Issues concerning Consultant-Client interactions: Things I learned at the Information Center

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Abstract

This paper considers certain fundamental issues whenever a consultant's services are needed. From the beginning, consultants and clients need to agree on several principles, set the parameters of their collaboration, and communicate clearly their expectations of the other's role. Often problems arise when either or both parties fail to set some mutually agreeable guidelines and standards of communication. The end result may be a disappointed, dissatisfied, client who may not seek consultation services in the future and a stressed, overworked consultant who may feel that her/his services are not appreciated. Finally, some random personal notes from my experiences as a SAS® consultant working at the Information Center of a major University are presented.

To Consult or not to Consult

Several statistical papers (Cameron, 1969; Marquardt, 1979; Moses & Louis, 1984) as well as papers presented in earlier SUGI conferences (Marx, 1990; Stewart, 1990) have all pointed to the effectiveness and success of hiring a consultant for a business or research project. The Canadian Aspirin study is such an example of successful statistical consulting (The Canadian Cooperative Study Group, 1978). The increased demand for skilled statistical and SAS consultants in the industrial and corporate world lends additional support to this claim (Stewart, 1990).

Employing the services of a trained consultant may be dictated by several factors, research problems, time and personnel limitations, financial benefits etc. Although a consultant may not be able to salvage a badly designed and executed study (Moses & Louis, 1984) or bring order in a chaotic programming environment, s/he may be able to suggest solutions that, if implemented, may save time and resources in the future (Marx, 1990).

The Power of Communication

The most important aspect in a productive and long-lasting consulting relation among clients and consultants is the ability to communicate to the other party the subtle points of the undergoing research project and the necessary steps to be taken for its successful completion. Zahn and Isenberg (1983) wrote about that impossible customer who demands from the consultant an enormous amount of programming, data coding and entry and requests an unrealistic deadline for the completion of this job. It is not unusual for either clients or consultants to mis-interpret the other party's intentions and expectations.

Moses and Louis (1984) suggest several steps for an effective cooperation between consultant and client:

- Understand the client's problem. Know what the client wants and expects from you, the trained expert. As a consultant, it is important to venture into the client's home-turf, get to know the research paradigm under investigation or the corporate structure, and use the client's field lingo.
- Know about scheduling deadlines and other 'materialistic' aspects of the consultation. Pay attention to the quantity and quality of resources (SAS applications, manuals, computing resources, office space, etc) the client makes available to you, the time deadlines for project delivery, the client's (as well as your own) financial limitations, your fees. Additional issues not to be considered lightly include your access and possible ownership of data. How will you be acknowledged for your work (except from your salary/fee)? Is there the potential for a co-authorship in a research paper (or an internal report) or will you end up being a footnote on the final page?
- The client may (and will frequently) have trouble communicating his/her problem clearly. It is your responsibility to ask the right questions

and probe for more information. Find out everything you can about the project you will be working on. Ask about what was going on before you. Who was in charge of the project you are about to take over? Did they document their work in an *activity log*? It will prove valuable in your future planning.

- Do not expect the impossible. Although consultants are highly motivated, trained, and energetic people, they may not be able to transform a poorly conceived study to a masterpiece of research.

The Initial Meeting

During your initial meeting, show your respect for your client and the problem(s) your client experiences. Do *not* ignore the common rules of courtesy. The client will tend to feel defensive and will not provide you with important information.

Listen carefully (rather than hear) as the client states her/his problem. Ask the right, inquisitive questions. Paraphrase and summarize occasionally, so that both the client and you get a clearer picture of the problem. If you feel that a follow-up meeting is necessary in order to clarify further aspects of the problem, you should always start with a brief overview of what has been achieved so far and the reason for this meeting.

If you feel hesitant about the project, do not commit. Give yourself time to consider the project and then respond to the client. However, if you are ready to commit, do not forget the 'practical' aspects of this commitment. State up front your projected time and your fees, delivery schedule, and resources you will need to complete it. An oral or (better yet) written agreement will protect both you and the client later on.

After the work is done

After your consulting work has been completed, and you are ready to give the client your recommendations and solutions, try to avoid the technical/statistical jargon which may be foreign to the client. Make concrete recommendations and present them in a appropriately formatted written report. A pile of output and lots of numbers, tables, and graphics may not mean much to a client (and may cost you a client).

