DIALOG at McDowell High School:
Acquisition, Instruction, and Management

by Marty Bray

A fashion design student needs to obtain biographical information on American fashion design.

A student in an environmental class needs information on the effects of acid rain on Mount Mitchell.

A student in the American history class needs to know the name of the first secretary of state for the Republic of Texas and his relationship with McDowell County.

A student in the current events class needs to locate an article about the Russian coup in a magazine to which the library does not subscribe.

These and other questions have been answered using DIALOG, a telecommunications service that provides access to vast amounts of current information whenever it is needed. How this service has been and is continuing to be used, as well as how we teach our students to use it, is the subject of this article.

History:

McDowell High School, a high school with approximately fifteen hundred students, began subscribing to DIALOG as a result of a 1989 assessment of the nature of research in the library. This assessment demonstrated that a better way of accessing the periodicals collection was needed. The answer to this problem seemed to be through the use of telecommunications because "telecommunications technology enables school library media specialists to use rapid communication and shared tasking to meet users' information needs as well as to enhance library media program management capabilities."[1] In selecting a database vendor, several resources were consulted including Dorcus Hand's (1988) article in *School Library Media Annual*.[2] DIALOG was selected over other telecommunications database vendors because the information available through DIALOG was most aligned with curricular needs, educational materials support, and train-

ing available for the staff. DIALOG is a collection of more than three hundred databases from which a person with a computer, modem, and password can access a vast amount of information. In order best to balance budgetary constraints with the information needs of our students, we selected Classmate, a service that DIALOG offers to schools. Classmate is a collection of approximately one hundred twenty databases which best meets the research needs of a majority of high school students at a lower price than full DIALOG service. These databases include ERIC, Medline, and America: History & Life. By accessing Classmate students may obtain information such as magazine citations, full text articles on historical topics, and stock market analysis. While the number of databases available to students is fewer than with DIALOG, the content of the databases within Classmate has not been limited. Our students use these databases to obtain information which is not available in the school library or in other libraries in McDowell County.

When Classmate was first introduced into the school, it was used primarily as a resource for eleventh and twelfth grade advanced English classes. As services such as InfoTrac (a CD-ROM magazine index) have been added to the collection, Classmate's role has become one of acquiring specific and current information. An example of this occurred last year when a business class needed information on various industries. A search on Classmate yielded all of the information required by the class, including data regarding products manufactured and current stock exchange statistics. The use of Classmate resources provides a level of information that not only allows students to do primary research, but also more importantly motivates them to pursue levels of academic research they would not do otherwise. This was demonstrated powerfully by two students doing research on a serial killer. By using Classmate, they were able to research the topic more fully than if

they had relied solely on print resources. After the assignment was completed, the teacher commented that the level of motivation demonstrated by these students was far greater than she had experienced or expected.

During the 1990-91 school year, an additional media specialist was hired to help with computer services at the high school. Since the library staff at McDowell High School views Classmate as an important resource for students conducting research, integrating the use of Classmate into the curriculum is one of the responsibilities of this new position.

Requirements For Accessing DIALOG:

In order to access Classmate, the MHS Media Center uses a Tandy 1000 SL/2 computer with an internal modem and printer as its telecommunications terminal. McDowell High School has a dedicated phone line in the media center just for Classmate. A dedicated phone line was installed for two reasons: the first was the heavy usage that our existing phone line was receiving, and the second was the anticipated heavy usage of Classmate. As the role of Classmate has changed, this second dedicated phone line is now being used for other electronic services such as a facsimile machine. The software, *DIALOG Link*, necessary to access Classmate, comes from the company and can easily be configured to the individual requirements of any media center. While other telecommunications software can be used, this particular piece of software saves a great deal of time and frustration because it performs many tasks automatically. When Classmate was first implemented, the two media coordinators attended a DIALOG Classmate "Teach the Teacher" workshop. This workshop covered setting up a telecommunications workstation, installing the software, and using the command structure of Classmate. Furthermore, the contents of each database and instructional strategies utilizing Classmate were discussed. Several manuals for use with

Classmate were given to the participants, and hands-on activities were emphasized. The cost of these seminars was approximately forty-five dollars per person. There is no annual subscription fee to Classmate and no long distance fees because it is accessed by a toll free number. The company does charge a fee of fifteen dollars per hour of connect time. Even at this rate the costs of using Classmate remain reasonable. Currently, without student limitations on usage, our library spends an average of fifty dollars a month, which translates to less than four cents per student a month. Student overdue fines are used to support the service.

