Staff Mentoring Programs Establish a Strong Foundation at APL

Timothy M. Frey and Karen Shaffer Penny

In the past two decades, employee mentoring programs have become extremely popular in both the public and private sectors. Because of APL's long-standing commitment to excellence and to maintaining an environment that encourages staff development, innovation, and productivity, mentoring efforts have taken root here as well. This article describes the purpose and framework of the APL Mentoring Program as well as its success, as evidenced by cumulative participation levels of more than 15% of APL staff since inception in 2001. The article also examines the overall impact of the program and concludes with a discussion about the expanding mentoring efforts that are planned for the future.

INTRODUCTION

Staff retention, career growth, employee productivity, critical skills maintenance—these are issues that virtually all organizations encounter at some point. Successful management of these issues can yield great organizational success, but if poorly handled, disaster can result. In recent years, effective mentoring programs have become a cornerstone in corporate America's strategy to face these issues head-on to remain viable and competitive. More and more, companies are turning to employee mentoring programs to promote growth and maintain excellence in the workplace. "Research … supports the fact that mentor assistance programs yield higher productivity and performance for both seniors and their protégés. Other evidence confirms that companies with mentoring programs stand a greater chance of accurately selecting and developing new talent, and recruiting and retaining highly qualified individuals."[1]

Many Fortune 500 companies have implemented mentoring programs in the past decade, and many report great successes. The Business Mentor Center reports that "71% of Fortune 500 companies use mentoring to be sure that people are held accountable for their commitment to learning, and this accountability works because it occurs within a supportive relationship that is focused on growth in areas targeted by the learners themselves."[2]

APL has a long-standing commitment to excellence and is committed to providing an environment for its staff that encourages growth, innovation, and productivity. Motivated by this commitment, and the growing trend in industry that has yielded so much success already, departments across the Laboratory have implemented mentoring programs in recent years. While specific advantages cited in the research vary among

organizations, a successful mentoring program offers the following advantages of particular interest to APL staff (here, we refer to program participants as *mentors*, i.e., ones doing the mentoring, and *mentees*, i.e., ones being mentored):

- Provides access to resources that may not be available in the mentee's immediate environment
- Allows mentees to seek guidance in career goals, and in some cases motivates them to begin to think about career goals
- Helps establish a feeling of belonging in, and commitment to, our organization
- Establishes a confidential, nonthreatening environment in which to discuss concerns and issues
- Gives mentors opportunities to give back to our organization by lending their expertise to grow new talents, which in turn could help develop eventual successors and facilitate overall technical and professional development

This article discusses specifically how the mentoring effort at APL got started and describes the program framework from the Strategic System Department's (SSD) initial rollout. It then highlights similar efforts in other departments, describes some of the initial impact that mentoring has had on APL staff, and concludes with a look to the future.

HOW THE MENTORING PROGRAM BEGAN

During the fall of 2000, SSD branch managers chartered the New Staff Orientation Program Team to investigate the feasibility of establishing a mentoring program. That team's efforts had theretofore been focused on how to best integrate *new* staff into the department. However, one of the articulated goals for the mentoring program was to accommodate *all* staff in the context of individual mentoring relationships. In addition, the program was to address a potentially wide variety of staff-defined professional goals (that is, not just integration into the department or Laboratory environment).

With this additional charter, the team conducted 6 months of extensive research, including a literature review, an examination of efforts in other organizations, participation in a professional mentoring conference, and a review of other past attempts at mentoring program implementation at APL. That research effort culminated in the presentation of a detailed proposal for a department-level mentoring program to management in April 2001.[3] The proposal included a recommendation and framework for a pilot mentoring program, which was approved and later implemented in the fall of 2001. It also recommended implementation of a full-scale program if the pilot program was deemed successful.

The pilot program was limited to 10 mentor/mentee pairs to enable frequent iteration between the Mentoring Team and each program participant. This iteration was paramount to determining if the program should be continued after its first year. Even though the team's research had shown a probable need for this type of program at APL, it was recognized that true validation of this need would come from the experiences of participants. The pilot program lasted approximately 9 months, the time frame in which most pairs made satisfactory progress on mentees' goals. Throughout that period, participants gave positive feedback, helpful recommendations for improvement, and ultimately a unanimous recommendation that the program be continued. This feedback, along with modest program costs, resulted in management approval for implementation of a full-scale program in the fall of 2002.

