

**Mentoring in a Box:
Tools for Developing a Mentorship Program for Applied Statisticians
Committee on Applied Statisticians (CAS), July 29, 2015**

What is Mentoring in a Box? A tool box consisting of a collection of guidelines, concepts and templates intended to help ASA groups and its members (e.g. chapters, sections, committees and other special interest groups) create and sustain a mentoring program of their own. We refer to these tools as **Mentoring in a Box** because the tools are intended to be portable, flexible and adaptable to different settings. As with any toolbox, the final outcome is intended to represent a customized mentoring program with the results closely aligned with the goals and the needs of the intended group.

Why open the Box? Mentoring has many benefits to those pursuing a professional career in applied statistics. Some of the benefits to individuals in a mentor/mentee relationship as well as an overview of the mentorship lifecycle is given in Appendix 1. In addition to benefits to participants, a mentorship program also has benefits for organizations; the accomplishments of engaged, creative employees committed to the vision and mission of their organization far outweigh the effort needed to initiate and sustain a mentoring program. While mentoring programs can have long-term benefits to business organizations, the benefits to professional associations such as chapters, committees or other special interest groups are direct and immediate. They enrich connections within the profession and thereby enrich the professional (and personal) lives of their participants. A mentoring program can enhance professional growth of members during and after participation by promoting involvement in the professional organization by fostering activities that enhance the organization's value to all members.

This tool box is intended to help create and sustain a mentoring program. The suggestions, guidelines and algorithms should enable an organization to jump-start a mentoring program and identify it as their own. Mentoring in a Box also provides a way for CAS to improve these contents by learning from other organizations what works and what needs improvement via the annual report template included below. Please let us know how you are doing by emailing the current chair or a CAS member when you start your journey.

For more information, please contact the [Committee on Applied Statisticians](#). This document was collectively authored by CAS members and includes materials created over the course of three years. Authors include (in alphabetic order): Marlene Egger, Amarjot Kaur, Chuck Kincaid, John Lin, Shari Messinger Cayetano, Richard Morris, Emily O'Malley Olsen, Mark Otto, Keith Schleicher, Erin Tanenbaum, and Eric Vance.

For the latest version of “Mentoring in a Box” please visit the CAS web site at: <http://community.amstat.org/cas/home>. Many of the materials in this guide are from experiences from CAS mentorship initiatives and from the Office of Personnel Management toolkit for building a mentoring program. For further resources see the CAS mentoring clearinghouse <http://community.amstat.org/cas/mentoring1/resources1>.

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Step One: Exploring the needs and purpose for a mentoring program

A mentorship program for applied statisticians can enhance the practice of statistics through achieving personal and professional goals of the participants. Such an outcome will commonly occur through sharing knowledge and experiences between a professional practitioner and someone entering the profession of statistics. The many ways in which people make career transitions into statistics, however, means that a constructive mentorship program can take many forms and be constructed in a variety of ways.

Before initiating a mentoring program, review the needs and potential benefits for its membership. For instance, does a program already exist that fulfills current needs? If not, do new statistical interests or goals need new program structures to meet them?

If the need for a mentoring program is identified then consider what type of mentoring program might be of greatest interest? For example, the CAS developed mentoring program with one-on-one interaction, as presented here, is one option. But other strategies are possible, such as a career development symposium or a designed workshop or support group highlighting specific areas of interest. You may choose to adopt one or more program strategies appropriate for your membership.

As the contents of this document illustrate, establishment of a preliminary mentoring program requires organizational commitment. Even with guides and templates to work from the process is experimental. You might establish an exploratory committee to decide on the need, purpose, and outline of the possible structure of a program. The proposal could be discussed, altered, and decided on by the organization's board. The board might form a pilot program. The pilot program should have modest goals of matching say 10 mentor/mentee pairs. There is more commitment to establishing a program, working out all the little details. It is also harder on the pioneering mentor/mentee pairs.

While all pairs have to find their way with each other, initial pairs do not have a body of experience from past pairs to draw on. Pairs should be asked to commit to only six months to a year in the program. Pairs may maintain productive relationships for years after the formal program ends.

Different people should run the pilot program and pass off their experience to those that run the established program when a member rotation on the mentoring committee has been worked out. Mentoring requires inspired work. This takes new blood to maintain. Knowledge should be documented and passed on others in the group and to CAS. Finally, ways to tie mentoring integrally into the organization culture should be explored from the beginning.

Step Two: Establishing a mentoring committee

A mentoring champion greatly enhances the success of the program. They are usually from upper management. The champion has the commitment to bring the program to life and make it sustainable. She recruits 2–3 more people to form an ad hoc committee. The committee will implement and oversee the first year of the pilot program. Succession on the committee can be accommodated by recruiting an additional person who will commit to championing the established program. Alternatively, if the next year's champion is already serving on the committee, then the additional recruit could serve on the following year's committee and could become the champion for the third year of the program.

Step Three: Structuring a Program

It takes time to realize the full benefits and sustain the impact of mentoring on the organization's members. We suggest that a mentoring program running for a minimum of three years would have time to advertise, recruit participants, and work out the rough spots in the matching, shepherding, and evaluation parts of the process.

If the program is geographically distributed, then many pairs must communicate remotely. It is difficult to establish a mentoring relationship over the phone. A meeting at a conference is important to allow mentor-mentee pairs to have an opportunity for face-to-face interaction and attend an orientation. To do this, advertisements matching the mentors and mentees need to occur many months leading up to the conference. After the initial kickoff, pairs can more easily carry on remotely after breaking the ice.

Step Four: Recruiting program participants

Announcing and publicizing and the program are important first steps. The existence of a new mentoring program could be announced and publicized through a variety of existing channels.

- An announcement in Amstat News
- Email distribution: sections and chapters have email channels to communicate with members
- Newsletters/website/podcasts associated with the ASA unit
- Word of mouth and other forms of networking

Other forms of popular media can be employed depending on the interests and proclivities of the targeted participants.

Make sure on the notifications, to send an alert when applicants respond to the application form and add a response that sends a copy of their form back to them. An email can be sent letting them know someone has received their application. Both the automatic response with their application and the email from the committee help engage them in the program.

Timing of the initial program launch should be coordinated with advertisement of the program. Importantly, matching of mentors and mentees prior to a targeted conference of interest or other face-to-face meeting opportunity should allow time for mentor-mentees to touch base with one another and exchange introductory material. This initial interaction prior to an in-person meeting will establish a personal basis for future relationship development. After the initial kickoff, mentor-mentees can establish a communication plan for ongoing interactions.

