



NASA/GSFC Leadership Program Evaluation Report

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Passion. Expertise. Results.

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Executive Summary

The purpose of this evaluation study was to assess program impact and characterize the value of various leadership programs currently sponsored by NASA's Goddard Space Flight Center (GSFC), thereby providing Office of Human Capital Management representatives with detailed information to inform refinement of leadership development activities.

Evaluation Scope

Using a combination of qualitative and quantitative methods, we evaluated the following programs:

- The Leadership Alchemy Program (LAP)
- The Accelerated Leadership Program (ALP)
- Goddard Leadership Education Series (GLES)
- The Secretarial Leadership Program (SL)
- The Leadership and Management Development Programs (LMD)

Specifically, the evaluation addressed the following research questions:

1. Are there any significant gaps or redundancies across the leadership development programs GSFC offers?
2. Are the GSFC leadership development program delivery methods and formats configured optimally?
3. Is there a relationship between individuals' participation in leadership development activities and individuals' leadership and management capabilities and competencies?
4. How does participation in leadership development activities affect the attitudes, skills/abilities, and behaviors of leaders themselves?
5. To what extent do business units who have more leaders participating in leadership development programs enjoy more positive outcomes than units with fewer leaders participating?
6. What cultural factors facilitate or inhibit re-entry after participation in leadership development programs?

Evaluation Methodology

Instrumentation

GSFC-sponsored leadership development programs were assessed using three methods of data collection:

- Inspection of Archival Data – ICF analyzed existing archival data such as program descriptions and presentations, participation statistics, and prior Level 1 evaluation results.

- One-on-One Telephone Interviews - One-on-one interviews provided participants, their supervisors, and program managers with the opportunity to discuss their experiences with GSFC-sponsored leadership development programs.
- Online Survey - Two Internet-based questionnaires were designed to gather feedback from program participants, supervisors of participants, and employees of participants, regarding the characteristics and quality of the leadership training programs, as well as the various impacts attributable to the training.

Each method generated data that provided insight regarding both individual perceptions of GSFC-sponsored leadership development programs as well as personal experiences with those programs.

DATA COLLECTION PROCEDURES

Interviews were conducted via the telephone between December 2005 and March 2006, each lasting approximately thirty (30) minutes. Surveys were launched on May 12, 2006. Several reminder communications were sent from ICF International and GSFC's Office of Human Capital Management to encourage participation. The supervisor survey was closed on May 30, 2006 and the employee survey was closed on June 2, 2006, after achieving a 30% response rate for each sample.

Key Findings

GAPS OR REDUNDANCIES ACROSS PROGRAMS

ICF found that of Goddard's five broad leadership competency categories, the *self*, *interpersonal* and *group* competency categories appear to be well-covered in existing leadership development programs. However, both the *organizational* and *environmental* components are insufficiently addressed by the courses we evaluated. Communication skills were addressed by every course we evaluated. However, due to the importance of communication skills for leaders, ICF views this as a positive redundancy.

CONFIGURATION OF PROGRAM DELIVERY METHODS & FORMATS

METHODS

Respondents from ALP and LAP favorably ranked the programs' delivery methods. GLES participants were slightly less enthusiastic, though still positive overall. In general, respondents rated programs favorably to the degree that the learning approach included experiential learning, follow-up opportunities, mentoring, collaborative learning, and networking.

FORMAT

In terms of format, ICF looked at marketing, scheduling, the application process, and senior leadership support. For program marketing, ICF found that in many cases, program written descriptions did not accurately reflect program content and outcomes. Scheduling was ranked overall favorably by participants, though there was some concern that the GLES backlog was a problem for some. Most perceived

the application process as fair, though many did not understand on what basis decisions were ultimately made. Finally, all of the senior leaders interviewed expressed support for the program while simultaneously pointing out that first line supervisors will likely be less supportive of the programs because they are not rewarded for developing staff.

RELATIONSHIPS AMONG PARTICIPATION AND LEADERSHIP/MANAGEMENT CAPABILITIES

OVERALL

Two-thirds of those surveyed believed that GSFC leadership programs either “greatly improved” or “somewhat improved” the effectiveness of leaders across the organization. Similarly, two-thirds of surveyed program participants reported that they personally had either “greatly increased” or “somewhat increased” their leadership skills as a result of their participation in GSFC-sponsored leadership programs. In addition, interview participants unanimously noted that participating in these leadership programs helped them become better leaders.