Teaching:

One of the advantages of using a computer as a research tool is that it promotes a high degree of motivation among students. This holds true for Classmate as well. As mentioned before, using Classmate has encouraged several students to delve more deeply into research topics that they would not have pursued if they had used only printed reference sources. Most of the students using Classmate are juniors or seniors completing some type of English project. However, sophomore students are introduced to Classmate during general orientation to the library and made aware that the service is available when other sources have been exhausted. Later in the year, a specific orientation session is conducted regarding the use of Classmate for those students who are doing a research project.

Planning a search strategy with the teacher is the first step in actually teaching Classmate to the students. Many curricular areas use Classmate to complete research projects: English classes use the service to find criticism on literary figures and their works; current events and history classes use databases, such as UPI News, to conduct up-to-the-minute research on relevant topics; science and environmental classes use Classmate to research topics such as the effects of acid rain on Mount Mitchell; and the business classes use Classmate to track stock market data.

We prefer that students use Classmate in small groups to facilitate better the learning process. After the staff has an understanding of the types of topics that the research will cover, we do some preliminary searching on the service to ensure that the students will experience some initial success with the service. Since the session is conducted in conjunction with an actual research project, we allow students to access the full range of databases available to them through Classmate.

After introducing the concept of accessing databases via telecommunications, we work on the concept of keyword or Boolean searching. Boolean logic is an important concept for the students to grasp if they are to use Classmate effectively. Also, more and more electronic reference sources, such as InfoTrac, utilize keyword searching as a means for retrieving information. We have used several strategies for teaching Boolean logic. They usually include brainstorming for keywords, an explanation of the operators (AND, OR, and NOT), and examples of actual search strategies. These concepts are taught in small groups using other electronic resources that utilize Boolean logic such as the library's online catalog, so that students can better grasp these concepts before actually accessing Classmate. After the Boolean operators are explained, the command structure of Classmate is explained. A menuing system is available

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which helps the student navigate through Classmate. The command structure is not that difficult to master and actually saves the student a great deal of search time. Students are provided with a packet of information which covers these concepts (See Appendix for example) as well as the databases available. Also in the packet is a worksheet for them to plan their search strategy before accessing Classmate.

At this point a demonstration of Classmate is conducted. If a small group is involved, the demonstration takes place on the telecommunications terminal. If a large group is involved, then an LCD panel connected to the terminal is used. Next, students are allowed to use Classmate individually. At this point the process becomes time-consuming. A search can take up to five minutes, which when multiplied by thirty students can easily consume an entire class period or more. As a result, more than one day in the library is planned for the class. During this time, every student is taken through a session

on Classmate. Finally, a follow up is done with the teacher to determine the success of the project.

Since DIALOG charges the school for the amount of time actually spent on the service rather than a flat monthly fee, we do not allow students access to Classmate unsupervised. Instead, we will either allow them to make an appointment to use the service or let them fill out a search sheet and the media coordinator will actually conduct the search for the student. The student picks up the printout of search results at a later time. This process saves the student and the media coordinator a lot of time and seems to be the more popular of the two options.

Problems:

The biggest problem with Classmate is the amount of time that it takes to supervise students while they perform searches. This problem has been addressed by allowing students to make appointments with the media staff and by the development of a system for requesting searches.