Ideally you would like to have as many mentors as mentees. Although the benefits to mentors are at least as great as to mentees, mentors must be actively recruited. Experience suggests that soliciting from notices may result in an uneven ratio with many more mentees than mentors. It should be clear that applying for the program does not guarantee a match of every potential mentee to a mentor. Recruiting from the mentoring committee, drafting mentors ahead of time or approaching high-level personnel and other members from within the organization are possibilities. Bringing participants from unexpected areas, while not always successful, may strengthen the program and the organization. As mentees apply, finding well-suited mentors may slow down the matching process but may result in better matches in the end. As a last resort, committee members can help mentees find their own mentors when none can be found otherwise. Ultimately, mentees finding what they need will strengthen them, the program, and the organization. The process of finding mentors can be described in the announcements, and should be looked upon as a critical component of the program.

Appendix 2 presents examples of advertisements used by CAS and the Biopharmaceutical community. The first is a screenshot of an advertisement from CAS on their community website. The second example announces a mentoring program for the Biopharmaceutical Section of ASA. The third example illustrates a follow up advertisement of for a mentorship program in the Biopharmaceutical Section. It mentions potential benefits to mentor and mentee and includes points of contact for those wishing to take advantage of the program.

Step Five: Pairing mentors and mentees

A simple “intake” survey is useful for collecting information for matching mentors and mentees. It should be limited in scope to minimize the burden for the candidates yet include points for match appropriate for goals of the program.

Google Forms can be used to collect information about candidate mentors and mentees as a basis for pairing. Appendix 3 includes suggestions for developing a Google Forms page to match mentors and mentees. Also, check the link to an example Google Forms page helpful for making matches. Since the complexity of matching increases with the square of the number of candidates, it is good to start with basic information and a small number of potential candidates.

CAS has worked with many rounds of matching and as such has explored different ways of matching mentors with mentees. From our experience, aside from name and email, we only ask basic questions on: 1) Are they a student and what degree are they pursuing, 2) details about their own careers including years on the job, 3) type of job (government, academic, commercial, biostatistics, etc.), 4) goals from the mentoring relation, and/or 5) location including city and time zone. This information was interesting to read, but we used basic information on their background to match mentors to mentees. Using too much information and complex matching algorithms do not help. Location seems like an odd bit of information, but ease of contact, especially within in the same time zone has turned out to be one of the key to a successful relation.

From Step Four, mentees will apply but mentors need to be asked. If you have a full roster of mentors, match mentees as they come in. This simplifies the matching and the first mentees to apply get the better fits. Whether you match as you go along or match at the end is based on your own preference and the logistics of the program (e.g. if mentors are readily available when the first mentee applies). If you have leftover mentors, consider continuing to seek out mentees—a willing mentor is a terrible thing to waste.

The data management is important, especially if committee members are all making matches at the same time. The Google Form results a spreadsheet on Google Drive, where the link is shared, so the whole committee can work with the matches. Extra columns can be added to the spreadsheet without corrupting the form. Adding URLs to LinkedIn or Job descriptions are helpful.

Also, make a separate table with the match information, the mentee, mentor, finder or person responsible for the match, and a note column. Mark the last contact and any information from calls. The match table is critical letting others know what people are available at anytime. Add a date column for the date the last letter was sent.

You can pay for an add-on to do an email merge in Gmail, use Microsoft Office, or construct the letters manually. Download the latest version of the Mentor/Mentee form table and the Match table. Add the Mentor-Email and the Mentee-Email to the match table. Edit the template letter with Form entries for the names and emails. Send one letter per pair. This identifies them as a pair from the very beginning. Include the 1) welcome materials adapted from Appendix 8 and the 2) DIY mentoring handout that can be downloaded from the CAS website or you can see a screenshot of it in Appendix 9. At this point you have helped the mentors and mentees to start their journey together.

Step Six: Communicating with program participants

Under [mail or email merge](#), instructions on how to use mail merges to contact mentees and mentors can be found for most word processing packages. A spreadsheet or table in a database has the names email addresses for each pair as records. A mass email

can be made by inserting “field markers” in an email template in place of the addresses and names. The template is then attached to the spreadsheet or table and a personal email is made for each row of data. Most systems have a preview, and it is important to check that the names appear in the letter in the right places, and the each particular letter is correct. Then when you are sure everything is correct, you hit send and everything gets sent at once.

An email can positively and gently state expectations of the program including a time line, some tips for success, and even some guidance about who to contact if things do not seem to be working out.

Once the mentoring program kicks off and initial communication is made to mentors and mentees it is important to periodically contact the participants to keep them engaged and also to remind them to keep up with the communications with their counterparts (mentors or the mentees). This may be accomplished with a simple email. Sample emails are given in Appendix 5.

Step Seven: Soliciting feedback from program participants

At the end of a six to twelve month cycle of a mentoring program, an email should be sent to participants to determine the value of the program to members. The participants can be surveyed and responses summarized to evaluate progress. Questions designed to identify areas of concern and elicit suggestions for program improvement can be included.

An example email requesting participation in the survey is given in Appendix 6.

An end-of-program survey on Google forms to evaluate the mentoring program can be useful for this purpose. The program administrative unit can modify the contents of the survey and/or communications according to program needs.

Below is a link to a survey about the 2013–14 pilot mentoring program of the ASA Committee on Applied Statisticians:

https://docs.google.com/forms/d/1UQbnlwYs1QHmulHv41I4FeHTOFNRsptHHLjsA5oNqmU/viewform?c=0&w=1&usp=mail_form_link

An example summary of survey responses from the 2014-2015 mentoring program of the Committee on Applied Statisticians is included in Appendix 6.

Step Eight: Concluding material and evaluation

Because it takes time to advertise the existence of the program and to recruit participants, we suggest that a mentoring program should plan to run for a minimum of three years. This will allow time to realize the full benefits of the program and to sustain the impacts of mentoring on the organization's members.

- How to sustain a mentoring program beyond the initial mentor/mentee pairing.
- How to decide when a mentoring program should formally end; however it may continue as long as deemed meaningful.
 - An annual report template for reporting on the mentoring program outcomes. Quantitative measures such as number of mentors and mentees, median/mean number of meetings, duration of relationships
 - Qualitative measures such as impacts and benefits from the program, best mentoring advice received, best mentoring advice given, recommendations for mentoring, modifications to mentoring program
 - Summary of the program and recommendations for next year or other programs.

A sample report of the ongoing Biopharmaceutical Section Mentoring Program is included in Appendix 7.

Appendices

Appendix 1: Mentorship Program Roles and Lifecycle

Mentor's Role

A mentor will generally be an experienced statistical practitioner, perhaps older than the mentee. Such an individual will be available to listen to and offer suggestions for situations the mentee may feel unprepared to handle on her own. Although this may involve alternative statistical methods, the mentor's primary function is not to serve as an adjunct statistical consultant, but rather to advise the mentee on other matters of professional performance. As a consequence, the support provided by the mentor will often facilitate the goals of the team to which the mentee contributes or to the mission of the employing organization. The mentor thereby contributes to enabling the mentee to adapt to the needs of the given circumstances.

