Teaching at the Computer: Best Practices for One-on-One Instruction in Reference

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During the late 1990s, reference service in the Science and Technology Library at the University of Alberta in Edmonton, Alta., changed from primarily walk-up service to 'roving reference,' in which reference staff move among terminals in the reference area assisting learners with their research. One of the results of this change in service style (and the change from print to electronic resources) was that many of the reference questions turned into one-on-one instructional sessions, with the librarians helping the learners with a whole range of knowledge deficits.

One-on-one instruction has always been a part of reference work, but in the paper environment getting a learner started with an index usually involved a brief and straightforward introduction. In the electronic environment, however, learners may need to learn everything from how to use a keyboard to using search languages and downloading and printing.

Unlike students in a classroom or in a one-on-one class (e.g., private music lessons), learners in the reference environment do not *intend* to be learners. They are 'accidental' students: they have to learn how to do several things before they can get to the information they are seeking.

For our part, members of the reference staff have become 'just-in-time' teachers. We have no lesson plans and no preparation time, we don't know what we're going to be

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teaching next, and there is no set amount of time allocated to delivering this uncertain curriculum. If fact, in many cases, time is a pressure because other people are waiting to be helped.

Developing the list

The Reference Team recognized a need for a better understanding of the elements required for excellent one-on-one instruction in the reference environment. We decided that we would learn as much as we could about one-on-one reference instruction (a review of the library literature revealed that there was little that addressed one-on-one

teaching in reference) and establish a list of best practices. With that list in place, we could then evaluate ourselves and determine where we needed improvement.

Most of the Science and Technology Library's reference staff either had formal coursework in teaching or had had in-service training and experience in the classroom. Everyone working at the reference desk was also well schooled in conducting a reference interview. However, none of us had received any training in how to do *one-on-one* reference instruction.

Our list of best practices for successful one-on-one reference instruction (see sidebar) is the result of a day spent brainstorming the differences and similarities in classroom instruction, the reference interview, and one-on-one instruction. It includes some well-used best practices from both teaching and

Top 10 Practices for Successful One-on-One Reference Instruction

1 Ensure that the learner is ready to learn

In some cases, learners who need to learn processes may be unable to take the time to be taught or may be unable to learn at that time. If someone is sitting at a computer terminal in tears, that person is probably too distressed to learn anything. Other examples would include a learner who has only 10 minutes to get the information before he has to go to class, someone who is too ill to learn, or someone who is never going to use the system again.

Make sure it's a 'teaching moment' before you try to teach.

Helpful scripts

"Do you have time to see how we find the call number?"
"Would you like me to show you how to do this?"

2 Don't teach people what they already know

Unlike a traditional walk-up reference question, questions at terminals do not always begin at the beginning. We often encounter learners who are part way through a search. Respect the person's knowledge by acknowledging what she already knows. The source of the problem may not be obvious, and it may have occurred several steps earlier in the search process. Careful questioning will help sort out what you will need to teach the person to allow her to answer the question independently.

Helpful scripts

"Have you used the catalogue before?"
"Why did you select this database?"
"Have you used Web of Science before?"
"Have you used a thesaurus before?"

3 Respect the learner's personal space

Be aware of physical closeness at the terminal, and try not to approach from behind (you risk startling the person). Stand to the side, when possible, so that you can reach diagonally in front of the user to point to something. Be aware of body language from the learner that indicates that you are physically too close.

4 Respect the learner's need to become independent

Let learners do it themselves — try to keep your hands off the keyboard. If the person does the work himself, he'll understand it a lot better, and if he controls the speed of the session, it will be easier for him to learn.

5 Explain each step when the learner comes to it

Library staff members do the same functions so often that they forget that the learner may not know what is supposed to happen next. Learners need step-by-step instructions so that they can learn the process and will be able to replicate it. For example, instead of saying "Click here" and pointing to a clickable icon, say, "To open the database, click here" or "To see the articles that your search retrieved, click here."

6 Go slowly, check for comprehension, and review if necessary

If the learner is saying things like, "How did you/we get there?" or "Why did you do that?" you're probably going too fast.

Give the person permission to slow you down. "Just ask if there's something that doesn't make sense."

Stop frequently and ask if the person has understood.

Suggest that the person take notes of the steps.

Review your process. Say, "Let's do that over again, so that you can see how it works" and have the learner repeat the steps.

7 Make learners comfortable with the fact that they have to learn something

Many learners feel that they should know how to use the library and should therefore know how to use computers to access what's in the library.

Most of us who work in libraries acknowledge that we are constantly learning. Use statements that let users know that there's no reason why they *should* know how all the systems work:

Helpful scripts

"This is a new system. You won't have had a chance to use it before."

"I haven't used this database much. We'll be learning some of this together."

"This isn't a very friendly interface. I have difficulty using this one."

8 Make the person comfortable with her ability to learn

Sometimes learners will say that they are too old to learn or not very good with computers. Reference staff do occasionally deal with people who are not interested in learning, but that is rare. People usually just need encouragement, good instruction, and small successes to convince themselves that they can use the system independently.

Use a statement like this: "If you can figure out how to get here on the subway (program your VCR, fix your tractor, etc.), you can learn how to use this system."

9 Use humour, and respect the learner's stress level

Some staff members are not comfortable injecting humour into the teaching process. They fear that people will misunderstand. However, many people practise humour that flows directly from the situation without recognizing it. Self-deprecating humour also works well. It can be very effective in diffusing the tension that sometimes surrounds the use of computers. For example, you can joke about a mistyped word: "If I could type/spell, it would help a lot." You can also joke about unusual titles: "I wonder what *that's* about?"

10 Know when to quit, and practise good exit strategies

Some learners are so lacking in confidence that they will want you to sit with them through their entire search session. However, when you are providing general reference service, you have to be constantly aware of other people who may need help.

Stay only long enough to get the person working independently and then move on. There are several strategies that help with this.

a Don't sit down

It is important to be at the same height as the person you're teaching, but if you sit down, the learner may assume that you are there for a long time. Squat down if the learner is at a low station or choose to teach at a high station where the person can sit on a high stool and you can stand. (If you squat beside a low station, it's clear that you don't plan to be there for hours. However, this quickly becomes uncomfortable and it is not physically possible for some staff.)

b Hand over the keyboard as soon as possible if you've been doing the typing

This is a first step towards closure of the session.

c Regularly scan for other people who need help

This lets the patron you are helping know that you have a responsibility to others.

d Practise open-ended closure statements

"Now that you know how to do this, I have to move on and help other people. But I'll check back with you in a few minutes to see if you have other questions."

"I'll be around this area. Just raise your hand if you have other questions."

"Let me know if there's anything else you need."

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reference adapted to one-on-one instruction as well as some that are specific to this unique situation.

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