The full-scale program has continued to yield positive results since inception. With few exceptions, the framework for the pilot served as the basis for the full-scale program as well as mentoring programs started in several other APL departments.

BASELINE MENTORING PROGRAM

Goal and Vision

Important to the success of any organized program is a clear articulation of its goal. The goal of the Mentoring Program is

> "To assist the department (or Laboratory) in attracting, developing, and retaining highly qualified employees from diverse backgrounds."

The program is intended to promote the career growth and satisfaction of our staff. If the program can make APL a better place to work by giving staff members access to resources custom-designed to help them grow in their careers, not only will they be more fulfilled, but the Laboratory will also benefit from increased productivity and innovation as well as less time and money spent recovering from attrition.

The guiding principle of the program—the vision—defines the strategy with which the Mentoring Team attempts to accomplish the program goal. This vision is

> "To provide all staff with a resource to help enhance, accelerate, and focus their professional growth, in the context of a mentoring relationship with a qualified, experienced staff member."

To this end, mentees' goals must be consistent with their professional growth. The following topic areas are defined to help mentees achieve this consistency and further outline the scope of the program:

- Improving soft skills (e.g., interpersonal communications, conflict resolution, leadership)

- Enhancing transition into the department/Laboratory environment
- Developing specific technical skill sets

These areas were chosen in recognition that many issues affect staff members' abilities to do their jobs effectively—not just technical expertise in a given area. And while the team wanted to provide an option for technical mentoring, experience has shown that most mentees have goals within the first two areas. Also important is that these areas are not mutually exclusive: mentees are encouraged to have goals in more than one area at the same time. Experience has shown that, for the most part, this is what they do.

It is also important that this program be a resource for *all* staff, believing that regardless of professional classification, access to a qualified mentor in the context of a structured program will yield increased productivity and satisfaction. As such, the program is open to all depatment part-time or full-time regular staff members at all technical, administrative, professional, and supporting staff levels.

Framework

Beneath the umbrella of the goal and vision, execution of the mechanics for each program cycle follows a relatively linear process: advertising, participation and matching, training, program maintenance, and program completion.

Advertising

Each program cycle is typically announced annually via an all-department staff e-mail from the department head. The announcement is immediately followed by an advertising campaign to explain the intent of the program and to allow mentees to sign up. This campaign includes posters, e-mails, and flyers distributed throughout the department. In addition, two information sessions are offered to interested staff, explaining the intent and structure of the program and providing the opportunity to hear directly from former participants about their mentoring experiences.

Participation and Matching

Since program participation is voluntary, anyone who wishes to be a mentee may join. After the mentees are identified, a member of the Mentoring Team meets with each of them to clarify their primary goals and identify the qualities (e.g., effective listener) and characteristics (e.g., experience as a program manager) they want in their mentor. Simultaneously, the team provides a general list of desired mentor qualities to senior management and asks them to nominate potential mentors from their areas. Nominations from former participants are also welcomed and encouraged.

Next, the team privately matches mentors and mentees based on mentee goals and known mentor qualities/backgrounds. After confirming mentor selections with each mentee, a team member meets with the potential mentor, describes the program and the reasons why the team believes that the match is good, and asks the person to participate. If the mentor agrees, after final confirmation with the mentee, the matching process is complete. If not, the process is iterated until a match is confirmed.

Some key elements of the matching process are as follows:

- Mentees are purposely matched with mentors *outside* their direct management chain (program and line) unless they specifically request otherwise. This is done to give mentees the freedom to discuss anything with their mentors without concerns about career implications. It also enables mentors to counsel or advise mentees without having to balance programmatic or group considerations.
- Mentees and mentors are both given "veto power." Mentees do not have to agree to the first-choice mentor, and mentors do not have to participate when asked. If either of these situations occurs (which is rare), the process is iterated until an agreeable match for both mentor and mentee is found.
- The matching process, which uses best practices from the research, is arguably the most important criterion to successful mentoring. A presentation on the matching process—given by the Mentoring Team at an International Mentoring Association conference in April 2004—received positive feedback and helped to valdate our approach.

