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A COMPUTER-BASED, STUDENT-OPERATED ADVISING SYSTEM FOR EDUCATION MAJORS

The College of Education at Kent State University has recently implemented a computer-controlled advising system for use by undergraduate education students. This computer program provides information in a variety of different areas including descriptions of various education programs, deadlines and applications, student teaching, and other topics that may be helpful to these students. Preliminary evaluation shows that the system is easy to use and effectively able to answer the questions often asked by undergraduate students in the College.

INTRODUCTION

In response to the increasing attention being given to standards for the preparation of teachers, students in undergraduate education programs are presented with a variety of deadlines, certification needs, and procedures for meeting specific requirements in a number of different major and minor programs. Even though most institutions provide students with printed guidelines and reminders, keeping track of details can become a complex problem for students who must make long-range plans for their overall academic programs in addition to scheduling individual courses each term.

Many undergraduate students tend to view the university catalog and other printed material as either too complex or too generic to answer their individual questions. They choose instead to seek fairly routine information by scheduling appointments with their faculty advisor and college counselor. Heavy demands on advisors for providing responses to such general questions reduce the amount of quality advising time available to students and create a backlog of appointments, often making it necessary for students to schedule sessions several weeks in advance.

In response to such problems, many universities have begun to use computerized degree audit systems for use by advisors when conferring with students. These systems store information about the major and minor requirements of academic programs, general institutional

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requirements, special programs, allowable course substitutions, course prerequisites, and transcripts complete with up-to-date tracking information on each student (Burdick & Reda, 1982; Friedlander, 1983; Lowry & Grites, 1982; Schinoff & Kelly, 1982; Spencer, Peterson, & Kramer, 1983).

Although degree audit systems are valuable advising tools, they do not provide answers to many procedural questions raised by students. In addition, many systems must be accessed by the counselor or advisor to generate the needed information, reducing some of the time saved by the original implementation of the computer system. One solution to this perplexing problem is to allow students to access the data base themselves for basic questions that can be answered without professional assistance.

Such a student-controlled system, "Counselor," has been designed by the College of Education at Kent State University for answering some of the simple questions from undergraduate students in the College. While counselors will still be available for in-depth questions, it is hoped that this system will accomplish the following:

- decrease the time needed for students to obtain answers to their questions,
- significantly reduce the load of many counselors, and
- allow counselors to spend more time with difficult and complex student concerns.

General Description of "Counselor"

The "Counselor" advising system was developed to answer some of the basic questions of undergraduate students within the College of Education. As stated above, the program was designed and produced to be accessed by students as an easy-to-use reference source.

The overall program was designed and produced in approximately a year and a half by a team including an instructional designer and a number of program counselors. Faculty in many departments were requested to supply the information used in the computer text screens specific to academic programs.

The computer program itself was written in the PC-PILOT authoring language for use on an IBM-compatible computer system configured with one or two disk drives and a printer. No specialized hardware was used within the system, since such use could reduce the dissemination of the program among other units of the university (e.g., regional campuses).

Content of "Counselor"

The "Counselor" program was designed as a series of nested menus which lead students to gradually focus their question with each succeeding menu until presented with the final, desired answer. The information available within the program is shown in Figure 1, which summarizes all of the topics accessible to students using this system. (All figures appear at the end of this article.)

Figure 2 shows an example of one menu within "Counselor," in this case listing the available information concerning some of the deadlines and applications within the College. Choosing option #3 from this menu, for example, would provide text to the student concerning student teaching. The actual results of this choice are shown in Figure 3.

In addition to computer text, various screens in the program refer to a nearby display board showing selected forms and requirement sheets. Using this board, students can actually view examples of some of the forms that must be filed in order to document progress in their studies.

The program also makes reference to several videotapes that help describe various programs within the College. These videotapes, the display board described above, and the overall computer program make "Counselor" a true multimedia system that can help students answer their questions through a variety of different media formats.

Control Within the Program

From the beginning of the project, it was decided that "Counselor" should permit a high degree of learner control and should be as easy as possible for students to use. This ease of use is particularly important considering the possible lack of computer literacy in many students, the large amount of information stored within the system, and the lack of available staff to assist students using the program.

The use of choice menus is one of the primary learner control characteristics of the program. These menus allow students to choose the specific information they wish to receive and provide each student with an overall outline of all the information available in a certain area of interest.