The second problem encountered with Classmate is that the cost of the service prohibits extensive use. This problem has been addressed through the acquisition of resources on CD-ROM which have a one-time fee and unlimited usage. Since other electronic resources such as the Online Catalog and CD-ROM databases have been introduced, Classmate is no longer being utilized as a primary resource. This trend does not necessarily mean that students are receiving inferior information. On the contrary, the information received though sources such as InfoTrac generally meets students' information needs quite well. These resources also allow students to learn to use electronic resources without the pressure created by limited access to the resources both in terms of time and physical accessibility. Classmate does have several advantages over these resources, both in terms of the amount of information available and the timeliness of the information; therefore, we continue to use Classmate, although to a lesser extent than before.

The final problem encountered with Classmate is the limited accessibility of the service due to the fact that the library can only maintain one dedicated phone line. While this problem has been addressed primarily though scheduling, a trend is beginning to develop where students use those resources more readily available, such as InfoTrac and SIRS, rather than request a Classmate search, even though the information in Classmate is superior.

Using DIALOG — The Future

As more and more electronic resources become available to the student, the role of Classmate in research has and will continue to change. The terminal which was once used exclusively for Classmate is now also used for FrEdMail and the TI-IN Long Distance Learning service. FrEdMail is an educational telecommunications service that allows, among other things, students to communicate with other students across the state and country. The TI-IN Long Distance Learning service allows students to participate in distance learning via satellite and computer. The dedicated phone line that was once used exclusively for Classmate will now be used to link the high school with the county's two junior high schools through fax machines. Finally, a new local area network allows multiple stations to access the library's CD-ROMs, online catalog, and the various telecommunication services. A local area network, or LAN, links the computers of the library electronically allowing patrons to access resources such as the online catalog, InfoTrac or any of the other electronic resources of the library anywhere a computer is available. It is also possible for multiple stations to access Classmate if the school has access to multiple phone lines and a modem that will meet the demands of multiple users.

This network may also be accessed via modem from computers outside of the library. Future plans for the network will take advantage of this potential and allow students to dial into the network from home. Although McDowell County is a rural county with a limited tax base, a small but growing number of students are gaining access to personal computers capable of accessing the local library and online information services such as Classmate. A far larger number of students are already familiar with computers or machines that use computers (the ubiquitous Nintendo, for instance). For those patrons who do not have access to a home computer, offering laptop computers for checkout may be a solution, especially as the price of these computers continues to fall.

Teaching students to use Classmate provides them not only with an understanding of how to access electronic resources, but also of the concept of telecommunications which students will increasingly find vital in conducting accurate and timely research. It is also important to show students how to use Classmate in the context of all of the resources availabl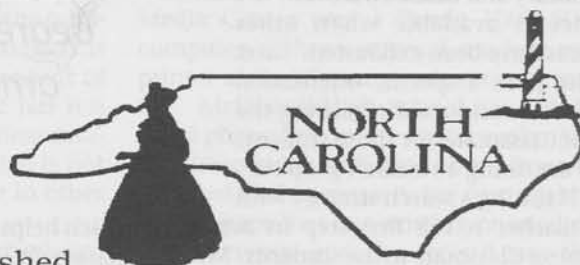e to them in the media center. At McDowell High School we have just implemented a network that brings together CD-ROM resources such as InfoTrac, The Information Finder (World Book on CD-ROM), an online catalog, and the Social Issues Resource Series (SIRS) on CD-ROM on multiple work stations. We teach the concept of Classmate as being another resource rather than the only source that students have available to them to use for research. This helps the student understand the concept that information is available from a variety of sources both in and outside of the media center.

Conclusion:

"The explosion of information and instructional technologies has formed the basis for our evolution from an industrial to an information society."[3] As this evolution continues, schools must teach students how to use services such as Classmate, as well as foster in them the critical thinking skills that they will need to survive in such a society. Services such as Classmate cultivate these critical thinking skills as the student selects appropriate databases, chooses appropriate terms to describe his/her topic, selects the appropriate information received, and incorporates the information into his/her research project.