Training

All mentees and mentors participate in mandatory training before they begin their mentoring relationships (usually 1 to 2 months after matches are finalized). Mentees complete 4 hours of training, and mentors complete 6 to 8 hours. Topics covered in detail with *all* program participants include

- Background information on the Mentoring Program
- Objectives and expectations
- Participant responsibilities (including the importance of confidentiality)
- How to effectively define goals
- Measurement of progress toward those goals and overall success
- Diversity in mentoring
- Exit strategy (see below)

Additional topics covered more extensively with mentors include some of the following:

- Listening
- Coaching

- Conflict resolution
- Additional resources to assist with mentoring

During this phase all mentees and mentors are given a comprehensive training binder and other reference material. A wide variety of training techniques are used, including multimedia, presentations, role-playing, and small group exercises. Testimonials are also included from former program participants to offer direct insight into the experiences of peers.

Program Maintenance

After training is completed, mentee/mentor pairs begin their relationships. Pairs are strongly encouraged to meet at least once each week for the first 6 weeks to establish rapport, build momentum, refine their goals, and create mentoring agreements. After the first 6 weeks, pairs are required to meet at least once each month, although most choose to meet more frequently. One initial requirement of each pair is that they co-author and sign a confidential mentoring agreement that minimally outlines the goals of both mentor and mentee for the relationship. The format of this agreement is flexible, with informal and formal samples provided for guidance. The agreements have proven to be a powerful tool to start the relationships on a mutually agreed-upon path, with clear agendas and anticipated outcomes. Mentoring agreements are commonly implemented in other organizations, and the research strongly advocates their use.

For the remainder of the program, periodic mentoring exchanges are held between the Mentoring Team and program participants. Mentees and mentors are usually separated during this phase. These exchanges have proven to be a valuable tool for information sharing and participant accountability, and they enable additional peer networking with fellow participants. On occasion, the team meets with mentees and mentors together to train on common topics and to network.

About halfway through the program (3 to 4 months after training), participants complete a progress evaluation. These evaluations serve as a basis for measuring progress toward original goals as well as information about goals added or deleted since inception of the mentoring relationship. They also provide a basis for determining how much longer pairs need to meet within the structure of the program.

Program Completion

Mentoring pairs decide on their own when they are finished; they can end their formal relationship whenever they choose. This process can sometimes be awkward, which is why both mentors and mentees are trained on exit strategy, i.e., how to determine when the relationship has finished and how to effectively communicate about its conclusion. This training also addresses how to gracefully exit a relationship in which an optimal match has not been achieved. Past experience has shown that most pairs finish between 6 and 9 months after they begin meeting. Pairs are certainly free to meet outside the program after that, but decide for themselves when they no longer need the structure of the program to be productive.

While feedback is gathered throughout each cycle, a concentrated effort is made to collect final thoughts and recommendations near the end. This feedback is essential for making program improvements and also helps identify lessons learned for other departments beginning their own programs. Some selected comments from past participants are as follows:

Mentor feedback

- "Being a mentor has brought home to me, once again, how absolutely important it is to keep the lines of communication open between staff and management. When information is lacking, people will fill in the gaps."
- "One of the lessons I learned from the mentoring relationship was that there was a need … for newer staff members to have someone (supposedly older and wiser, or at least older) to talk to about their career—someone who was not in the supervisory chain. Some folks are reluctant to talk to supervisors about job dissatisfaction, other jobs, personal situations, etc., for fear of misinterpretation by the person who fills in the Blue Sheet. There is also a need … for cross-group interactions."

Mentee feedback

- "My mentor helped me take steps to pursue alternate/additional work projects. I could have done it on my own, but I would have waited a lot longer and would have been more tentative. She gave me confidence I was making good choices."
- "The mentoring program has been the impetus for me to focus on career/work goals. It has allowed me to clarify and prioritize what I need to be doing, how I need to be doing it and let the less important issues become just that—less important."
- "It was really a benefit to talk with someone who has taken the same path I want to, and succeeded."
- "Overall, the major benefit to me was being accountable to someone—I couldn't make goals, and then just kept putting off working on them. I had to (and wanted to) show my mentor that I was making progress."