COMPETENCY RATINGS

Similar to a 360-Degree Assessment, we obtained competency ratings from multiple perspectives - program participants, employees of participants, and supervisors of participants. Taken together, we found the following most and least improved competencies:

	Participant Ratings (Self)	Supervisor Ratings (Downward)	Employee Ratings (Upward)
Most Improved	Recognizing Capabilities	Recognizing Capabilities	Managing Daily Stress
	Increasing Effectiveness	Increasing Effectiveness	Inspiring Others Towards Success
	Managing Daily Stress	Building Intra-GSFC Relationships	Building Intra-GSFC Relationships
			Soliciting Input from Diverse Groups
Least Improved	Saving Time	Maximizing Human Capital Costs	Building Cross-NASA Relationships
	Directing Resources Towards Goals	Improving Group Dynamics	Understanding Own Role Contribution
	Saving Money	Saving Money	Saving Money
		Directing Resources Towards Goals	Maximizing Human Capital Costs
			Encouraging Customer Relations

SOURCE OF ENHANCED LEADERSHIP PROFICIENCY

When asked to describe the sources of the leadership proficiencies they developed, survey respondents reported that one-third of their development was attributable to GSFC-sponsored leadership programs and two-thirds was attributable to other sources. The other sources cited were primarily on-the-job learning, and secondarily

mentoring and coaching. Both survey respondents and interview participants indicated that the leadership programs “oriented” them by providing a “map” and “tool box of techniques” to use, but individuals needed to use their own “follow through” to look for certain on-the-job situations and see those situations as opportunities to apply new knowledge, skills, and behaviors.

RETURN ON MISSION

ICF explored the overall return-on-mission for GSFC-sponsored leadership programs and also examined program-specific investment information in terms of impact on job performance, the relative value, the intent to invest budgetary resources toward these programs, and reported investment value from the perspective of senior leadership. Overall, the extent to which the financial and resource investments made by GSFC were worth the impact on job performance was reported very positively by all groups. Interestingly, *employees* of participants are seeing demonstrable evidence of the return and value of these programs. As for the relative value of GSFC leadership programs compared to other training experiences within and outside GSFC, two-thirds of participants reported they preferred their experience in GSFC-sponsored training to other experiences. Both participants and their employees responded positively to the question, “if you had budgetary responsibility, would you choose to invest a portion of your operating budget towards leadership program participation?” Finally, our interviews generated unanimous reports that senior leaders consider employees’ participation in GSFC-sponsored leadership programs to be a worthwhile investment.

These results indicate that overall, GSFC-sponsored programs provide an adequate return-on-mission. However, the area requiring attention (that could evolve to be a point of vulnerability) is the ability of these programs to ensure the organization is preparing the proper leadership bench strength. While in general the programs provide good return in terms of impact on individual and workgroup effectiveness, the organization’s ability to develop leaders who prioritize and point resources towards mission readiness is less solid. Successfully working in a resource-constrained environment and directing resources towards accomplishing the mission must reside in all leadership levels and should be further enhanced. Some of the least improved leadership competencies were in the areas of maximizing resource efficiencies and directing those resources towards mission accomplishment. Thus, ICF views this as the area with most potential for improvement in the return-on-mission generated from GSFC-sponsored leadership programs.

AFFECTS OF PROGRAM PARTICIPATION ON PARTICIPANT ATTITUDES, SKILLS/ABILITIES, & BEHAVIOR

Nearly all respondents reported that program participation had positively impacted their knowledge, attitudes, skills and behaviors. The specific impact depended on the program. LAP participants mentioned that appreciative inquiry techniques had provided them with the skills necessary to lead through asking questions (rather than making directives). Self-awareness, and enhanced listening skills were also enhanced through LAP. Respondents reported that results ranged from enhanced conflict management with staff and contractors, to improved cost effectiveness and productivity. The only skill regularly reported by ALP participants was situational leadership. GLES respondents mentioned communication skills and understanding the impact of diverse personality styles as their top improvements. GLES participants

repeatedly noted that these skills led to enhanced teamwork such as creativity, buy-in, cooperation, consensus, commitment and conflict resolution.

DIFFERENCES ACROSS DIRECTORATES

To explore this question, ICF selected five key indicator variables for Directorate comparisons, and extracted data from leadership program participants to examine whether differences existed across the following Directorates: Office of the Director, Management Operations Directorate, Office of Systems Safety and Mission Assurance, Flight Programs and Projects Directorate, Applied Engineering and Technology Directorate, Science and Exploration Directorate, and Suborbital and Special Orbital Projects Directorate.

Overall, we found small differences among Directorates in terms of increased leadership skills, perceived investment and relative value, the intent to invest budgetary resources, and the proportion of leadership improvements attributable to GSFC-sponsored programs. The Flight Programs and Projects Directorate and the Applied Engineering and Technology Directorate had relatively lower reported increases in leadership skills. The most positive investment value (i.e., financial and other resources) and relative value (i.e., compared to other training experiences within and outside GSFC) was reported by program participants from the Office of the Director. For both investment value and relative value, the Flight Programs and Projects Directorate reported slightly less positive responses, but indicated still quite positive value nonetheless.

