Evolution and Revolution

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INTRODUCTION

Evolution is defined as a series of related changes; a continuous change from simpler to a more complex or higher state; cultural change determined by technological factors. This surely describes the current changes in today's information climate. Revolution is known as an alteration or change in some manner. In archaic usage it meant a turning over in the mind. The latter definition relates specifically to this paper: to meet the demands of evolution we must change reference services and to do this we must change our minds.

Changing reference service is not a new concept. The library literature abounds with citations.[1,2,3] Harold Billings comments about evolving toward a paradigm rather than to it because as we approach a model it will change. The dynamics of change mandate flexibility. Librarians have acknowledged the possibility of change, theorized ways to accomplish change and yet seem reluctant to implement new models. Institutions are indeed hard to move and "paradigm shifts are painful".[3] My hope was to identify a paradigm, and begin a shift as soon as possible, realizing that full implementation would not be possible immediately.

As is obvious to any experienced science reference librarian, the more the research of scientists evolves into narrower foci the more multidisciplinary the research. Thus it is easy to follow the rationale of Miksa that research has become nondisciplinary.[5] Rather than a library providing access to documents, the library needs to provide access to information, the origin of which is not important. Control of the bits and pieces of information will take more effort in the future than a scientist will have time to manage. Librarians must therefore become part of the communication matrix including Internet and NREN.

To begin to move toward a paradigm a possible first step could be to survey faculty for what they perceive their needs to be, i.e. what services they want. But can we be sure they know what librarians are capable of, or what services might exist?[6] It may be wiser to begin, and act in concert with survey techniques as the process progresses.

Background

The Science Reference Department at Arizona State University serves roughly one third of the student population of 40,000 and is comprised of eight librarians plus six support staff. Six Science Reference Librarians are subject specialists responsible for desk duty, collection development, mediated searching and bibliographic instruction in their respective subject areas.

In 1988, the Arizona Board of Regents published "No Challenge too Large No Step Too Small; A report and recommendations of the Arizona Board of Regents Task Force on Excellence Efficiency, and Competitiveness". They outlined 24 recommendations within eight areas of concern for the states' three universities. This report lent guidance to the planning steps for the Public Services Division of ASU Libraries. The Board of Regents' recommendation supporting graduate education and research and its statement of the synergism that exists between it and the economic return to the University speaks clearly to the future of ASU.
The 1991 strategic plan for ASU Libraries reads: "Goal #1: Develop and sustain the libraries service programs to participate fully in the university's initiative for excellence in instructional programs and research ..."

**Campus Environment in the Sciences/Engineering**

In assessing the effectiveness of Science Reference Service in supporting the goals of the Libraries and the University, a dichotomy was recognized. Science Reference serves mostly the upper division undergraduates which is countern to the emphasis on research. It was decided to take up the challenge and explore improving our support of research efforts by changing the ways we offer reference service and shifting to include the provision of high level research assistance for faculty and graduates.

ASU Libraries offers a successful, fee-based research service as part of our public service function, to serve corporate, off-campus users. Science Reference expertise helps to support that service. At this point in time faculty who want "full research service" must utilize the fee-based service. We believe it is logical to utilize our expertise to provide this service for our faculty in support of their growing research needs.

Science Reference Librarians are excellent; they have subject and bibliographic knowledge of the science and its literature, they are proficient, not only in reference and collection development but research, computer literature searching and systems. Our human resources are under-utilized because we are presently unable to offer a higher service level. It is interesting that we trust Science Reference Librarians to evaluate and select material for the collections and yet they are not empowered or provided opportunities to make value judgments about research results and to repackage information. Rice calls this "reticence rationale."[7] I call it a waste of human resources.

Science Reference offers a higher level of support in some areas through end user searching. We have subscribed to Medline, Biological Abstracts and Compendex on CD-ROM. This was only a beginning for what we needed to accomplish.

