

DIALOG—A Telecommunications & Biological Research System Available for High School Students & Staff

Kenneth M. Highfill

For the last 20 years as a high school biology teacher, I have eagerly awaited a national research data bank which would provide my students and our science staff an avenue for scientific literature reviews. My students and I are in a particularly unique situation due to the proximity of Lawrence High School to The University of Kansas's science library. Nonetheless, research techniques described in this article might well apply to any high school biology teacher who is within short driving distance of a university. Further, in cases of more distant travel, major university science libraries are commonly available on weekends and vacations.

The telecommunications scientific resource bank that we use is called DIALOG. The system provides the opportunity for its users to research in one of the most complete and powerful on line information systems available anywhere in the world. To become a member of the DIALOG network, a classroom teacher and his students require access to a personal computer, a modem (300, 1200 or 2400 baud), ASCII-coded communications software, any standard analog phone line and a password. Further, a printer is recommended. In the use of IBM PC or compatible equipment, DIALOG-LINK software is recommended by the company at a cost of \$125 but is not required.

Of special interest to biology teach-

ers in DIALOG is "Biosis Preview," a worldwide coverage of life science research. Databases for agriculture, art, business, chemistry, computers, education, engineering, government, law, literature, mathematics, medicine, psychology and social sciences are also provided by DIALOG.

The Search Begins

Each semester, my college preparatory general biology and zoology students are assigned a DIALOG search. To complete the assignment, each student selects a topic of interest from the units that we will be covering that particular semester. Any topic of biology found within a scientific journal is acceptable so long as the article is not over five years old.

Next, the students schedule an appointment with our computer resource librarian. Within our high school library and under the supervision of the librarian, the students telephone DIALOG through the computer system previously mentioned. Within a matter of minutes, DIALOG selects pertinent listings of topic articles and a listing of references is printed.

Most of the articles are sophisticated so it is best for the students to then have their biology instructor indicate which selections are within reason—based upon the student's background.

Accessing through either the computer and modem in the library or within my classroom, the students can telephone a telecommunications port at The University of Kansas and determine if the journals that are selected are available at the university. If the journals are available, the student

then travels to the university's science library and makes a photocopy of the selected article. Students are advised to print an article that is within their understanding because each student will then present a three to five minute oral review of the article to their classmates. Through a posted listing of articles, no article is presented more than once.

Responses

Admittedly, most of the students find their selected article somewhat challenging to present to their classmates; however, the students, who have completed their search and journal work, discover the assignment has merit. In fact, most of the students involved express positive statements in regard to their development of self-confidence in research. Further, by the time my students have located the assigned articles, the students have developed perspective in regard to the immense quality and quantity of the university's scientific resource journals. Commonly, my students' parents will accompany them to the university; thus, another generation becomes involved in an appreciation of modern science research techniques.

My advanced students who elect to complete senior research papers are also expected to complete DIALOG searches. Abstracts can also be supplied via DIALOG for selected articles.

Accessing DIALOG from the Classroom

Until recently, it was not very realistic for a single classroom to have

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access to DIALOG. The system was primarily reserved for major library and office facilities. However, three Classroom Instruction Programs (CIPs) are available, two of which may be of interest to biology teachers.

(1) The Classroom CIP of DIALOG provides 60 databases at the cost of \$15 for each hour of on line use. The Classmate Starter Package is \$65. It is an instructional program designed for students in grades 7-12, community colleges and undergraduate institutions.

(2) The DIALOG CIP offers access to more than 280 DIALOG databases. DIALOG is designed for specialized high school programs, graduate and undergraduate programs. Cost is also \$15 for each hour. I do not have the CIP systems in my classroom but they may be of interest to others.

If the researcher wishes to download onto a disk from DIALOG, a computer with at least 256K memory is

recommended. Instructional booklets and the training videotape are extra.

When high school students have access to a computer and telecommunication software, searches can be performed by university library staff and sent through the mail. There is a fee for such research but the cost is probably more reasonable than extensive travel. Such a plan might be especially realistic for advanced project students.

Summary

DIALOG is an academic data bank that directs high school biology students into telecommunication research programs at a fraction of the regular commercial cost (\$30-\$300/hour). Within a matter of minutes, students can become active participants in contemporary life science research without extended correspondence and frustration amongst piles of research

volumes in a major university library. Further, I would hope that my students are developing academic skills and appreciation for the research potential provided by computer networks.

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Dialog Information Services, Inc., 3450 Hillview Ave., Palo Alto, CA 94304. For further information, contact DIALOG (1-800-334-2564).

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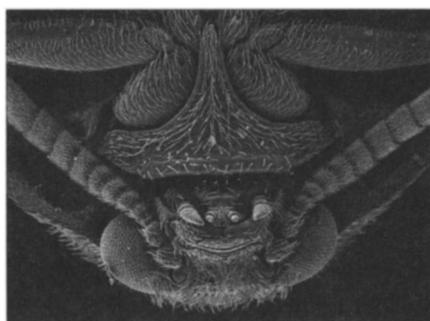
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