Function keys were also included in the program to make it possible for users to carry out simple commands with single keystrokes (see Figures 2 and 3). As can be seen, reminders at the bottom of each screen show the user how to use the function keys to begin a new search (F1), access a help screen (F3), access the Main Menu (F5), and print the computer screen (F9). The use of these function keys allows a user great freedom and control within the total program.

Finally, an alphabetical list of topics was provided (see Figure 4) to allow students to access many of the **major** topics within the program without using the nested menu system. A topic within this list is chosen simply by moving the cursor to the space in front of the item and then pressing the RETURN key.

Preliminary Results of Student Use

Two pilot tests of the system were carried out during the spring of 1988 with twenty-one paid, undergraduate volunteers who were asked to use "Counselor" to answer a number of different questions. A paper and pencil evaluation instrument was used to determine student perceptions of the program.

Overall results revealed that the system met the expectations of the design team and functioned well for the students involved in the pilot study. Student responses to the test questions revealed that the system was able to supply the requested information to students in an understandable manner.

Results of the attitudinal questionnaire showed that the pilot test participants **enjoyed** the program, thought it was easy to use, and would recommend it for use by others. The weakest point of the program appeared to be a lack of specific detail in some sections, an expected result due to the extreme breadth of the overall information system.

Based on the overall results of the pilot tests, the design team made minor refinements in the information provided through this program. Further revisions will provide more depth in those areas where students requested more detailed information.

Full-scale implementation of the system is planned for January 1989. In addition to planned use in a media center within the College of Education on the main campus, several regional campuses of the university have expressed an interest in this program as a method of getting specific, current information to students interested in the College of Education.

CONCLUSION

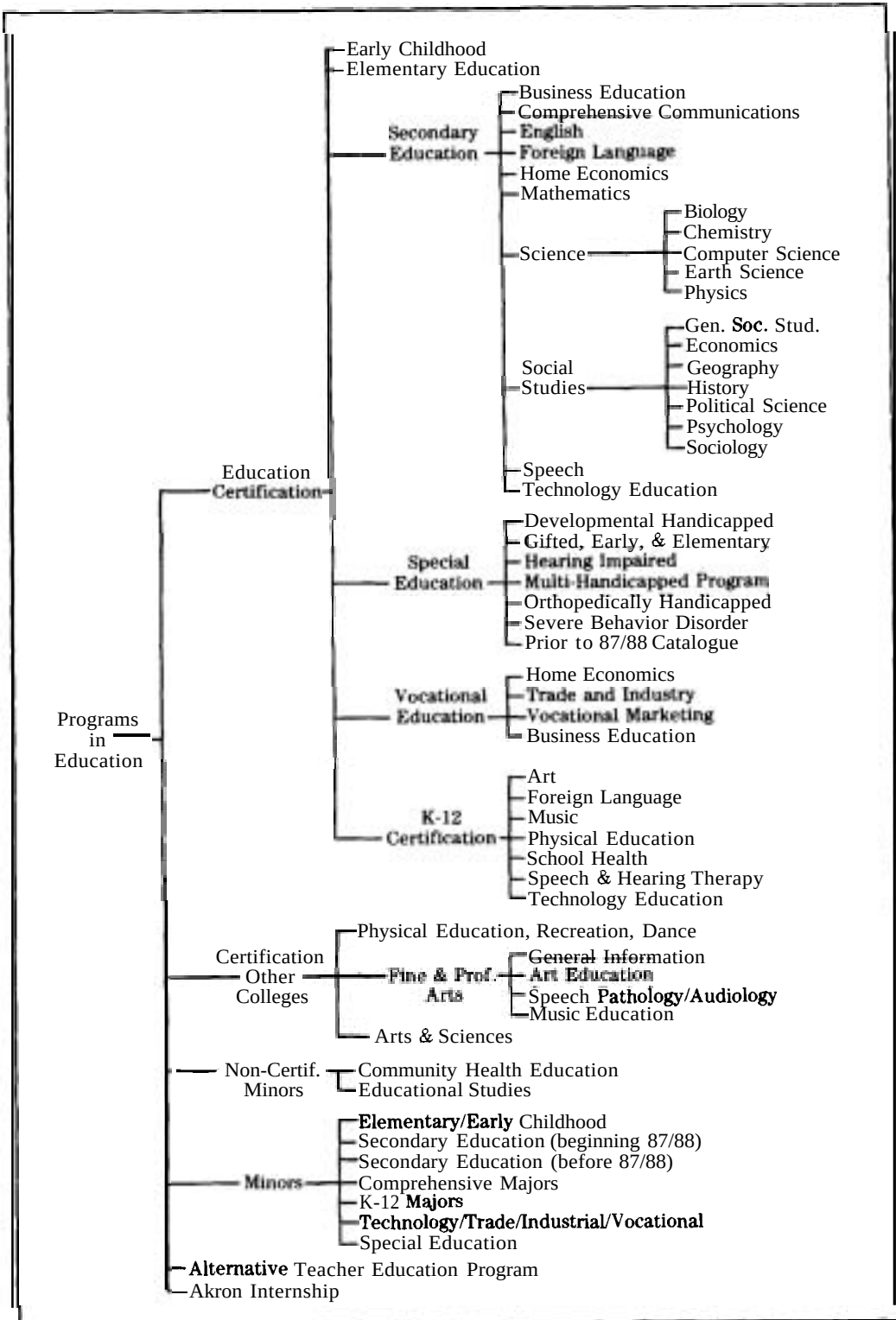
Based on preliminary student data and feedback from college faculty, "Counselor" appears to be a well-designed computer program with the ability to provide answers to student questions in a variety of content areas. In general, users liked the student-oriented approach and were able to easily obtain information from the system.

