

I think there are a few recent library trends that will especially affect science and technology librarians, which I will describe using the scientific research process as a framework. After the formulation of an idea for a research study, the first step in the process is applying for funding. With funding agencies such as the NSF and NIH requiring the deposition of data and data management plans, librarians will continue to assist scientists with data management throughout the entire research life cycle. They can also help researchers select a data repository, either domain-specific or institutional, and deposit their data in the chosen repository. Also, as some funding agencies are requiring interdisciplinary research (what are the public health or economic benefits of a particular study?), Sci-Tech Librarians must adapt to this trend as well. This could take the form of providing a scientist with search strategies to use in a database that they aren't familiar with.

Research laboratories are moving away from traditional lab notebooks and towards electronic lab notebooks (ELNs), and science and technology librarians are poised to help researchers use them during the study itself. As different lab notebook interfaces allow for different research needs (does your lab need to draw chemical structures in synthesis reactions, or plan restriction enzyme digests after cloning a new plasmid?), librarians could help researchers select the appropriate one for their specific research needs. Another trend in libraries that will affect Sci-Tech Librarians is data management. As researchers are managing larger datasets that are comprised of varied types of data, librarians will need to be able to assist them with the gathering, storage, and long-term maintenance of those datasets. Libraries have also recently begun to establish Makerspaces, and models produced using 3D printing can help scientists in their research. For example, a Sci-Tech Librarian could make a model of a bone for medical students to learn about anatomy during training for surgery. Another application is a device for a wheelchair that makes it easier for its operator to control the joystick.

The advent of open access publishing is another trend that will affect libraries in the near future: researchers are choosing between open access (freely available online) and traditional (behind a paywall, need a subscription to access) journals. Sci-Tech

Librarians will have a hand in helping researchers deciding not only which journal to publish in, but also what type of journal they would like to showcase their work in. Post-publication, researchers may want to use a data visualization software such as Tableau to create eye-catching visuals showing their data. As libraries have started being the centers for data visualization on university campuses, a basic knowledge of products like this will benefit Sci-Tech Librarians.