FORMAL VERSUS INFORMAL MENTORING

Some common questions are asked about mentoring at APL. Why do we need a formal mentoring program?

Doesn't (and shouldn't) mentoring happen spontaneously and informally? Does the formal process hinder informal mentoring relationships? While these questions express an understandable concern, experience has shown that informal and formal mentoring not only can peacefully coexist but actually complement and support one another.

Our goal has never been to formalize all mentoring at the Laboratory but rather to provide a resource for mentees to find qualified mentors when their own networks don't suffice. The program offers a rich breadth and depth of access to mentors that mentees either wouldn't know or may not feel comfortable approaching on their own. It enables mentees to discuss their goals, careers, challenges, and growth with someone outside their direct sphere in a confidential, objective manner. Finally, in most cases, the mentoring relationships that begin in the program evolve into longer-term informal relationships that provide value added well beyond the initial constructs of the program. The bottom line is that informal mentoring is vital in any organization and should always be encouraged; however, a formal program allows equal access to mentors for all staff and expands the resource pool well beyond that of any individual's own network, making it the perfect complement to the informal mentoring that already naturally occurs.

EXTENSION TO OTHER DEPARTMENTS

The need for mentoring is certainly not unique to one department. Every department at APL has a vested interest in attracting, retaining, and developing qualified staff from diverse backgrounds. As a result of a confluence of individual department-initiated efforts, along with efforts to expose the broader Laboratory community to the original program, the number of departments that have embraced and initiated mentoring programs continues to grow (Table 1).

In addition, the National Security Analysis Department (NSAD) incorporated mentoring into its pilot study lead development program in 2005, pairing 12 program participants with mentors as part of their overall development plan. The Technical Services Department (TSD) is in the process of examining the mentoring needs of its employees, with a decision to follow in 2006 regarding how to best address those needs.

The structure and execution of mentoring programs across the Laboratory have largely modeled the original program paradigm, but each has added unique elements or modified the original design to address individual department challenges. The SD program is the exception in that its primary goal is critical skills retention. SD program participants are selected by management and matched with more experienced mentors in specific technical areas. The program framework is founded on analysis of a department-wide staff skills matrix and is designed around the goal stated above. Although different in primary motivation from other programs, this is a perfect example of a mentoring program designed to meet a specific organizational challenge in a unique environment.

Table 1. Department Mentoring Program time line.

Department	Program initiation
Strategic Systems (SSD)	Fall 2001
National Security Technology (NSTD)	Fall 2002
Space (SD)	Fall 2002
Business Services (BSD)	Fall 2003
Power Projection Systems (PPSD)	Fall 2003
Human Resources and Services (HRSD)	Fall 2004
Research and Technology Development (RTDC)	Winter 2004
Information Technology Service (ITSD)	Fall 2005
Air and Missile Defense (AMDD)	Fall 2005
Global Engagement (GED)	Fall 2005
Applied Information Sciences (AISD)	Winter 2006

As stated above, while differences in other programs are not as pronounced, each mentoring team has masterfully custom-designed program implementation to optimally meet the unique challenges in each department environment across the Laboratory. A partial list of these customizations is as follows:

- NSTD has two 6-month cycles per year to meet the high demand from participants and focuses primarily on career and soft skill development.
- BSD has participants from every group on its team to represent the diverse perspectives and task areas across the department and has used innovative and creative methods of advertising their program to staff.
- HRSD has worked issues associated with facilitating the participation of staff working shifts or assigned to security posts.
- AISD has adopted a more automated process of information exchange to address the large number of staff in their department.
- AMDD developed an automated matching program, with an initial match based on mentee goals and mentor qualifications and a secondary sort by self-identified personality traits.

As of this writing, each department that has implemented a mentoring program has received positive feedback from participants and plans to continue with the structures that are now in place. Since the original design of the program was created to be flexible, change

is always encouraged if the current business situation warrants it.

CROSS-DEPARTMENT EFFORTS

Now that many departments are engaged in mentoring, two efforts are under way to leverage our diverse programs to build a strong cross-enterprise mentoring community of practice: cross-department mentoring exchanges and cross-department mentoring relationships.