- Teacher – share knowledge and experience
- Problem solver – identify resources and suggest alternative approaches
- Motivator – encourage and support
- Coach—offer positive and constructive feedback
- Guide—help mentee identify and set realistic goals

Benefits to the Mentor

- A connection with skills and perspectives of recently trained professionals
- Development and enhancement of communication and leadership skills
- Satisfaction of passing on skills and knowledge that can enhance the career and personal growth of the mentee and contribute to maturity of the profession

Mentee's Role

A mentee acknowledges his intention to enter a new stage of development as a statistical practitioner by expressing a willingness to seek counsel on applying their knowledge and skills to the practice of statistics. Mentees seek to accelerate professional growth through a one-to-one relationship with a mentor. Mentees may choose to implement suggestions received from a mentor but will retain responsibility for their implementation in the fulfillment of their duties.

- Learner – a strong desire to learn new skills and abilities
- Decision maker – take charge of your professional development
- Initiator – be willing to explore new challenges
- Risk taker – be willing to fail and then to recover
- Goal setter – set challenging goals

Benefits to the Mentee

- An introduction to the organizational culture and the applied statistician's role
- A source of professional/social contacts with other applied statisticians in the field – “plugs you into the power network”

- A role model
- A source of encouragement and motivation leading to greater self-confidence and esteem
- A sounding board for questions about methods of analysis and communication of results
- Help in establishing professional development plans, career goals and acceleration of their achievement

Mentorship Lifecycle

Mentoring has a finite life cycle consisting of four stages.

- Establishing rapport
- Identifying directions
- Making progress
- Moving on

Establishing rapport involves the mentor and mentee working together with mutual respect for each other's roles. Each will need to exchange views on what the relationship is and is not. They should agree to work together in a way that is mutually satisfactory – for example whether the mentor is prepared to accept unscheduled telephone calls or emails, or whether all contact should be scheduled in advance. They will also need to set up a way of calling meetings that covers frequency, duration and method of contact (i.e. email, telephone, other communication methods). Part of establishing rapport may be for the mentor to gain an understanding of various characteristics of the mentee's employer, and thus the culture in which they the mentee works. If the mentor or mentee feels there may be conflicts of interest or the possibility of security breaches, care will be needed to avoid such interactions.

If in establishing rapport a mentor or a mentee feels that they are not well matched, either party may initiate withdrawing from the program.

Identifying directions is likely to be the stage in the mentorship life cycle during which there is the most intensive contact between mentors and mentees. It will involve the two parties in a relationship working together to diagnose the mentee's interests and goals. While setting priorities, mentors will need to be sensitive to the fact that they have a responsibility for offering guidance to the mentee. Mentees should be encouraged to freely discuss early stage objectives. The primary outcome of this stage should be a personal development plan with target dates and agreed outcomes, drawn up and agreed upon between mentors and mentees.

Making progress once objectives and priorities have been set and a personal development plan agreed upon is the next stage of the life cycle. During this stage, mentor and mentee will frequently review progress against the agreed plan, adapting it as necessary. They may wish to refine the frequency with which reviews should be carried out. The mentee is responsible for raising concerns outside of set review times so that problems can be dealt with expeditiously.

Periodic review of progress by both mentor and mentee is important. Mentors should help mentees to assess the value to them of each activity engaged in as soon as possible after its completion.

The final stage of the life cycle is **moving on**. A natural point for beginning to make plans for moving on is when the mentor and mentee jointly feel the mentee has reached the goals established at the outset. The structured mentoring relationship will normally end when the mentee attains his or her goals. However, if both parties are willing to continue the relationship it will be necessary to revisit how they see it evolving, and to revisit the informal agreement.

Appendix 2: Advertisement Examples

Example 1 CAS, year 1:

HOME ABOUT US MEETINGS NEWS RESOURCE ARCHIVE CONTACT US MENTORING Search

Mentoring

- Welcome Packet
- ASA Mentorship Program 2013
- Join the program?
- Books
- Mentoring Programs
- Clearinghouse Resources

How Can You Participate?

We are looking for mentors and mentees at all levels. If you are interested in becoming a mentor or mentee please see our web page for more information:
<http://community.amstat.org/CAS/Mentoring1/WelcomePacket/Jointheprogram>

Background

The ASA Committee on Applied Statisticians was recently awarded ASA funding to develop and pilot a mentoring program. As a part of this pilot mentoring initiative, the Committee is working to match applied statistician mentors with applied statistician mentees. The goal of this initiative is to create long lasting value for mentees as well as mentors, and this pilot will allow an opportunity to test the program before its full scale launch next year.

Opportunities for Mentors and Mentees

If you are a member of the ASA or attending one of the ASA's conferences (JSM, or the Conference on Statistical Practice for example) CAS would like to invite you to join the Partnership Mentorship Program. We are in our first year and seeking both mentors and mentees. Mentees are both those that are relatively new to statistics or the ASA as well as individuals looking to further their career and seeking some guidance. Mentors are statisticians with at least 2 years of experience (although 5 or more years may be more appropriate in many cases) in statistics who are interested in helping other statisticians.

Internet | Pro

Example 2:

Biopharmaceutical Sections Initiating Mentoring Program:

The Biopharmaceutical Section is pleased to introduce a mentoring program for the enhanced benefit of its members!

Networking can be challenging but is beneficial. Meeting others in our profession can help us quickly learn the ropes, improve our careers, and contribute to statistical profession. Finding a mentor has its challenges and keeping that in mind, the Biopharmaceutical Section is initiating the mentoring program based on the mentoring blueprint created by the Committee on Applied Statisticians.

The goal of this initiative is to help members further enrich and enhance their professional experience through achieving personal and professional goals. This may commonly occur through sharing of knowledge and experience between a professional practitioner and someone entering the profession of statistics. A constructive mentorship relationship can take many forms and may occur at any stage of career with benefits for both mentor and a mentee. We will provide *hands-on* resources for mentors and mentees to facilitate their interactions. Information related to the mentoring activities and additional resources for mentors and mentees will also be made available via Biopharm website in future (<http://community.amstat.org/BioP/aboutus/mentoringprogram>).

Currently we are looking for mentors and mentees for this mentoring program. Are you interested in becoming a mentor to a statistician and helping initiate this program? Are

you a potential mentee, or can you nominate a statistician who may be looking for a mentorship program? If so, please email contact info to the (biopharmmentoring@gmail.com) with the subject: "Biopharm Section Mentoring Program". It would be helpful if you also send a resume to help us match mentors and mentees. Please contact (insert appropriate email addresses here) if you need additional information or clarification related to this program.

Example 3:

Biopharmaceutical Section Launched Mentoring Program

"Tell me and I forget, teach me and I may remember, involve me and I learn." Benjamin Franklin

The Biopharmaceutical Section introduced a mentoring program earlier this year for the benefit of its members. This program is based on the blueprint created by the ASA Committee on Applied Statisticians and the goal is to help members further enrich and enhance their professional experience.

