20

In addition to the Capital One Grant funding for a portion of certain staff salaries, Museum support includes staff benefits, some staff salaries and transportation costs, and most administrative costs (facility expenses, telephone, and overhead). Student rewards and benefits include free tutoring, on-the-job training, life-skills and leadership courses, college preparation workshops, museum passes, as well as cultural and social enrichment trips. For many students, going on field trips becomes a highlight of the program and, therefore, encourages them to continue their participation.

For the past two years, Career Ladder students have joined other students in youth agencies, also sponsored by the Capital One Leadership Grant, on informal educational trips to the U.S. Space Camp, the Kennedy Space Center at Cape Canaveral, Florida, and the Disney Youth Education Seminars in Orlando, Florida. We have had such good success with our students that they initiated a request to incorporate other youth leadership opportunities of their choice into the program. For the 1999-2000 school year, Career Ladder students provided seasonal science activities at selected family homeless shelters and other agencies. These projects gave students a chance to give back to the community and to serve as role models. Other student suggestions for 2000-2001 include starting a small web page development business (with the technical assistance of Capital One) and devising ways to earn extra money for additional field trips.

The Career Ladder program has reached an increased level of recognition through press coverage, including a forthcoming article in *Richmond Parents Monthly*, and through recruitment efforts. At first, we had to aggressively recruit children for participation; the reverse is now true with teens, parents, and principals initiating contact with the Science Museum and asking how they may participate in the program.

A goal of the Career Ladder Program is to make a positive impact on the lives of all participating youth. As mentioned before, many participating students face situations that may hinder their commitment to learning; it is our hope that they will overcome these factors with the constant encouragement and support of the Science Museum. The program began in 1997 with entering high school freshman, sophomores and juniors. In the 1999 and 2000 classes, a total of seven students graduated from the program with six out of the seven continuing on to college. Most importantly, all students who have participated have stayed in school and proceeded on to the next grade level. One specific example of the program's success is a student who was accepted to college after spending three years in the Career Ladder Program. Though he had

been ready to quit school in order to support his family, we encouraged him to stay academically focused during his time of financial and family stress. If asked what his motto would be for incoming Career Ladder students, this student replies, "It sounds silly or corny, but you will never know unless you try!"

Over the next year, we expect to serve twenty students (fifteen paid high school interns and five middle school volunteers). Future program designs include expanding the program to serve more inner-city students from low-income neighborhoods, as well as offering the program to students in low-income rural areas. Also, we will develop alternative career plans for those students who are not accepted to college.

A community institution targeting academic support of at-risk students can certainly take on a program like Career Ladder. An institution considering the establishment of a similar project should design a program that integrates mentoring, homework tutoring, SAT coaching, field trips, workforce training and leadership workshops, adequate funding, and volunteer support from community businesses. Actual employment for the high school students in a productive and effective work environment is also essential. In order for these various, and sometimes disparate, components to work well and efficiently, close coordination with school systems is mandatory; guidance counselors are powerful resources when it comes to implementing and sustaining such a program. And, of course, adequate funding is essential, both from the sponsor and from the host organization, in order to maintain staffing, overhead expenses, and supplies. Finally, full commitment to the program on the part of the host institution's leadership, as well as a dedicated, hard-working staff, are of utmost importance. ■

INTERVIEW WITH ANGEL THOMAS

Q: What career path did you follow to reach your present position? Is this what you originally aimed for, or were there twists that brought you here?

A: I began my career at the Science Museum of Virginia in November 1993 as a part-time gallery educator shortly after graduation from Virginia Commonwealth University with a B. S. in Biology. I always loved science and this museum since I was a child. As there was an immediate opening, I thought to myself what a great opportunity to apply for—and it was! As the years went by, I progressed in the education department to a Science Center Program Coordinator (coordinating after school and summer class programs) to a Science Center Program Specialist, Senior (supervisor of after school, summer class, and Career Ladder Program). I originally aimed to have a career in field or lab work. As previously stated, there was an opening here at the Science Museum and it was a favorite place of mine.

Q: Have you been involved in similar programs before? Was there a particular moment or stimulus that caused you to begin this project?

A: No, the project was already a museum objective/goal. When the funding became available, the project was then given to me to develop, coordinate, and instruct because my supervisors thought I would do a good job with the program.

Q: Have there been any unique or unexpected consequences for you resulting from your project?

A: Yes, of course. The program is now in its third full year of operation. The unexpected consequence was the program's success. It has certainly flourished since its beginning during 1997-1998 in more ways than one:

a. Program Recognition In addition to the Virginia Math and Science Coalition award, the program has gained recognition in other ways. The program has been appointed as an Honorary Member of the Business Faculty for Richmond Public Schools for the supervision and instruction of the Cooperative Office Education student(s) on the job.

Students, parents, and schools call frequently now in hopes of us recruiting students and expanding the program. Also, *Richmond Parents Monthly* magazine will be publishing a forthcoming article.

b. Program Graduates We have had six seniors since the program started three years ago and all of our students have graduated and gone on to college.

c. Number of students served increased Went from serving twelve students to the current seventeen students.

d. Number of Program Staff increased Started out with one part-time staff member; now have one full-time program coordinator and one part-time employee (a former Career Ladder Program graduate and now in college).

e. Collaboration among similar youth agencies Due to our funding through Capital One, we have managed to build strong relationships and collaborate with other youth serving agencies from the Richmond area. We meet monthly to follow through with our Capital One Leadership Pledge, " We pledge to improve the lives of our children today to support their development as the leaders of tomorrow."

Q: Are you able to identify the greatest lesson you have learned and the rewards you have gained through working on the Career Ladder Program? What is the greatest benefit you see coming to students through their engagement on this program?

A: The greatest and hardest lesson that I have learned is that sometimes the Program staff may be the only support that these students have to inspire them to succeed in school and set career goals. Some of our students do not receive these encouraging messages from home. In any case, the Career Ladder Program seeks to encourage students that "they can beat the odds and excel."

The greatest reward that I have gained through working with the Career Ladder Program is when my students succeed and beat the odds in many ways (academically, socially, emotionally). Plus, I am able to give back to the community in which I grew up.