You may also have to balance between suggesting a simple solution that the client can understand and apply on her/his own and a rather obscure solution that is beyond the client's level of knowledge and expertise. In other words, do you just do the work and move on or do you try to educate the client and improve her/his knowledge of the problem? If you are working within a corporate structure, consider offering seminars and workshops to the client's employees. It may land you an additional consulting job and will empower the client with more information and knowledge for handling similar problems in the future.

Some Random Personal Thoughts

SAS is the recommended and fully supported statistical software at SU. The clients we support (through our consulting sessions, seminars, documentation, e-mail technical support) are primarily graduate students and faculty working on various projects. Unless it is something simple, I have tended to avoid the over-the-phone requests for "five seconds of your time" or the walk-in "five minutes for an ANOVA" type questions. Experience has shown that these requests last much longer with both the client and myself not achieving our goal at the end. Rather, I invite the client over at the Center and have a one-on-one meeting and discuss the project.

- One of the first questions to answer is their knowledge of the SAS system and their statistical background. It helps to know when considering possible solutions that they will understand and be able to defend later on. I also set some priorities straight. I can help them with the SAS aspects of their work not their research design/methodology question and I cannot complete their assignment which was due half an hour ago.

- Often the question may be simple and rather straightforward to answer in which case we look over the client's SAS code and logs to discover the error. Re-designing and improving the code is done *with* the client present, so the client is fully aware of what will be achieved at the end.

- Other times the presented problem may require looking up references and manuals and doing some more extensive research, in which cases I ask for a one to two-day period so I can look for the proper answer. I also inform the client about the availability of SAS manuals at the campus libraries.

- It is not unusual for the client to jump in the details of his/her project without considering the fact that it is the first time I work with him/her. The answer is to ask questions about the design again and again until we both have a clear picture of the project. It is here where we occasionally discover that some of the errors in previous SAS code are due to a lack of understanding of the problem. It is also here that we find out the changes the client wants to make to the design of the project have been mandated by supervising faculty, while the client may not be fully knowledgeable about what is asked of him/her. Although, it may be difficult to override a supervising faculty, firmly suggesting alternative solutions may be warranted.

- I have found out that suggesting SAS manuals, usage and reference guides, and primarily Books by Users, to clients helps in augmenting their knowledge base of SAS. Introducing large chunks of comments within the SAS code is a tool that has helped both me and the client. When the client comes back two months later I can recall rather easily what I did earlier. The final SAS code is tailored to the client's needs and abilities.

SAS consulting within a major university has provided interesting insights into multiple scientific disciplines from biology to geology to psychology. It has also been a training experience for me since every consultation case (and every client) presents with a different problem to be dealt with.

Final Comments

Consulting for a client may be a rewarding experience. It offers you financial independence as well as the time to consider additional activities (Marx, 1990). The successful consultant is the one who is able to communicate with the client clearly, exchange information about the problem to be solved, and provide the client with solutions and information. At the end, the successful consultation is indeed the two-way street Moses and Louis (1984) suggested; both the client and the consultant come out having discovered something new and useful that they can apply in the future.

REFERENCES

Cameron, J. M. (1969). The statistical consultant in a scientific laboratory. *Technometrics, 11,* 247–254.

Marquardt, D. W. (1979). Statistical consulting in industry. *The American Statistician, 33,* 102–107.

Marx, T. (1990). The consultant's life is/is not a happy one. *Proceedings of the SAS Users Group International, 15,* 583–585.

Moses, L., & Louis, T. A. (1984). Statistical consulting in clinical research: The two-way street. *Statistics in Medicine, 3,* 1–5.

Stewart, L. J. (1990). Consulting, counseling, and consoling: The rest of the story. *Proceedings of the SAS Users Group International, 15,* 555–558.

The Canadian Cooperative Study Group (1978). A randomized trial of aspirin and sulfinpyrazone in threatened stroke. *New England Journal of Medicine, 299,* 53–59.

Zahn, D. A., & Isenberg, D. J. (1983). Nonstatistical aspects of statistical consulting. *The American Statistician, 37,* 297–302.

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