Mentoring can enhance not only your practice of statistics but both your personal and professional life. Sharing your knowledge and experience between a professional practitioner and someone entering the profession of statistics can be mutually rewarding. A constructive mentorship relationship can take many forms and may occur at any stage of career with benefits for both mentor and a mentee:

Benefits to the Mentor

- A connection with skills and perspectives of recently trained professionals
- Development and enhancement of communication and leadership skills.
- Satisfaction of passing on skills and knowledge that can enhance the career and personal growth of the mentee and contribute to maturity of the profession.

Benefits to the Mentee

- A role model, but more accurately a sounding board, for questions about methods of analysis and communication of results.
- A source of perspective, encouragement, and motivation leading to greater self-confidence and esteem. Help in establishing professional development plans, career goals, and acceleration of their achievement.
- A source of professional/social contacts with other applied statisticians in the field—"plugs you into the power network."

The mentoring program was well received by Biopharm members and we currently have about 20 mentor-mentee pairs enrolled in programs. Some of them also attended the mentoring event at the Biopharm Mixer at JSM and had an opportunity for in-person interaction with their mentors/mentee.

If you are a potential mentee or a mentor, or can nominate a statistician who may be looking for a mentorship program then please email contact info to the (biopharmmentoring@gmail.com) with the subject: "Biopharm Section Mentoring

Program." Future information related to the mentoring activities and additional resources for mentors and mentees will also be made available via Biopharm website (<http://community.amstat.org/BioP/aboutus/mentoringprogram>).

You may also contact (insert appropriate email addresses here) if you need any additional information or clarification related to this program.

Appendix 3: Google Forms page & matching mentors and mentees

Suggestions for using Google Forms to collect information on mentors and mentees: Google Forms can be used to collect information about candidate mentors and mentees as a basis for pairing. Google Forms make it easy to develop a customized set of questions for your particular group, distribute them by email or by an embedded link in a newsletter, or on a website. The responses result in a spreadsheet that is accessible to all that have the link. Below is some guidance about how to get started matching mentors and mentees.

Although a variety of browsers can work, it is probably best to start with a Google-friendly browser like Goggle Chrome. From the Google home page www.google.com click on the google apps icon - a 3 x 3 matrix of small squares - in the upper right and select Drive. On the upper left, click on the red CREATE box and select Forms. This opens an environment for developing questions of many types, including text response, multiple choice and graded responses such as 1 - 5.

The following link illustrates the questionnaire and shows some typical questions that may be useful in matching. Please tailor this based on your choices for Step Five.

https://docs.google.com/forms/d/10rT-gMaFzkaSKTfgyHaFO1pxjQQeiZC7u4LnMcZuSq8/viewform?usp=send_form.

Download the results and use this information along with a copy of their resumes or LinkedIn webpages to match the mentors with the mentees. For more information on Google Forms please see their website at:

https://support.google.com/docs/answer/87809?p=forms_welcome&rd=1.

You can add extra columns to the form without corrupting the form. Add a column for any LinkedIn or job description page. Make a separate sheet for the matches that has the name of the mentee, mentor, the committee member that matched them, a date column for when the match letter was sent, and a notes column that included information on the contact with the mentoring pair. This table will be used to construct the matches.

Appendix 4: Example email to mentor or mentee about their match

An example an email welcoming a new mentee to the program and to introducing her or him to a matched mentor is as follows. A similarly structured email, with mentee and mentor roles interchanged, can be sent to the mentor.

Dear Participant,

*Thank you for signing up to be a **mentee** in the inaugural CSP mentoring program. This program would not exist without your interest and participation. Hopefully, this*

experience will help facilitate your goals within the statistics profession and the world of statistics will benefit, if just a little, from your involvement.

Your mentor is Jane Doe jane.doe@xxx.com. The two of you were matched on a combination of your goals for the mentoring program and your areas of interests and expertise. In many cases we were able to make a great match! Even if it's not a perfect match, your mentor will be able to talk with you and be a willing listener who has experience in the field of statistics and has your best interests at heart.

The steps in the mentoring program are as follows:

0. Read the Welcome Packet (enclosed) to learn about the mentorship program in detail including expectations of the mentor, mentee, frequency of meetings, methods to use, etc.

1. Respond to your mentor's email or send your mentor an email before JSM, if possible. Maybe you can arrange a phone conversation (or a Google Hangout) in the next week before the conference. Maybe not. No pressure.

2. Arrange to meet with your mentor face-to-face at JSM, if you are both attending. Unless you have a conflict, we recommend meeting during the Biopharmaceutical Section business meeting.

3. After establishing some rapport, continue your mentoring relationship long distance until it's time to move on. Attached is a guide to mentoring prepared by the ASA Committee on Applied Statisticians for their pilot mentoring program. Please read it. The cliff notes version of the mentoring life-cycle is: establish rapport, identify directions, make progress, and move on.

4. We might send you a short survey in future to gather feedback on the program to help us decide whether to continue it in future years. If you get such a survey, please respond.

Hope to see you at the upcoming Joint Statistical Meeting!

Appendix 5: Example ongoing contact emails

Suggested email texts for ongoing contact with mentees and mentors.

Email 1:

We hope your participation in the 2014 mentorship program for applied statisticians has been stimulating and that you are beginning to experience some of the rewards of a mentee/mentor relationship. By now, we expect that you have made contact with your counterpart of your mentee/mentor pair and have begun to identify some common areas of professional interest. If you haven't made contact yet, we encourage you to do so. It is not too late to start the relationship. The first few communications should establish rapport and help establish the tone for your future interactions. We hope that as you move beyond initial introductions that you are able to identify mutually important directions for constructive discussion of the practice of statistics. We believe that once you have agreed upon some objectives and set some priorities, the stage is set for satisfying professional growth of both players.

You are part of the first group to participate in this new ASA program. We encourage your participation and trust that the professional interactions fostered by the program will be stimulating and satisfying to you. We encourage your feedback as you participate. Feel free to email opinions and comments on any aspect of the program to appliedstatisticians@gmail.com.

Email 2:

As a participant in the 2013 mentorship program for applied statisticians, you should be making progress toward some of the mutual goals identified by your mentee/mentor pair. We encourage you to continue building upon your previous interactions. By this stage, you may want to review progress in the context of your mutually agreed upon plan, adapting it as necessary. You may wish to alter the frequency with which your planned discussions are carried out so that problems can be dealt with expeditiously outside of set review times. Remember, there is no predefined path your mentee/mentor pair should follow. Any challenging professional situation you jointly choose to explore may well lead to new stages of development as statistical practitioners.

Best wishes with your ongoing discussions. As always, we encourage your feedback as you both continue to make progress in your professional relationship. Feel free to email comments about any aspect of the program to appliedstatisticians@gmail.com.