**THE WRITTEN PLAN**

There was a need to codify a goal to work toward. A written plan would accomplish several things. It would confirm and institutionalize our goals and allow staff to fully support the process. It would assure that we keep the present level of reference service by documenting our reference environment. By documenting staffing needs it would ensure that the new services would not put added pressure on the department or change the quality of service. A major concern with planning efforts is that the usual history is to add and integrate more services without appropriate support.

End user services are a good example: if added without staff they put more demands on the librarians serving at the Reference Desk. So the PLAN had to take into account the environment in which we operate.

**Patrons**

Today we see a more sophisticated level of patron, but - in their needs not their library abilities. Dougherty identifies a common myth when he states "Researchers and scholars are skilled users of research libraries."[8] We also serve the so-called "invisible patrons"[9] not only by virtue of the dial-up capabilities of the Online Catalog but in-house because as end users they often will seek no further than sources apparent in the Online Public Access Catalog (OPAC) environment.

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ASU Online Catalog

It is very clear that although our Online Catalog is a wonderful tool, it is far more sophisticated than it first appears and it has limitations which are not apparent to all users. Six Wilson indexes, including General Science Index and Applied Science and Technology Index have been loaded as have several local databases and a transparent link to the Denver Colorado Alliance of Research Libraries (CARL) system including Uncover. It is imperative that patrons have assistance in determining what databases are useful to them and to encourage their use of materials in other formats. In our experience, patrons have many questions about the catalog, many get confused regarding what information they have received, or what part of the catalog they were accessing. They tend to overlook the rest of our collection as it becomes "invisible" to them. Help nearby - without having to leave the station and come to a desk has proven the best way to intercede.

And so a new plan for reference within the Daniel E. Noble Science and Engineering Library's Science Reference Service was written and submitted in August of 1989. It was accepted by the Dean for implementation in stages. It was hoped that Science Reference Department could be a flexible test model.

BASIC SUPPORT STEPS

On the premise that a proper foundation was imperative, we identified needs for increased office support staff and technology. A full-time paraprofessional with technological support to accomplish collection maintenance at a level to provide the best framework for reference service (a microcomputer, and access to INNOVAC, to aid with check-in, claims and binding) was specifically requested. Workstations was provided for each Science Reference Librarian. The microcomputers have modems and are wired to the campus broadband allowing access to E-mail systems, INTERNET, and BITNET. The Information Desk was moved from the building entrance to the main catalog area near the Reference Desk. This allows Library Assistants to use the print ready reference bibliographic tools, participate in providing aggressive service to Online Catalog users and become a more integrated part of reference services.

This is as far as we have progressed; we face real budget constraints this year in Arizona. It should be mentioned that today's economic environment may be the reason why some are hesitant to start a revolution. The important point is that we are exercising our creativity, challenging our patterns and continually changing. We are also pleased with the progress we have made.

FUTURE

Perhaps the critical step in achieving a new model will be to create lines for professional positions with the title of Science Reference Librarian and having no subject specialty responsibilities. Their focus will be reference service: desk duty, general orientation and instruction. They will use online searching for ready reference, and help patrons with all end user services.

Using our Subject Specialists, establishing and publicizing faculty research assistance will be the last stage. We know this shift will take time before science faculty will be able to acknowledge, based on experience, the credibility of the premise. We hope the service will be similar to that seen in corporate special libraries and in other settings described in the literature.[10] After a successful trial period the service will be expanded to graduate students.
CONCLUSION

The plan to create the new model of Science Reference involved two main areas and is being accomplished in stages. To begin freeing subject specialists time, the information desk has taken over more transactions while also better serving catalog patrons who would not otherwise question or who are intimidated by computers or lines at reference. An increased level of basic support has been provided in staffing and technology. The second stage will be service changes in addition to changes in who serve at reference desk. Research assistance will be provided and actively promoted by subject specialists working closely with faculty. In addition to the new relationships supporting the University's mission and goals, the alignment will be important as we turn from ownership to access in research libraries. In the future our knowledge will be used not for development of collections but for control of information. This is truly a revolution we must facilitate.

REFERENCES