APPENDIX

Steps for using DIALOG

1. Choose a topic that you will be researching.
2. Decide which databases will most likely contain the information you are looking for. (See Handout)
3. Decide what words will best describe your topic on the worksheet. These words are called concepts or descriptors. Consulting the **Readers' Guide** and **InfoTrac** will help you choose descriptors. Generate a list of as many descriptors as you can that best describe your topic.
4. Fill out the **Search Worksheet** using the descriptors you listed in step three. Put one descriptor under each concept listed on the **Search Worksheet**. AND and OR link your descriptors through the use of Boolean Logic. **AND** is used to narrow your search by more specifically describing what it is you are looking for and **OR** is used to broaden your search by creating more options in the search command.
   Be sure to include the databases that you will use to locate your information. Use the abbreviations that DIALOG uses for each database to save you time and money when conducting your search. If you are looking for a specific author, include that on the search worksheet.
5. At the bottom of the sheet is a space to write out the specific search strategy that you will be using. You may use the back of this sheet to complete this if you wish.
   Specific commands that you will need to know include the following:
   B   Begin a new database.
         Example: **B NEWS1**
         This command will make the computer access Newsearch for you.
   F   Find a particular term or terms linked using Boolean Logic.
         Example: **F George and Bush and Iraq**
         This command will make the computer look for any news items that have the words George, Bush and Iraq in it.
   AU=   This is the author command, giving you articles written by a specific author.
         Example: **AU= Bray, Gerald**
         This will give you a number of articles written by Gerald Bray.
   D   Display any citations that any search has turned up.
         Example: **D S1/L/ALL**
         When the computer finishes a search it will give you the number of citations that that particular search yielded. You may look through these citations to see which ones you want to use. S1 is the number of the search that you have performed. L is the type of display that you want to see. L stands for long and means that you will see all of the information associated with that article. S will give you just a citation and is more economical to use at this point. ALL tells the computer to give you all of the citations included in this search. You can ask for specific citations by typing in a number such as 5 or a list of numbers such as 1-5.
   T   This command will cause the computer to scroll through any citations that you tell it to. It works just like the Display command except that the information will scroll up the screen until it is all received by the computer. This command is very economical and convenient as you will see in the next step.
6. Log-on to DIALOG by pressing **F5**. The computer will go through a log-on sequence and then ask you at what level you would like to search. Type in 2 to indicate that you will be performing your search manually. Enter your begin command for the database you would like to use and then enter your search commands. After the computer has searched a database, it will tell you the number of citations that it has located. You may then use the display command to see any citations you choose. If you are sure that you would like to see all of the citations indicated, use the T command. The information that is sent to the computer will be saved in memory.
7. You may enter a new database at any time by typing a new begin command (**B EDUC1** for example).
8. When you are finished, hit the F5 key and choose the log-off option from the menu. You will then be out of DIALOG. After you have left DIALOG and when you change databases, a report of how much time you have spent will be displayed. Make a note of this information on the Search Worksheet.
9. After you have performed the log-off, use the up and down arrow keys to scroll through the information that you saw during your search. Use the **F4** key to mark the beginning and end of any information that you want printed. Next, press the **F8** key to call up the print menu. From this menu choose option 2. Press M for marked portions of text when prompted.
10. When you have finished, return the search worksheet to Mr. Bray and make your requests for a magazine or microfiche, if appropriate.

References

1 Robert Swisher, Kathleen L. Spitzer, Barbara Spreitersbach, Tim Markus, and Jerry Burris, "Telecommunications for School Library Media Centers," in *School Library Media Quarterly* 19 (Spring 1991): 153-160.
2 *School Library Media Annual*, ed. J. B. Smith (Englewood, CA: Libraries Unlimited, Inc. , 1988): 141-149.
3 *School Library Media Annual*, ed. J. B. Smith (Englewood, CA: Libraries Unlimited, Inc. , 1990): 59-66.