

GOODMAN RESEARCH GROUP, INC.
Program Evaluation • Consultation • Market Research

***Dan River Information
Technology Academy
(DRITA)
Executive Summary***

PREPARED BY

Lorraine Dean, B.A.
Miriam Kochman, B.A.
Helena Pylvainen, B.A.
Colleen Manning, M.A.
Karen Peterman, Ph.D.
Irene F. Goodman, Ed.D.

SUBMITTED TO

Institute of Advanced Learning and Research

October 2009

Conducted as part of National Science Foundation ITEST
Grant #0624728

EXECUTIVE SUMMARY

In 2006, the Institute for Advanced Learning and Research (IALR) received a three-year grant from the National Science Foundation's Information/Innovative Technology Experiences for Students and Teachers (ITEST) division to create the Dan River Information Technology Academy (DRITA) for under-served high school students in rural Virginia. The only program of its kind in Southern Virginia, the program was designed to provide participating students with competencies in information technology (IT) and workforce skills. In addition, the program seeks to encourage students to graduate from high school and attend college.

In 2009, DRITA is in its final year of funding under the three-year NSF ITEST grant, but has been granted a no-cost extension to proceed with program activities until July 2010. Currently, DRITA serves three Cohorts of students. Cohort 1 began in 2006 and accepted 32 students; Cohort 2 entered in 2007 with 32 students; and Cohort 3 entered in 2008 with 28 student participants. DRITA has retained 21, 27 and 26 students from each of the Cohorts, respectively; student retention rates improved as the program matured.

Students participate in a variety of skill-building activities in information technology (IT) and science, technology, engineering and math (STEM) topic areas, including:

- Courses on Basic IT Skills (BITS), Programming using C++, Animation, Robotics, and Geographic Information Systems (GIS);
- Seventy-hour externships in Year 2 and 3, with local businesses, IALR departments, and educational institutions; and an
- Annual Tech Expo & Banquet where students present the fruits of their summer work for their families and instructors.

Students who complete their courses are eligible to receive up to 6 college credits through Danville Community College. Students who complete externships are eligible for \$500 in scholarship dollars.

DRITA students and their parents attend:

- College and Career Workshops that focus on PSAT, SAT, College Applications, Financial Aid, College Admissions, Career Choices, GPA, letters of recommendation, etc.;
- College campus visits; and
- Industry trip visits.

The aforementioned program elements are made possible through the work of course instructors, externship supervisors, and DRITA program staff and administration.

METHODS

Goodman Research Group, Inc (GRG) was contracted to evaluate the DRITA program in 2006 and has been the program evaluator for three years – the entirety of DRITA’s program implementation. GRG’s data collection targeted three major audiences in each year of the program: DRITA students, parents/guardians of DRITA students, and program administrators (staff, course instructors, and externship supervisors).

GRG collected information from students using web-based feedback surveys, content assessments, focus groups, on-site observation, and one-one interviews. Data collection regarding the students’ experience focused on assessing attitudes toward STEM and STEM-related careers, changes in IT skills, attitudes toward college, and gaining feedback on the program’s events and offerings.

GRG used paper-and-pencil feedback surveys to obtain feedback from parents/guardians on various program elements they may have attended. Parent feedback surveys and focus groups addressed parents’ perceptions of their child’s progress through DRITA.

GRG gathered data from DRITA staff, course instructors and externship supervisors through interviews, student rating sheets, and focus groups. This audience provided information on student performance, feedback on DRITA courses, and perceptions on the quality of communication among program administrators.

This report highlights findings that summarize the three years of the program’s implementation from each of these audiences.

KEY FINDINGS

- DRITA successfully exposed students to STEM-related topics.
- As a result of that exposure, students gained significant skill development in IT-related areas, including basic IT skills, hardware, animation, C++ programming, and robotics.
- Students agreed that DRITA is fun, gives them a valuable work experience and prepares them for the college application process.
- Parents appreciated the opportunities the program gives their children, and believed that the entire region benefits from the program’s existence.
- Students maintained their level of existing interest in IT throughout their years in the program.
- Students demonstrated that the program gave them marketable skills for the short-term, and believed that they gained marketable skills they could use in the long-term.

- The externships and the College & Career workshops were the most celebrated parts of the program.
- Externship supervisors and students felt students gained workforce development skills through the externships; however, some externship supervisors felt that their business or organization was not a match for the program.
- Some students have already earned money due to the skills they gained through DRITA: two students received part-time jobs through their externship placement and one student is pursuing an entrepreneurial endeavor to design and sell web layouts.
- Parents and students found the information they gained in the College & Career workshops to be helpful, valuable, and not accessible to them otherwise; students who were not previously interested in attending college became interested in college after the campus visits.
- Through the college preparation and IT courses, students were able to focus their career choices and see how STEM-related topics could fit into a variety of career trajectories.
- Program staff has navigated changes in leadership and programmatic challenges successfully, resulting in a streamlined program after three years.

KEY RECOMMENDATIONS

- Secure financial resources to continue the existing program activities.
- Consider extending aspects of the program through student's first year in college.
- Align all program elements to maximize the match between student's IT and STEM interests to their DRITA experiences.
- Clearly communicate expectations for the externship to externship supervisors and to students.
- Continue to improve the courses by reinforcing concepts that are a challenge to students and by maintaining high-quality course instructors.
- Increase program visibility and branding by advertising throughout the region and throughout the year.