While "Counselor" is currently designed only for undergraduate education students, future versions may include information for graduate students as well. In addition, the overall design could be used for providing information to students in a number of different colleges within the university. Further investigation will determine whether the system is more helpful for certain students or in certain content areas and whether this system helps to reduce the amount of time counselors often spend answering basic information questions.

References

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Figure 1. Summary of content available within "Counselor" (includes two separate pages of information).



College Requirements	- Professional Standards - Advanced Standing - Requirement Sheets - Grade-Point Average
Advising & Counseling	- Faculty Advisor - Program Counselors - Career Planning & Placement - Guidance Bureau - University Psychological Services - Disabled Student Services
Applications & Deadlines	- General Information - Advanced Standing - Student Teaching - Graduation - Certification
Student Teaching	- When - How Long - Taking Classes - Application
University Information	- Residence Services - Registration - Financial & Fees - Parking Services - University Admissions - Tutoring - University Health Services

Transferring

List of Topics

Figure 2. Sample choice menu covering deadlines and applications for undergraduate students in the College of Education.

DEADLINES / APPLICATIONS

1. General Information about Deadlines
2. Advanced Standing
3. Student Teaching
4. Graduation
5. Certification
6. Return to Main Menu

Please choose your topic number and press the RETURN key · ->

F1=BEGIN/END F3=HELP <<<< DEADL./APP. >>>> F6=MAIN MENU F9=PRINT

Figure 3. Sample test screen showing content associated with student teaching for students in the College of Education.

Student Teaching

Applications for student teaching are available in **409** White Hall, the Office of Off-Campus Programs and Professional Field Experiences. You must apply one year prior to your student teaching semester. Applications are due by the end of the second week of the semester in which you apply. For example, student teachers for spring **1990** must apply in spring **1989**.

Press SPACE BAR for previous screen or any Function key shown below . . .

F1=BEGIN/END F3=HELP <<<< DEADL./APP. >>>> F5=MAIN MENU F9=PRINT

Figure 4. Alphabetical list of topics available within the program.

Alphabetical Listing

Choose your topic with cursor arrows (Up Down Left Right) then push RETURN.
When finished, use **F5** for MAIN MENU or use other function keys.

- -> Academic Forgiveness	Graduation
Admissions	Guidance Bureau
Advanced Standing	Learning Development Center
Advising	Main Menu
Akron Internship Program	Official Requirement Sheet
Alternative Education Program	Parking
Applications/Deadlines	Personal Problems
Career Planning/Placement Center	Pre-Professional Skills Tests
Certification	Program Counselors
Core Courses	Registration
Dormitories	Secondary Education Program
Early Childhood Education	Self-Assessment Form
Elementary Education Program	Special Education Program
Faculty Evaluations	Student Teaching
Financial Aid	Study Skills
Freshman Recalculation	Tutoring
Grade-Point Average	Vocational Education Program

F1 = BEGIN/END F3 = HELP <<< TOPICS >>> F5 = MAIN MENU F9 = PRINT