Email 3:

By this point in your participation in the 2013 mentorship program for applied statisticians, you probably have made substantial progress on one or more of the goals your mentee/mentor pair has been pursuing. Reaching one or more professional goals carries a sense of personal accomplishment and can be seen as a benchmark of professional development. If your pair has reached some of its goals, the structured mentoring relationship will have served you well and perhaps the mentee/mentor

relationship has run its course. Normally, the relationship ends when a pair attains such goals. However, both of you may wish to continue the relationship. If so, it may be useful to revisit an unmet goal or to formulate a new professional challenge. If these possibilities are of mutual interest the mentee/mentor relationship can continue to serve the professional interests of both parties.

As part of the first group to participate in this new ASA program, we invite you to participate in a short survey. The purpose of the survey is to help us understand how the program benefitted to you. We want to learn how different forms and frequencies of interaction served your particular interests, as well as which aspects of the program failed to engage you or otherwise meet your expectations. Your responses will help us modify and adapt aspects of the program to better serve the needs and interests of emerging and seasoned practitioners of statistics. The questionnaire will soon be made available online (or by email).

Appendix 6: Email requesting mentors and mentees fill out an evaluation

Dear Mentor/Mentee,

As a participating mentor or mentee in the mentorship program we request that you fill out the brief survey even if (or especially if) you have already sent us an email about your experiences. The more you can tell us about your experience the more we can learn about how to improve the mentoring program in the future.

There are # other mentor-mentees in this pilot program so every response will increase the value of this survey. Thank you for your response!

Survey results will be summarized and shared with the Committee on Applied Statisticians of the ASA to improve mentor-mentee program development.

Sincerely,
Your Mentor-Mentee Program Administrator

Example of results from program survey

2014-2015 CAS Mentor/Mentee Program Feedback Summary

1. My role in the ASA Mentoring Program was

6 Mentees

9 Mentors

2. Did you meet face-to-face?

	Role		
	Mentee	Mentor	Total
Yes	1	3	4
No	5	6	11
Total	6	9	15

3. Did you meet your mentor/mentee at JSM?

	Role		
	Mentee	Mentor	Total
Yes	1	3	4
No	5	6	11
Total	6	9	15

4. Since JSM, how many times have you and your mentor/mentee been in contact?

Frequency	Role		
	Mentee	Mentor	Total
0	1	1	2
1	1	0	1
2-3	2	1	3
4-6	1	3	4
7-10	1	3	4
>10	0	1	1
Total	6	9	15

5. Do you plan on "meeting" with your mentor/mentee again?

Next meeting	Role		
	Mentee	Mentor	Total
Yes, we have already scheduled our next meeting	2	4	6
Yes, though nothing is scheduled	2	1	3
No, but maybe we will if I my mentee contacts me / I contact my mentor	1	3	4
No, it won't be worth my time or effort	0	0	0
Maybe at JSM/CSP	0	0	0
Other	1	1	1
Total	6	9	15

Response Other:

mentee: "No, proved to be too difficult to "meet" but "meetings" were beneficial"

mentor: "We intend to touch base every 2-3 months"

6. How likely would you be to recommend a similar mentoring program to a colleague or friend?

Recommendation	Role		
	Mentee	Mentor	Total
1 (very unlikely)	0	0	0
2	0	1	1
3	0	0	0
4	0	0	0
5	0	0	0
6	1	0	1
7	1	1	2
8	1	2	3
9	1	2	3
10 (very likely)	2	3	5
Total	6	9	15

7. What impact, if any, did being a mentee/mentor in this program have on your career or personal life?

Impact	Role	
	Mentee	Mentor
My mentor provided extremely valuable advice in our one phone conversation last fall. He also helped via email a couple of times.	1	0
My being a mentee is a great experience to me as an Applied Statistician. I had a good rapport about area to really fit in as an Applied Statistician.	1	0
This has been a great program for me! My mentor met with me regularly, helped me with the job market, wrote me letters of recommendation, gave me an IDP to fill out and discussed the results and my career trajectory, helped me with my decision as I chose my next job, spoke with me on small issues such as ideas for what to do during certain situations while teaching, and even has agreed to collaborate on some research. The program helped me stay on track with my goals and make sure to achieve new goals I hadn't previously thought about but that will help me continue to advance in my career.	1	0

Impact	Role	
	Mentee	Mentor
I have been working at getting my professional life in focus and *my mentor* has been a great help in giving me suggestions on how to do this.	1	0
I am so inspired by mentoring that I am starting a mentoring program through my local chapter.	0	1
None. I feel guilty about not reaching back to my mentee. I could offer her some great advice, but it falls on the list of priorities. If she were to contact me I would gladly respond. Maybe she doesn't want to talk to me? Maybe she does, but she's too nervous to contact me?	0	1
I felt I was able to help a junior faculty to advance their career through interactions in bi-monthly meetings that we have had. My mentee has progressed from a post-doc fellow to a faculty position during the time we started this process.	0	1
Very little	0	1
Satisfaction of being able to guide or help someone else as they struggle to focus or manage their career goals	0	1
It gives me an opportunity to explore business problems outside my line of work. Sharing tips and tricks are very rewarding.	0	1
It helped me hone my communications and leadership skills in addition to the overall satisfaction of helping out my mentee.	0	1
If nothing else, it represents deliberate action towards mentoring. Just the act of being involved is a reminder and obligation to mentoring.	0	1
Total	4	8
Frequency Missing = 3		

Summary

Benefitted	Role		
	Mentee	Mentor	Total
Positive	4	5	9
Neutral	0	1	1
Negative	0	2	2
Missing	2	1	3
Total	6	9	15

8. Do you have any feedback or comments on this or any other CAS mentoring initiatives?

Additional Comments	Role	
	Mentee	Mentor
Please keep doing this program and other mentoring initiatives as well!	1	0
My mentor was extremely busy and it seemed that this year was not a good one for him to be mentoring a young faculty member. I hope to talk with him more in the future but it was unfortunate that we weren't able to connect more frequently.	1	0
I became a mentee because I ran into a specific career development problem: I would like to find a position with a greater focus on quantitative modeling than the job I hold now. [rest removed for privacy reasons]	1	0
It was easy.	1	0
Excellent!	1	0
This was my second time being a mentor. I had a lot more interaction with the first mentee. This mentee's need was very specific and short-term. I believe that I helped him with career advice, but it was not a long term mentor-mentee relationship.	0	1
My mentee and I met somewhat regularly once month and have had a productive time. We are continuing past this formal period. I was expecting some reminders of where we should be in our mentoring relation. It would have been nice to get those as sounding boards. I edited my mentee's CV as she was looking for a job. It was a good way to look at her and where she was trying to go. Meeting in person at JSM and when she and her husband came through town were good for us to get a better sense of each other. My mentee was interested in academic jobs, something I had no experience in. I got a colleague to talk with her to her about the tradeoffs between the Government vs. academic tracks. I also called others to get some information on about on expectations of academic contracts.	0	1

