A school psychologist describes the experience of designing a database management system to keep daily records of services provided to students and parents. Information in the database included: dates, type of service, and time spent. A system such as this provides instant access to accountability data. How to create and maintain the database is discussed. The "Psychologist's Toolbox," designed to be similar to a web-page was created for teachers to be able to access information on their classroom computer. Various services provided by the site are described; for example, a "solution identification scale" is included, which enables teachers to design an intervention for a particular situation. Directions for creating a teacher-accessible web site are included. The toolbox provides teachers with ready access to all needed referral forms, related articles, and reference materials. Teachers can send in the forms by e-mail or print them out. Use of the networked computers enhances and streamlines the consultation process and allows for better delivery of services to both teachers and students. A page for parents is under design. (EMK)
So You've Finally Got a Computer at Work! Now What?  
Maximize your consultation while minimizing your paperwork

By Ned Engel, Kelly Caci, Amity Currie

This year, my 64K IBM computer dinosaur was finally replaced with a state-of-the-art, networked computer. Now all classrooms and offices, including the office of the school psychologist, are linked together. To add to this good fortune, I have two computer-savvy interns. The first thing we undertook was to design a database management system using Microsoft Access. This enables us to easily keep daily records of service provided to students and parents, including the dates and types of service provided and the total amount of time spent on each service. This gives us ultimate accountability; we can quickly collate data into spreadsheets so we can see at a glance the type of service provided across grade levels.

We also started talking about creating a web site. By chance I was reading an article on business uses of networked computers. It occurred to me that the initial step would be to create a Psychologist's Toolbox through which teachers could access various types of information and connect directly with me using e-mail; this helps us deliver timely consultation.

Currently teachers can double click on a light bulb icon labeled "Psychologist" and enter a menu page which gives them different options. For example, they can bring up a Student Referral form and print their responses on a hard copy or fill it out on the screen and return it electronically to me. They can also access a file of more than 30 articles I've written about children's psychological needs, including "Teaching Kids to Be Truthful," or "Talking with Children about Difficult Subjects". Teachers can locate these articles in a table of contents. And teachers can send me messages with their concerns about specific students. This beats being waylaid in the hallway on my way home or to a CSE meeting.

My interns and I also developed a written student observation form with specific suggestions for each student. Teachers can pull these forms up to remind themselves about our ideas for intervention. The Toolbox also contains a Solution Identification scale which enables teachers to design an intervention for a particular situation taking place in the classroom.

By making this material readily available on the network, the teachers have quick and easy access to the information they need to help their students. Thus the psychologist's services have been made very accessible.

The Database

The database was designed to help answer important questions about the population we serve and the way we serve them. This can be done using any database software; we used Microsoft Access, but FileManager, ClarisWorks, or others should work similarly.

Creating a database is not too difficult. The basic idea is that you establish "fields" which contain similar data for each "record". In this case, every student is a record. Generally a database program will ask you to establish your fields when create a new database. Our fields for each student include identifying information: Last Name, First Name, Grade, Teacher, and Year. When you establish fields, you will be asked to identify what kind of field it is. Don't panic! To begin with you will want all of your informational fields to be text
fields, since these give you the most flexibility. In Microsoft Access, fields are created in what is called a "Main Data Table," which is just a list of all your data. However, this may be different in other database programs; use your help button, wizards, or other information given you by the software creators to help you adapt the program to your own uses.

