Information Overload: Training Consultants to be Knowledgeable, not "Know-it-alls"

Katie M. Livingston
Coordinator of Consulting Services
Computing and Information Services (CIS)
Box 1885
Brown University
Providence, Rhode Island 02912
(401) 863-7323
KATIE@BROWNVM.BROWN.EDU

Brown University

5,200	undergraduates
1,200	graduate students
500	faculty
2,000	staff

CIS supports academic, library and administrative users.

Staff: 135 FTEs

Introduction

The biggest challenge in managing academic consulting programs remains how to train employees to support a vast array of hardware, operating systems, and applications. We must disseminate a huge amount of information to consultants, as well as ensure this information is turned into knowledge.

Some institutions attempt to teach every consultant everything. While this is certainly a noble effort, it can be difficult to carry out. If your site is large and supports dozens of software packages and platforms, training your consultants to be able to handle every single question that arises is probably not worth your time. A more logical and effective strategy is to evaluate the type of questions your site receives, and focus your training to cover the majority of those questions. After that, teach your consultants how to research and answer the more complicated, less frequently asked queries.

This paper describes a successful consulting program based on the premise that it is more useful and important to teach student consultants to know how and where to look rather than try to know every answer automatically. By creating knowledgeable, self-sufficient consultants, we help the both the user and the consultants themselves.

Description Of Consulting At Brown

Brown University has a consulting program of ninety undergraduate and graduate students who work in four different locations on campus. These students are of varied backgrounds, and the majority (80%) are *not* Computer Science concentrators. We make an effort to ensure our consultants are not "computer jocks," but are instead well- rounded students who can explain difficult concepts clearly.

At each consulting office two students, a first or second semester consultant plus a more experienced one, handle consulting contacts over the phone, on-line, or in person. We support four operating systems, several network configurations, peripheral devices, and numerous software packages.Every week our student consultants help approximately 1,500 faculty, staff and student users .

As might be imagined, making sure all of these consultants are equipped to do their jobs is a tall order. Most students work 10-15 hours a week and are not entirely enthusiastic about attending frequent training sessions when they have homework and midterms (even when they are paid to come to trainings). However, there is a lot of information out there with which they need to be familiar in order to assist users, and we consulting coordinators have to make sure they learn it. At the same time, our philosophy is that

our employees are students first, consultants second. They are in college to work on degrees, not just to serve as computing assistants. Therefore, we decided to plan a training program that did not usurp a lot of their study time nor our own work hours. We have tried to make our consulting training program as interesting, diversified and efficient as possible. We have found that by keeping track of what users are asking we can tailor our services and our consultant training to reflect the needs of those who use computers on our campus (this has worked for years in the televsion industry in the form of the Nielsen ratings). Our training program teaches student employees the basics of consulting at Brown, and at the same time imparts learning and research skills to make them self-sufficient consultants.

Consultant Training

Since we typically add or alter our facilities over the summer or during winter break, we have a mandatory training day just before classes start each semester. This includes a separate track for new consultants to introduce the basics, while returning students attend short seminars on more advanced topics. Last semester, for example, new consultants attended clinics on advanced Microsoft Word, GML, and Excel, while returning students learned about campus network troubleshooting and statistical packages. We feed them breakfast and lunch, and end the day with a movie party so everyone can get to know each other informally.

For very experienced consultants we have an additional half-day of training that is 'by invitation only' during which we go over the responsibilities of consulting in our central office. Being invited to join this group is something of an honor for a consultant, for it lets everyone else know he or she is one of the very best.

Throughout the semester we have optional paid training classes on special interest topics or software or procedures that have suddenly changed (new Word versions, network configurations, etc.). Professional staff enjoy running these as a way to meet students and obtain feedback on planned services. Experienced consultants often teach these classes as well, and we generally serve pizza or cookies as an enticement for attendance.

As has been noted above, not all students have the time and inclination to attend extra training. Some feel that they don't need to know about TeX when they work in a remote cluster where users only ask about printing, while others feel a little nervous about attending an advanced seminar. For this reason, we have developed a series of take-home tutorials. Consultants can complete audiocassette tutorials on common software packages like Pagemaker and Excel, or can go through short workbook exercises on other topics. In this way, consultants can learn new packages or information when it is convenient for them, typically long after the average CIS staff person has gone to bed.We require that consultants finish at least three tutorials or training classes a semester, and giving them several choices has definitely helped both their interest level and the knowledge base of the entire consulting program.

Probably the most salient and effective way consultants learn is through interaction with more experienced workers. We make an effort to schedule new consultants with returning students for each shift. By establishing an informal interning process, newer students learn the ropes in a non-threatening manner.

In addition, consultants can learn from each other via our electronic conferencing service, called BRUNO (BRown University News Online). We have set up a private conference for members of the consulting program, on which they are free to post any questions, hints or advice. Professional staff post software changes or other announcements here too, as it is the surest way to reach all 90 students in a short period of time.