ASA should arrange face-to-face meeting if possible.	0	1
This is very helpful initiative. However, mentees need to understand that the role of a mentor is not same as a role of a headhunter i.e. mentor should not be viewed as a job finder. Mentees should be asked to have their goals or purpose listed before meeting mentor, so they can put their thoughts on paper and show some self-motivation and commitment.	0	1
I found this to be helpful to both the mentee and mentor if they define their goals and the level of interactions needed to achieve that goal.	0	1
Keep the program going and continue to expand it via other avenues of mentoring like speed mentoring, at conferences, and talks by influential speakers etc. There is a room to refine the mentor-mentee matching process as a part of the continuous process improvement.	0	1
Total	5	6
Frequency Missing = 4		

9. Would you like to be added to the 'Friends of CAS' list?

CAS List	Role		
	Mentee	Mentor	Total
Yes	5	8	13
No	1	1	2
Total	6	9	15

Appendix 7: Formal report example

Sample ASA Biopharmaceutical Section Mentoring Initiative Report

(Note: this is a report from an ongoing program. This will get revised at the end of first year cycle and will have more quantitative measure at the end of the program)

Background

BIOP mentorship program was endorsed by the EC at ENAR this year. The benefits of this program include:

- Increased networking between members and member participation within BIOP
- Positive advertisement opportunity for the section, increasing reputation and impact
- Retain members and enroll new members, including students
- Support members' career development
- The BIOP mentoring program will follow the blueprint created by the Committee on Applied Statisticians (CAS) that ran a successful pilot in 2013 and is now scaling up for the ASA mentoring program (funding received for 2014-2015).

Mentoring initiatives have also been implemented and will continue at CSP and JSM conferences and is one of David Morganstein's 2015 presidential initiatives. Many other sections and chapters are initiating mentoring programs, e.g. Consulting Section, Washington Chapter and others. BIOP has made several efforts to take off the mentoring program since the last EC meeting

Mentoring Initiative Activities

Mentoring program announced in May (via Section email and word of mouth)

- Reminders in July
- Created email account specific to this communication
- Good response (close to target)
- Created survey (modified from the CAS experience) to facilitate pairing of mentors and mentees
- 20 pairs matched based on background and interest
- Created welcome package (modified from the CAS document) specific to BIOP that will provide information to mentor-mentees about program expectations
- This document was shared with mentor-mentee pairs
- 'Meet & Greet' event for mentors and mentees at the BIOP business meeting. Of those enrolled in the program, about 9 folks were expected to attend JSM/BIOP mixer.

- Not many showed up and those who came didn't have their mentor or mentee counterpart available there. This also could be due to time of mixer competing with ASA fellows' ceremony.
- Reminder email sent to mentor-mentees to keep them engaged and also to remind them about their ongoing communications responsibilities etc.
- Article on mentoring provided for the BIOP Newsletter.

Future Activities & Plans

- Continue to create awareness of this program via Section website, newsletter, podcast, and other ASA units.
 - Make efforts to create more comprehensive links for resource through BIOP website.
- Continue to remind mentor-mentees about their communication and keep them engaged
- Conduct a brief survey at the end of the first year cycle and also potentially mid way to gauge the interest and interactions.
- Planning a podcast on mentoring initiative.
 - If successful, the mentoring program can be repeated annually with ongoing enhancements
 - a simple roadmap can be created to make this program sustainable
 - plan for future announcements of this program (early next year)
 - For sustaining the mentoring program long term (at least 3 years?), consider adding new member(s) to the committee and allow for existing member(s) to transition out.

Summary of Survey Results and Impact

Appendix 8: CAS Welcome Packet

American Statistical Association

2014 Mentorship Program

Committee on Applied Statisticians—July 2014

Welcome

Congratulations on your decision to participate in the 2014 mentorship program for applied statisticians sponsored by the American Statistical Association. This program is designed to establish a mentoring relationship that will provide you with an opportunity to realize both your personal and professional development goals. Mentorship involves a partnership between two people working collaboratively to enhance skills, share knowledge and to experience growth through a mutually beneficial interaction. Mentoring is a proven strategy for reaching ones goals at any stage of life.

We appreciate your involvement in the ASA's mentorship program. The welcoming materials included here represent a variety of resources on mentoring relationships for both mentors and mentees. We encourage you to spend some time reviewing the contents of these materials before meeting with your mentor or mentee. This time will help you understand the mentor/mentee relationship, develop some expectations of yourself and begin to formulate an outlook for your relationship.

Please don't hesitate to contact us (<http://community.amstat.org/CAS/mentoring1>) with questions, comments or feedback.

Expectations of the Program

Overview of Mentorship

The purpose of the mentorship program is for applied statisticians to enhance the practice of statistics through achieving personal and professional goals. This will commonly occur through sharing of knowledge and experience between a professional practitioner and someone entering the profession of statistics. The many ways in which people make career transitions into statistics, however, means that a constructive mentorship relationship can take many forms and may occur at any stage of life.

Mentor's Role

A mentor will generally be an experienced statistical practitioner, perhaps older than the mentee. Such an individual will be available to listen to and offer suggestions for situations the

mentee may feel unprepared to handle on her own. Although this may involve alternative statistical methods, the mentor's primary function is not to serve as an adjunct statistical consultant, but rather to advise the mentee on other matters of professional performance. As a consequence, the support provided by the mentor will often facilitate the goals of the team to which the mentee contributes or to the mission of the employing organization. The mentor thereby contributes to enabling the mentee to adapt to the needs of the given circumstances.

- Teacher – share knowledge and experience
- Problem solver – identify resources and suggest alternative approaches
- Motivator – encourage and support
- Coach—offer positive and constructive feedback
- Guide—help mentee identify and set realistic goals

Benefits to the Mentor

- A connection with skills and perspectives of recently trained professionals
- Development and enhancement of communication and leadership skills
- Satisfaction of passing on skills and knowledge that can enhance the career and personal growth of the mentee and contribute to maturity of the profession

Mentee's Role

A mentee acknowledges his intention to enter a new stage of development as a statistical practitioner by expressing a willingness to seek counsel on applying their knowledge and skills to the practice of statistics. Mentees seek to accelerate professional growth through a one-to-one relationship with a mentor. Mentees may choose to implement suggestions received from a mentor but will retain responsibility for their implementation in the fulfillment of their duties.

- Learner – a strong desire to learn new skills and abilities
- Decision maker – take charge of your professional development
- Initiator – be willing to explore new challenges
- Risk taker – be willing to fail and then to recover
- Goal setter – set challenging goals

Benefits to the Mentee

- An introduction to the organizational culture and the applied statistician's role
- A source of professional/social contacts with other applied statisticians in the field – “plugs you into the power network”
- A role model
- A source of encouragement and motivation leading to greater self-confidence and esteem
- A sounding board for questions about methods of analysis and communication of results

- Help in establishing professional development plans, career goals and acceleration of their achievement

Mentorship Lifecycle

Mentoring has a finite life cycle consisting of four stages.