Because we wanted our database to answer specific questions about the kinds of services we were providing and the amount of time we were spending on these services, we established a series of fields where we could record this. We did this by listing the various activities we consider part of our psychological services: parent conference, teacher conference, classroom observation, student interview, assessment (which includes testing), counseling (individual), counseling (group), articulation with private therapist, CSE meeting, and MCT (Multidisciplinary Consultation Team, our version of what many districts call Child Study Teams) meetings. Each of these activities then became three fields: one that allowed us to list whether we had provided this service, one that allowed us to list the dates when these services were provided, and one that allowed us to list the total amount of time we had spent providing these services. For example, for parent conferences we established the fields "Parent Conference" (to be filled with either a yes or a no), "Parent Conference Dates" (to be filled with the dates of any parent conferences or phone calls), and "Parent Conference Time" (to be filled with the total amount of time spent on parent conferences or phone calls). These last fields provide the main exception to the rule of making all your fields text fields. Since we wanted to be able to calculate the total amount of time spent on any one activity, we created the "time" fields to take numerical data. When you are creating the field, there is a place on the dialog box that asks you what type of field it is. Just check, click, or scroll to "numerical."

The final field we created was a "notes" field. This allowed us to put more detailed information in the database, such as presenting problems, or details of interactions with parents, teachers, or children.

Next, we asked the software to create a blank "form" onto which we could enter data. When we gave this command, the computer asked us which fields we wanted included on our form. We selected all of them, since we wanted to use the form for entering all of our information. Formatting the form was tedious, but not difficult. Each field is placed on the form with a corresponding field name. To create the form we adjusted the size of the fields and field names to meet our needs, and placed them where we wanted them. We were able to insert the text "Psychological Services Provided," "Dates," and "Total Time" as the titles of this table.

We were now ready to begin entering information. There are simple buttons provided in the program for beginning a new form (for each new student) and for finding a particular record (an existing file on a student). We fill in the identifying information for each student, then enter the dates and total times for each service provided. The time is entered in quarter-hour increments, with 15 minutes entered as 0.25, since this is the best way to allow the computer to calculate total times.

The best thing about using this database is the information it allows us to gather. It is easy to sort information by any field. We keep ours sorted alphabetically by last name, but we can also easily sort by grade or teacher for information about problems that may be occurring in particular grades or with particular teachers. We can find all the records of children served on a particular day, week, or month, allowing us to have a clear picture of what was done. We can generate a list of all children we see in group counseling, or all
classroom observations we have done. When it comes time for reporting how we spent our time, we can find the total time spent on each task, and also report percentages. Many database programs will also allow you to create graphs showing these totals and percentages -- what a way to wow your boss!

The database is easy to maintain. We leave the computer on all day. As we see students or complete conferences, we enter the information. Or we spend a few minutes at the end of each day plugging in the data. But, it is definitely more efficient to enter data as you go. That way, you won't have to recreate all of the meetings or phone conversations you had over the course of the day.

The Psychologist's Toolbox

The toolbox was designed to be similar to a web page where one can access different information through linked documents. To implement a Psychologist Toolbox like the one we created, a school must have a networked computer system where the toolbox can be accessed by clicking on an icon on the desktop. At Todd we have a networked system and use Windows95. This concept will work with Windows 3.1 as well, and with MacIntosh as long as the computers are networked.

To build a toolbox, first determine which forms and information will be accessed through the toolbox. All materials must be saved as documents. We started by creating a subdirectory on Dr. Engel's system drive called "Psychology at Todd". All the documents referenced from the toolbox were saved in this folder.

Using Microsoft Word 7.0, we designed an introduction page which briefly describes the functions of the Psychologist Toolbox, and included our e-mail address. The second page of the toolbox is a menu of options from which our different forms can be accessed. The menu page is simply a table of contents on which the accessible documents are listed. We laid these out with the document names spaced fairly well apart to provide room for the linked icons. Once the menu shell is formatted to your preference, the links can be added.

The first link on our menu accesses the directions page, which explains step by step how to utilize the forms in the toolbox, and then how to e-mail them if desired. The menu page also provides viewers with links to different referral forms, as well as access to a table of contents which indexes reference materials and articles. The final link on the menu page opens up a description of the role of the School Psychologist at Todd Elementary School.