We also discovered that the proportion of leadership improvements individuals from various Directorates attributed to GSFC-sponsored leadership programs versus other sources mirrored our overall findings. However, we did find one exception – program participants from the Office of Systems Safety and Mission Assurance reported gaining more from GSFC-sponsored leadership development programs than other Directorates. For this group, nearly half of their leadership improvements were attributable to these programs. However, these findings must be interpreted with caution due to the extremely small sample size.

CULTURAL FACTORS THAT FACILITATE OR INHIBIT RE-ENTRY

The main factors that encouraged the application of learning were the degree of supervisor and peer support. In addition, both participants and those who observed participants returning to their jobs remarked that the individual's personal self-motivation and robust commitment were instrumental factors that facilitate re-entry. Workload was the most influential factor reported to inhibit participants' re-entry after training. Both training participants themselves and those individuals observing training participants returning to work (i.e., supervisors, employees) noted that workload demands are sizeable and prohibit not only attending training in the first place but subsequent experimentation with new leadership skills. Participants also mentioned that lack of structured follow-up to the programs and natural homeostasis (i.e., the human tendency to resist change) hamper the application of new learning to regular job duties. Organizational culture and the political environment were rated as powerful - *both* as factors that support the application of learning to the job and as factors that inhibit application.

Conclusions & Recommendations

While overall results were positive, with participants, supervisors of participants, and employees of participants providing substantial examples of individual, workgroup, and organizational impact from various leadership development programs, an alternative approach was uncovered. We conclude that perhaps a modular approach to training would maintain or enhance current levels of impact.

The modules of this GSFC-wide Leadership Development Program would be loosely sequenced by audience profile. In addition, the modules would be competency driven, and would explicitly align with the GSFC mission. Finally, the modules would be based on adult learning principles of relating content to participant experiences, interactivity, collaboration, and application.

The success of the modular approach hinges on its ability to effectively market the approach, select participants, determine CLT logistics, schedule the modules, enlist senior leadership support, and evaluate future return on mission.

CENTRAL COMPONENTS OF THE MODULAR APPROACH

The GSFC-wide Leadership Development program should include the following eight components:

1. Core Learning Modules – ICF suggests that current programs be “deconstructed” into shorter, more targeted classroom-based sessions of 3 or 4 hours in duration, to be loosely sequenced according to the particular supervisory, managerial, or leadership needs and ambitions of its audience. ICF recommends that GSFC spell out the anticipated outcomes of module participation (e.g., increased supervisory skills, enhanced self awareness) and how the learning gained from participation can directly enhance participants’ job performance. In addition, sufficient real-world examples from successful leaders should be included.
2. Collaborative Learning Teams – ICF recommends choosing consistent language for this learning element - ‘Collaborative Learning Team’ (CLT) - to grow name recognition and institutional support for this valuable component. ICF recommends GSFC establish such CLTs immediately, with one set of teams comprised of new supervisors, and another set of teams comprised of existing supervisors and other leaders enrolled in learning modules. We also recommend teams convene quarterly and that those opportunities are viewed as yet another core learning module.
3. Self- & 360-Degree Assessments – We found that program participants benefited substantially from the use of self-assessments and 360-degree assessments during leadership programs. ICF recommends these tools be retained from the various programs and incorporated into core learning modules, perhaps as pre-work, to maximize participants’ improvements in self-awareness and ability to improve group dynamics.
4. Online Resources - To further extend the impact of participation in various collections of modules, ICF recommends targeted, yet comprehensive, on-line resources be made available to all audiences. These resources will serve both marketing and learning transfer purposes by helping to increase awareness

- about (and interest in) various modules, clarify the subject and intended impacts for each module, and provide additional resources (and referrals to other resources) for individuals to sustain their learning and development.
5. Mentoring & Job Shadowing – We recommend including on-the-job experiences (such as mentoring and job shadowing) in the modular approach, since participants reported those experiences as vital to their leadership development. Selection and matching of mentors and job shadowing experiences must take into account race, ethnicity, and other dimensions of diversity to enhance and support the equal development of all groups.
 6. Past Participant Support – ICF recommends that the Organizational Leadership and Culture Office representatives partner past participants with current participants to facilitate learning transfer. Perhaps past participants could be invited to attend Collaborating Learning Team module sessions to expand their ability to both share success stories and refresh their grasp of module content.
 7. Advanced Immersion Program –Since LAP is an intense (and expensive) immersion program that we found to positively affect individuals' self-knowledge and self-development, ICF recommends that GSFC retain the program, but permit only advanced leaders who have demonstrated mastery of core learning modules to participate. In other words, this program can be used similar to a "capstone" course to inspire individuals to deeply enhance their self-development before turning back again to more of a focus on relating to others.
 8. Senior Leadership Modules - ICF also recommends including several senior leadership modules targeted at the GS14, GS15, and SES levels. Desired impact from these modules should include enhanced retention of GSFC's most senior leadership ranks and strengthening of Center succession planning efforts.