- Establishing rapport
- Identifying directions
- Making progress
- Moving on

Establishing rapport involves the mentor and mentee working together with mutual respect for each other's roles. Each will need to exchange views on what the relationship is and is not. They should agree to work together in a way that is mutually satisfactory – for example whether the mentor is prepared to accept unscheduled telephone calls or emails, or whether all contact should be scheduled in advance. They will also need to set up a way of calling meetings that covers frequency, duration and method of contact (i.e. email, telephone, other communication methods). Part of establishing rapport may be for the mentor to gain an understanding of various characteristics of the mentee's employer, and thus the culture in which they the mentee works. We recommend that the mentor and mentee also exchange resumes or CVs. If the mentor or mentee feels there may be conflicts of interest or the possibility of security breaches, care will be needed to avoid such interactions.

If in establishing rapport a mentor or a mentee feels that they are not well matched, either party may initiate withdrawing from the program. At this time the CAS does not have additional mentors or mentees to match to participants who choose to withdraw.

Identifying directions is likely to be the stage in the mentorship life cycle during which there is the most intensive contact between mentors and mentees. It will involve the two parties in a relationship working together to diagnose the mentee's interests and goals. While setting priorities, mentors will need to be sensitive to the fact that they have a responsibility for offering guidance to the mentee. Mentees should be encouraged to freely discuss early stage objectives. The primary outcome of this stage should be a personal development plan with target dates and agreed outcomes, drawn up and agreed upon between mentors and mentees.

Making progress once objectives and priorities have been set and a personal development plan agreed upon is the next stage of the life cycle. During this stage, mentor and mentee will frequently review progress against the agreed plan, adapting it as necessary. They may wish to refine the frequency with which reviews should be carried out. The mentee is responsible for raising concerns outside of set review times so that problems can be dealt with expeditiously.

Periodic review of progress by both mentor and mentee is important. Mentors should help mentees to assess the value to them of each activity engaged in as soon as possible after its completion.

The final stage of the life cycle is **moving on**. A natural point for beginning to make plans for moving on is when the mentor and mentee jointly feel the mentee has reached the goals established at the outset. The structured mentoring relationship will normally end when the mentee attains his or her goals. However, if both parties are willing to continue the relationship it will be necessary to revisit how they see it evolving, and to revisit the informal agreement.

Logistics of Program

Matching Mentors and Mentees

Mentors and mentees were matched based on their resumes or CVs. If you feel you are not a good match for your mentor/mentee, please discuss your concerns with your mentor/mentee. If your relationship with mentor/mentee is not working out as you had hoped, it's OK to terminate your relationship. With that said, we hope that perhaps new topics should be discussed that will work for both mentor and mentee.

Modes of Contact

Telephone calls, Google Hangouts, Skype, and face-to-face meetings are great ways to establish rapport, identify directions, make progress toward goals, and discuss moving on. Emails or texts could be useful supplements to the above modes of contact but should not replace scheduled meetings and should not be assumed modes of contact without first confirming with one another.

Interactions

The **first meeting** should be initiated by the mentor. Provide contact details such as your email, telephone number, times when you are available to meet, and Skype user name (when available, see below). If immediately available, also send a resume or CV to your mentee. Mentees, if you don't hear from your mentor prior to August 8th, please reach out to help facilitate the discussion.

Meetings may happen in person, on the phone, through email, or through Skype. If you have never used Skype and would like to learn how, there are numerous tutorials on YouTube which may help such as the following: <http://www.youtube.com/watch?v=sodMDs7rEEk> Skype provides free communication with audio and visual options via an internet connection.

Please try to use low cost methods to meet. If the proposed methods do not work for your pair, please contact Committee on Applied Statisticians (<http://community.amstat.org/CAS/mentoring1>) as we may be able to help find alternate ways to meet.

In the first meeting, introduce yourselves. As a good ice breaker include things about yourself such as your name, where you work, how long you've been in the workforce, the types of projects you are currently working on, and/or your statistical interests. Next, discuss what you hope to gain from your mentorship experience. Mentees, be as specific as possible in your comments to start moving towards a strong mentor/mentee relationship. Then continue to work through either introductions or topics specific to your interests. At the end of each meeting, it may be helpful to summarize key points discussed and to confirm the next time you will meet. Please see the lifecycle discussion for more details.

Frequency of Meetings

Mentors and mentees should plan to have their introductory meeting by the end of the JSM. If one or more person is not attending the JSM, then the meeting will likely be on the phone. Otherwise make an effort to meet at least once at the JSM. It may be at a social mixer, walking through a poster session or the marketplace, for a meal, or before or after a talk. As time permits, consider asking your mentee (or mentor) to spend some time with you at JSM to get to know one another. About one meeting per month is typical, but your specific needs and schedules will determine what the appropriate frequency is for you.

To maintain momentum, additional meetings are expected throughout the year. We recommend that each mentor/mentee pair meet about once a month between August and December of this year. You can then choose to meet monthly or bi-monthly after the new year until JSM of 2015. The Committee on Applied Statisticians asks that you have at least 3 meetings before December 2014.

Moving On

The pilot is a voluntary opportunity and we hope you take advantage of this opportunity. As members of the pilot, we ask that you continue to meet for a full year, with monthly meetings at the beginning and as needed thereafter. If your experiences warrant extending the relationship, we encourage you to continue to meet after the pilot is complete.

We are developing a survey to measure your satisfaction with the program. Participants will be asked to complete the survey mid-year and (potentially) at the end of the mentorship program. The survey results will be analyzed and discussed with key ASA stakeholders in anticipation of the 2015 mentorship cycle.

Assuming the program goes well, the results of the analysis and discussions will then feed into 2015 recommendations. We may also ask you to nominate others for a mentorship program in 2015 and/or ask you to serve as a mentor or mentee in the future. CAS plans to continue to increase the number of mentor/mentee pairs. Your satisfaction and participation is paramount to our program. Thank you for participating in our second year.

Mentor FAQs

My mentee has asked me for advice on methodology to apply to a specific problem, as though I was a consultant.

Technical advice is absolutely within the range of expected conversation. As a mentor, you need to establish which methodological material you are comfortable sharing. You may not be in a position to answer a question, either because you don't know the answer or because what

you do know is proprietary or confidential information. You as the mentor need to set the boundaries with your mentee.

I feel that my mentee's career path is moving away from statistics.

Part of the journey for your mentee may involve them deciding if statistics is the right career field for them. Be supportive regardless of what path they choose. Ultimately, if they make a career move and change professions, you should probably discuss whether the mentorship should continue or not.

My mentee seems to have lost interest...

(alternatively) My mentee gets in touch with me far more frequently than I imagined, and I just don't have the time to respond.

The frequency of the interaction should be established early in the relationship so that both sides have clear expectations. Deviations from the agreed upon frequency interaction should be discussed politely.

My mentee complains about an employer's unreasonableness in not allowing the mentee to take the training that they think they need. Should I intervene?

As a mentor, focus on supporting the mentee rather than intervening directly. Help them identify ways for them to learn and grow within the environment they're in. You could look for free or lower cost options for training, or depending on the motivation of the mentee, there may be certain investments your mentee is willing to pay for themselves.