Exchanges

Within the past 2 years, a Cross-Department Mentoring Team was formed to look specifically at how to leverage experiences and lessons learned by each department to benefit all mentoring programs. To support this goal, the team has held three cross-department mentoring exchanges to date and plans to continue them two or three times per year to

- Share lessons learned, best practices, and solutions to mentoring challenges
- Explore how to best share department resources
- Develop a vision for future collaboration and integration of efforts

One or two representatives from each department participate in these exchanges, which so far have been well attended and successful in achieving their goals. The main topics have been overall program comparison in the areas of advertising, matching, training, gathering participant feedback, team dynamics, and best practices in the evaluation of program success.

Relationships

As the programs in each department expand, there has been increasing interest in cross-department mentoring relationships in which the mentor and mentee in a given pair are from different departments. Reasons for this interest have varied but have included a desire to learn about business processes and cultures in other departments, to access technical skills that may not be resident within a given department, and to collaborate across business areas. To date, this cross-department mentoring relationship concept has been piloted in and between several departments. The number of these relationships (along with participating departments) is shown in Table 2.

Value Added

The cross-departmenal mentoring exchanges and relationships are forums in which staff from different departments can work closely together in a variety of ways. Not only do they expand the mentor resource base and help the mentoring programs across the Laboratory improve, but they also facilitate moving APL closer to true enterprise behavior as we strive to break down department and business area stovepipes. This positive trend is an example of the impact mentoring has had at APL. A more detailed view of overall impact is discussed in the next section.

OVERALL IMPACT

Measuring the success of initiatives like mentoring from a purely quantitative perspective is challenging. When staff and funding resources are involved, however, questions regarding return on investment are always warranted to make good decisions about the future. We submit that three main questions need to be answered regarding the success of any program.

1. Are the goals of the program sound and consistent with overall organizational goals?
2. If the program meets its goals, will its contributions to the organization be worth the investment?
3. After the program is executed, does it meet its goals?

Questions 1 and 2 are exactly what department managers ask when considering programs such as mentoring. Regarding Question 1, the goal of attracting, developing, and retaining staff is certainly in line with our organizational goals. For Question 2, the average cost of the mentoring programs is extremely reasonable, with most of the expense being due to start-up costs and training of mentors and mentees rather than

Table 2. Total number of cross-department mentoring relationships (as of December 2005).

	Mentor from								
Mentee from	SSD	BSD	PPSD	NSTD	HRSD	TSD	SD	AMDD	AISD
SSD		1	4	1	1	1	1		
PPSD				1					
NSTD		2							
RTDC	1								
ITSD	1								
GED				1				1	2
AMDD				1					

for program execution. Given that training costs are nonrecurring, as the number of trained mentors and mentees rises in each department, program costs will be reduced. If the program helps develop staff and yields higher employee satisfaction, the relatively low cost of program execution seems to be more than worth it from that perspective alone. However, if the program helps prevent even one staff member from leaving APL (and it has on several occasions), the common estimates of how much it costs to hire and train just one new employee (6–12 months of salary) are often commensurate with the cost of the entire program.

This leaves us with Question 3: Is the program meeting its goals? For the programs at APL that have goals of attracting, developing, and retaining staff, is the program working? Unfortunately, it is still too early to answer this from a rigorous Laboratory-wide analysis, but several other "measures" indicate that we are moving in the right direction, specifically in the areas of participant feedback and overall levels of participation (first time and repeat).

Participant Feedback

With few exceptions, participants from across APL have given positive feedback about their experiences in the program. In addition to the participant feedback discussed earlier, comments such as the following are common across the board: "I feel more a part of the Laboratory." "All our staff should participate in this program at least once." "The program helped me tremendously." "It was a win-win scenario." "All departments should have a mentoring program." In general, participant feedback gives demonstrated evidence across participating departments of skill improvement, increased motivation, improved efficiency, career growth, and a feeling of being an important contributor to APL, as mentees are defining *and* accomplishing their career-related goals.

In addition, participants almost unanimously recommend the continuation of the program in each department, and many feel that they have made progress in accomplishing their goals, which must, by definition, be related to professional growth at APL.