Once you have formatted your menu page, proceed with the following steps to insert a link next to its document name on the menu:

- Click the cursor at the end of the form name
- Click on "insert" on the main toolbar to open the pull down menu
- Click on "object" to open the object window
- Click on the "create from file" tab
- Choose "browse" to open your directory with the files you want to access through your toolbox
- Highlight the file name you are linking
- Hit OK
- Click in "link to file" and "display as icon" boxes
  (Optional: To change the icon picture or caption, click on "change icon" button.
  Choose a new icon and/or change the caption)
- Click on "OK"
• You can adjust the size of the icon box by clicking and holding the mouse button on the borders of the box and dragging the border to the size desired.

This process embeds the icon within your current document. To open the linked document, double-click on the icon. This will open up the form you have linked. It may be helpful to put links at the bottom of your linked forms which connect back to the menu, similar to a "back to main page" link on a web page. This allows users access back to the main menu without closing and reopening documents. The linking process must be repeated for each document you want to link to the menu in your toolbox. You can link Word documents as well as Excel (spreadsheet) documents.

The reference and articles icon in our toolbox is a link to an Excel "table of contents" spreadsheet which lists each article name and a link to the article itself. We chose to do this in Excel since it is easier to list the articles and links in column form on a spreadsheet. Our "Solution Identification Scale" was also created in Excel for ease of formatting.

After formatting and linking all your documents, the toolbox must be loaded to your network. Our computer teacher, Peter Harris, loaded our toolbox onto the Todd School network and created a shortcut that would appear on all desktops of the networked computers. Thus, teachers have access to all the toolbox information in all of their classrooms. You will probably need to enlist the help of your computer teachers or network operators to provide access to your toolbox. It is also important to load the toolbox documents as "read only" so that the forms cannot be altered by teachers using them. As "read only" documents, they can be opened and filled out on screen, but must be saved by the user under a different document name. This allows on screen access to the documents, but protects them from being changed every time they are accessed.

We suggest that users save their documents to their own secure network drives to ensure confidentiality. Once teachers fill out and save the forms, they can e-mail them to the psychologist. This is accomplished by composing an e-mail message and making the form an attachment to the e-mail. This saves the teacher time in that he or she does not need to walk around the building to deliver the forms. The psychologist receives the e-mailed documents immediately and can make an appointment with the teacher (by e-mail or in person) to begin formulating an intervention plan.

Confidentiality is always important. The very nature of e-mail isn't as secure as we probably think; thus teachers are encouraged to limit the amount of identifying information and be sure they send it to the right address. At our school each teacher has their own private user identification code; so when they log on their password is invisible on the screen. Before obtaining a password, they were required to sign a detailed ethics document which the administration keeps on file.

When we introduced this system one month ago the teachers were very excited. Both the superintendent and the principal commented that this was the first attempt at getting teachers to communicate directly to each other via the network. When the first form was e-mailed to us, we were ecstatic. However, so far most teachers are printing out blank forms and then filling them out; they enjoy not having to walk to the main office. They are accessing the reference library of parenting and educational articles and print out copies for themselves. When I visit teachers for consultation, I ask if they have tried double clicking on the light bulb icon of the Psychologist's Toolbox. If not, I have found it useful to demonstrate how to use the system.
Fostering collaborative consultation

The Psychologist's Toolbox provides teachers with ready access to all needed referral forms, as well as related articles and reference materials. The articles are useful for teachers, and can also be printed and given out to parents. The teachers can choose to fill out and send the forms electronically through e-mail, or they can simply print out the blank forms and fill them out by hand to deliver to the psychologist. Regardless of the method used, teachers have an unlimited supply of needed forms and articles. The Psychologist Toolbox enhances and streamlines the consultation process, and allows for better delivery of services to both teachers and students.

We are currently designing a web page for the Todd Elementary School which will link to a separate Psychologist's Toolbox for parents. This site will consist of Dr. Engel's monthly school newsletter articles and nationally published articles, plus other useful information for parents in the district.

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