Mentee FAQs

My mentor doesn't give me as much attention as I feel I need: what should I do?

You should establish a frequency of interaction that both you and your mentor are comfortable with and committed to following. If they have not been able to meet as planned, you should politely work with them to re-schedule. If after multiple attempts you have been unable to meet, you will need to consider finding a new mentor.

The advice I am getting from my mentor is completely at odds with what I am getting from my line manager, in terms of what training/continuing education I should be taking. Whose advice should I take?

Ultimately, you as a professional are responsible for your own career development. Don't dismiss either person's recommendations immediately, but carefully lay out a plan that will help you grow, recognizing that your employer will have areas they will want you to focus on. Talk with your manager regarding your development goals and work to find middle ground if necessary.

I would like to reply to a job advertisement but the post is in my mentor's organization. Can I do so?

We can't think of a reason why you shouldn't apply for the position. In fact, you may want to let your mentor know when you do so. Depending on the nature of your interactions, your mentor may wish to exclude themselves from the interviewing process.

Sample Mentoring Program Evaluation

1. What did you like best about the mentoring program?
2. What did you like least about the mentoring program?
3. What were the elements of your mentoring agreement with your mentee/mentor?
4. Did your mentee/mentor honor your agreement?
5. How would you rate the time commitment of the mentoring program?
6. How many meetings did you have with your mentee/mentor?
7. To what extent did mentoring address the development needs of your mentee/mentor?
8. To what extent does the Program Manager add value to the mentoring program?
9. What is your overall rating of the mentoring program?
10. What additional comments would you like to make to improve the mentoring program?

List of Program Resources

There are many great resources on mentoring, some of which are listed on the CAS mentoring website: <http://community.amstat.org/cas/mentoring1>. A few useful books about mentoring and career advice are listed here: <http://community.amstat.org/CAS/Mentoring1/Books>.

The CAS Model

Thank you for participating in the second year of the Committee on Applied Statisticians' mentorship program. This program was developed to meet the needs of the Friends of CAS. Are you currently not a friend of CAS? Please email us at: applied.statisticians@gmail.com with the subject "Join Friends of CAS."

We at CAS do not work alone. One of our primary goals is to liaison with other groups of applied statisticians within the ASA; we are aware of numerous mentorship opportunities available throughout the ASA. Accordingly, our web site maintains a clearinghouse for other mentorship opportunities. We encourage potential mentors or mentees to consider all ASA mentorship opportunities available before asking to become a mentor or mentee with CAS.

For more opportunities, please see the CAS website:

<http://community.amstat.org/CAS/mentoring1>

Appendix 9: DIY Mentoring Handout



The graphic features a central blue silhouette of a person. Above it is a blue speech bubble containing the ASA logo (American Statistical Association) and the tagline "Promoting the Practice and Profession of Statistics®". To the right is a larger blue speech bubble with a quote: "A lot of people have gone further than they thought they could because someone else thought they could." — Unknown. Below the person silhouette, the text "DIY Mentorship" is written in large, bold, black letters. To the right of "DIY" is the text "A tool prepared by the ASA Committee on Applied Statisticians". To the right of "Mentorship" is a smaller blue silhouette of a person.

Links to the Committee on Applied Statisticians Mentoring Clearinghouse Resources

(first log in to ASA Members Only at www.amstat.org/membersonly)

Mentoring programs:
<http://community.amstat.org/CAS/mentoring/new-item/mentoringprograms>

Clearinghouse resources:
<http://community.amstat.org/CAS/mentoring/new-item>

Links and articles:
<http://community.amstat.org/CAS/mentoring/new-item/clearinghouseressources>

The Committee on Applied Statisticians (CAS) has prepared this document to give you the basic resources to start a mentoring relationship. If you have suggestions for improving DIY mentorship, please contact CAS at applied.statisticians@gmail.com.

A MENTORING RELATIONSHIP can be mutually rewarding, enhancing not only your practice of statistics, but also your personal and professional life. The many ways in which people make career transitions into statistics, however, means a constructive mentorship relationship can take many forms and occur at any stage of life. In most cases, you find a mentor or someone to mentor on your own (i.e., do it yourself [DIY]).

Benefits of Mentoring to the Mentor

- Connect with the skills and perspectives of recently trained professionals
- Develop and enhance communication and leadership skills
- Pass on skills and knowledge that can enhance the career and personal growth of the mentee and promote the practice and profession of statistics

Benefits of Mentoring to the Mentee

- Engage with a statistician who can act as a role model or sounding board for questions about being an effective statistician
- Gain a source of perspective, encouragement, and motivation leading to greater self-confidence and esteem
- Access a source of professional/social contact with other statisticians in the field—ask your mentor to “plug you into the power network”

Qualities of a Mentor

Mentors are often experienced statistical practitioners, though not necessarily older than their mentees. They are available to listen to and offer suggestions for situations the mentee may feel unprepared to handle on their own. Although this may involve technical statistical discussions, the mentor's primary function is not to serve as an adjunct statistical consultant, but rather to advise the mentee on matters of professional performance and relationships. Ways the mentor contributes:

- **Teacher:** Sharing knowledge and experience
- **Problem solver:** Identifying resources and suggesting alternative approaches
- **Motivator:** Providing encouragement and support
- **Coach:** Offering positive and constructive feedback
- **Guide:** Helping the mentee identify and set realistic goals

How to Find a Mentor/Mentee

- Formal/informal ways (e.g., programs, friends, and colleagues)
- Inside/outside your organization
- Within your professional organizations and networks (e.g., ASA mixers)
- In a time zone/location that works for your situation

Ask yourself: Where are the resources to help me with my career path?

How to Set Boundaries as a Mentor

Determining what is effective or appropriate between you and your mentee is important. Have a clear and mutual understanding about the time commitment and specific goals of your mentor-mentee relationship. Mentees may expect to have multiple mentors corresponding to different aspects/stages of life and career development.

Mentorship Lifecycle


Mentoring has a finite life cycle consisting of roughly the following four stages:

1. Establishing rapport
2. Identifying directions
3. Making progress
4. Moving on

Qualities of a Mentee

Mentees acknowledge their intention to enter a new stage of development as a statistical practitioner by expressing a willingness to seek counsel about applying their knowledge and skills to the practice of statistics. Mentees seek to accelerate professional growth through a one-to-one relationship with a mentor. Mentees may choose to implement suggestions received from a mentor, but will retain responsibility for their implementation in the fulfillment of their duties. Mentees may expect to use multiple mentors corresponding to different aspects/stages of life and career development. Successful mentee qualities:

- **Learner:** Having a strong desire to learn new skills and abilities
- **Decision maker:** Taking charge of your professional development
- **Risk taker:** Being willing to fail and then to recover
- **Goal setter:** Setting challenging goals



Take the step to make your life and career more fulfilling, and don't do it alone.