Overall Participation

Perhaps the best current measure of the need for such a program, and the impact it has had so far, is the levels of participation to date. Not only has there been a healthy level of first-time participation, but many mentors and mentees have been involved for more than a year (not necessarily in the same pairing). Figure 1 shows yearly, cumulative participation by department since 2001. We also find representation at the mentor and mentee levels across the spectrum of technical areas and years of professional experience. Early analysis in SSD, NSTD, and BSD has shown that a greater number of women and minorities have participated than would be expected from baseline representation in each department.

Given the rates of participation across the Laboratory in the newer mentoring programs, the continued strong participation in mature programs, and the overwhelmingly positive feedback from participants, we believe that these efforts have been successful.

In addition, numerous studies have concluded that a positive relationship exists between mentoring and organizational commitment, which in turn leads to higher retention and productivity.[4–6] We believe that, based on this internal and external evidence, the overarching goal (question 3) is being met, even in these early stages.

NEXT STEPS

The future for mentoring at APL looks bright. With Laboratory-wide cumulative participation already more than 15%, and with several departments just beginning mentoring programs, we expect the total participant numbers to continue to increase. Feedback has been consistently positive, and the programs seem to be making great strides in meeting their goals, both within and between departments. However, efforts need to be continued and reinforced to grow department programs; provide resources to make them more efficient, interoperable, and beneficial; and seek innovative ways to introduce new elements to increase success. To say "we've always done it this way" should never be successful in its attempt to diffuse positive change. Mentoring programs should always be a work in progress. To that end, the cross-department mentoring exchanges will continue to support the helpful interchange of information among departments and serve as a resource to engender enterprise behavior across the Laboratory.

A formalized structure for facilitating cross-department mentoring relationships should be created and executed. The pilot programs have worked because of the small number of relationships involved. However, as interest grows, issues such as funding, potential cross-department transfers, availability and allocation of mentors, and department-specific cultural differences will take center stage. A structure must exist to address these issues and ensure that cross-department mentoring runs smoothly.

Finally, efforts will be made to collaborate with external organizations to exchange best practices, as appropriate. These organizations include other parts of JHU, APL's sponsors, and leaders in corporate mentoring programs.

CONCLUSION

In summary, the mentoring effort at the Laboratory has certainly been a rewarding journey for many