Another online resource is PDOC (Printed Documentation), a part of Brown's campus information server. PDOC contains documentation on software and services available to the community, including tutorials and manuals that may be read online or printed out for take home use. Consultants can refer to this information, or guide the user to the appropriate documentation for the software he or she is using. We also maintain a series of "HotSheets," one page summaries of procedures for dealing with common questions or problems.

Finally, we created a consultant handbook that provides general and reference information to give the consultant ideas of where to look to solve a user's problem. For instance, if someone asks a novice consultant a GML question, the handbook references specific manuals and pages on which the consultant should find the answer.

Through all of these strategies, we have attempted not to make all consultants learn everything by heart. Instead we have put them in an information-rich environment with the tools they need to navigate the vast amount of information for which they are responsible.

How Has This Worked?

This multilevel approach to training has worked well for us, as it addresses the different learning styles and time constraints of student consultants. Students who used to complain that they were "overwhelmed" by the amount of information thrown at them at the beginning of the semester now feel more comfortable with and confident of their roles as consultants.

They know that no one expects them to know everything, but that they are expected to use common sense. If a consultant receives a question she cannot answer, she can use a variety of resources to help her: other consultants, online or printed documentation, BRUNO, or the Handbook. If she and the user still cannot find the answer, the question is forwarded to the staff consultant. There is no stigma in saying "I don't know" to the user, as long as it is couched in terms of "I don't know but I'm referring you to someone who does."

Because we are living in what experts call the Information Age, it seems appropriate that we turn from the expectation that everyone must know everything to the mindset that everyone should develop broad learning and research skills. There was a time, back in the Middle Ages, when it literally was possible to have read every book in existence and to possess all existing knowledge. As any visitor to a public library knows, this is completely impossible now. Instead, we visit the reference section of the library and ask the reference librarian to guide us to the sources that will help ∫ the newspaper index, periodicals catalogs, the card catalog. In his hypertext work "Thinking Machines," Ted Nelson envisions the spread of this type of information navigation assistance, comparing computer consultants to flight attendants who help us get where we need to go. Consultants have also been compared to physicians, mechanics, and other service-oriented professions, and the merits of each of these analogies have been argued at length by countless others.

What does this mean for those of us user services professionals who rely on student employees to provide our frontline consulting? We have to teach our consultants how to navigate the information world by first deciding what they absolutely need to know (mandatory knowledge), what they should know (common knowledge) and what it would be nice if they knew (recommended knowledge).

How To Implement This?
Is this to say we should all sit back and accept mediocrity in our employees? Of course not. As consulting coordinator, it is up to you to teach your students what you feel they need to know based on your familiarity with your user community. In short, you need to know well the type of help you are providing to users.

Try logging your consulting contacts for a week, a month if you can stand it. Ask who is coming to you for help. When? For what information? Are they beginners, or experienced users? Are they quick syntax queries or longer, show-me-how-to- do-this contacts? At Brown we take a "snapshot" of our user community each semester by logging all consulting contacts for a one week period. Questions are logged on paper log forms (easier and

quicker than online systems we have tried) and the data is entered into SAS for analysis. It isn't necessary to log every single question all year long; in fact, it gets in the way of regular consulting.

Plug the data you collect into your favorite statistical package, and see what you have. Chances are, you'll see patterns. Are one out of every five questions related to printing? Do you get only a few JCL questions, and do they come in during business hours? You'll begin to see where you can be flexible with your training plans. If you receive four questions a week on SPSS-X and you've been training all fifty of your consultant in-depth on the package, the odds are slight that any one student is actually going to be asked a question on that topic. If you've been paying all fifty students to learn information they may rarely if ever get to use, you may decide you can reallocate some of that to more immediate projects. On the other hand, if 250 user contacts are related to Word Perfect, you would certainly want to make sure your students knew the software thoroughly.

Once you have decided what you feel your consultants absolutely need to know, move down the list to what they should know, then to what you would like them to know but that you wouldn't lose sleep over if the question had to be referred.

Next, determine what methods you want to use to present or make available this information to your students. At Brown, we cover the absolutely mandatory items ("mandatory knowledge") in person, during our day of training. The "common knowledge" topics are covered in the handbook, in the take-home tutorials, and in ongoing trainings. The "recommended knowledge" subjects are on PDOC and can be discussed on BRUNO. If you can break down the computing information for which you are responsible in this fashion, you will find that not only will you have a better idea what your students know, but also that they will be happier because they no longer have to worry about memorizing esoteric commands since it's ok to look them up.

Conclusion
This approach to training user support specialists is going to become more widespread as the computing industry continues to mature and put out new products. Accordingly, the role of the consultant has to change from "know-it-all" to "knows- the-ropes," becoming someone who has good basic knowledge and research skills, and can help the user find the answer in a joint effort. It is up to us to stop feeling uncomfortable about saying "I don't know off the top of my head" as long as after that we can then use our skills to track down the answer or at least point the user in the right direction. There *is* too much to know and we are too proud to admit it.