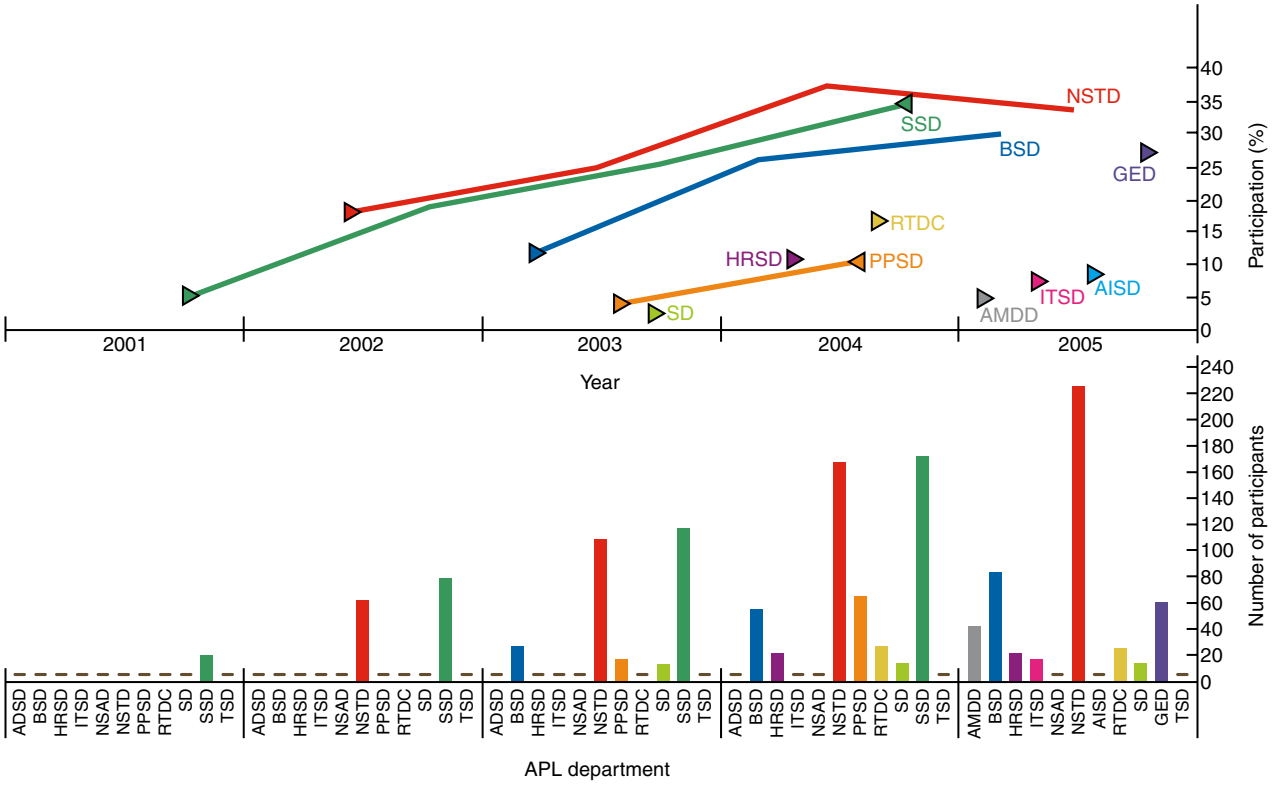

Figure 1. Cumulative participation by department. The top graph shows percent cumulative participation in each department beginning with the implementation of the pilot program. The denominator for each year's calculation is the number of total eligible staff in the department at the beginning of the program cycle. The numerator counts each participant only once (mentors and mentees), regardless of whether they have participated in more than one cycle. Right- and left-facing arrowheads show program start and end, respectively. Departments without data points in successive years had not started the next cycle as of December 2005. Cumulative percent participation may decline if the department grows at a faster rate than mentoring program participation in a given year (e.g., NSTD in 2005). The bottom graph shows the cumulative number of participants by year and includes repeats.

who have been involved. From just 10 mentoring pairs at program inception, to date 356 have formed to work on mentees' career goals, which, when accomplished, contribute directly to the quality of APL work and the satisfaction of our staff.

In addition, mentoring teams in each department have shown initiative and innovation as well as a willingness to work together. Cross-department mentoring pairs have been established, and staff members are becoming more networked across the Laboratory. As a result, mentoring is moving APL closer to true enterprise behavior.

Management across the Laboratory has shown a great deal of support for these efforts, confirming to staff members that our leadership cares about their careers. Management's investment in these programs, the hard and creative work of each mentoring team, and the willingness of APL staff to seriously participate have far exceeded expectations. Given that almost every department has implemented a mentoring program, it is likely that very soon every staff member at the Laboratory will have access to this resource which has benefited so many already.

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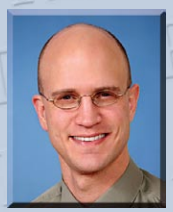
THE AUTHORS

Timothy M. Frey is a member of the Senior Professional Staff in the Global Engagement Department (GED). Since joining APL in 1997, his work has included weapon system reliability and accuracy analysis, modeling and simulation, software development, and systems engineering. Mr. Frey also has experience in project and program management in the areas of human interaction simulation and training as well as net-centric concepts and application development. He led the development of the Strategic Systems Department (SSD) New Staff Orientation Program in 1999, has led the GED/SSD Mentoring Program since its inception, and is involved in integrating mentoring efforts across APL. **Karen Shaffer Penny** is a member of the Senior Professional Staff in the Human Resources and Services Department (HRSD). After joining APL in 1999, she supported the SSD and National Security Technology (NSTD) as a human resources generalist. In 2003, she was appointed Section Supervisor of the Department Service Team supporting the National Security Analysis and Technical Services departments. She supported the development of the SSD New Staff Orientation Program in 1999 and the development and implementation of the mentoring programs in SSD, NSTD, and HRSD. Further information on the mentoring program can be obtained from Timothy Frey. His e-mail address is timothy.frey@jhuapl.edu.



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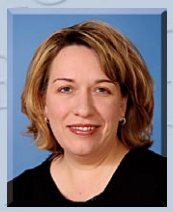

Karen Shaffer Penny