

The Student Advising Process: Problems and Opportunities

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Abstract

The main objective of this research is to study the problems of the current student advising process and to investigate the feasibility of developing an Internet-based advising system for advising undergraduate students on course selection in the College of Business. The data gathered in this research shows that students are highly unsatisfied with the current process. The results also reveal a high likelihood that students will use an Internet-based advising system, if one is available.

Keywords: Intelligent systems, decision support systems, Internet-based systems, advising process

1. INTRODUCTION

Due to the rapid growth of a medium-size university in Texas over the past several years, there have been complaints regarding the student advising process. The ratio of students per advisor is high and increasing as the student population increases. This large ratio of students per advisor has resulted in inadequate and inappropriate advice to students. Incorrect advice can cause dissatisfaction and frustration as students might take unnecessary courses that could eventually lead to delayed graduation.

The current student advising process for course selection is comprised of various faculty members serving in this capacity. This process is time consuming for both the faculty advisors and students with many of the

interactions basically routine and repetitive. In order to examine the root causes of these problems, a survey was developed to gather more information regarding the problems.

Taking advantage of advances in technology, the feasibility of developing an Internet-based Advising System as an alternative to the current advising process merits investigation. Such a system might help reduce the current constraints. Instead of consulting with a faculty advisor, students will be able to obtain advice on courses needed via the advising system. With Internet capability, students will be able to access the system 24 hours per day and 7 days a week. Students should be more satisfied with the quality and convenience of results. Therefore, another survey was conducted to

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examine the likelihood that students will use such system, if one is available.

2. BACKGROUND

In an effort to increase the effectiveness of decision making, many different techniques have been developed, including the use of an intelligent system. Prior studies have shown that an intelligent system works best when problems are semi-structured (Dorr et al 1988; Messier and Hansen 1987; Messier 1995; O'Leary and Watkins 1989).

The advising process is a complex decision process that requires numerous qualitative judgments. Due to the large number of potential advices, it is not trivial and cannot be solved with common sense. This mix of objective and subjective inputs, along with its use of heuristic rules for determining the direct route of the courses required to take towards the graduation, makes advising decision support a prime candidate for this research study.

Previous research findings have shown that an intelligent system could be used to increase the effectiveness in decision making (Changchit et al 2001 (a), 2001 (b); Gal and Steinbart 1992; Graham et al 1991; Odem and Dorr 1995). The results reported that subjects who make decisions with the aid of the system were better and quicker at reaching decisions than subjects who make decisions without the support of the system (Eining and Dorr 1991; Fedorowicz et al 1992; Meservy et al 1986; Murphy 1990). However, the literature contains no example of a system developed to facilitate the advising process via an Internet-based technology.

Unlike previously developed systems, the type of the system investigated for its feasibility in this study will provide a cutting-edge and interactive advising experience. It will be developed as an Internet-based application with the advantage that it is appealing to students and constitutes the way they prefer to interact with. The system will also give an open-enrollment atmosphere and the online feature allows subjects to consult with the system at their convenience--during the workday, at night, or on weekends.

3. METHODOLOGY

Two surveys were developed to gather information regarding the problems with current advising processes as well as the likelihood that students would use the Internet-based advising system. In order to encourage the responses from subjects, one of the authors hand distributed the surveys to a random selection of students close to the business classrooms and business computing lab. These areas were selected since we were trying to get the perceptions of the advising system by business students. It was decided that by focusing on one of the

four colleges in the University, we could get a clearer picture of the adequacy of the current system. One hundred-ten (110) subjects responded to the questions. Students were asked a number of demographic questions and others relating to previous advising experiences at the University. Then a series of items were included for respondents to rate their agreement/disagreement on a seven-point Likert scale, with 1 = strongly disagree and 7 = strongly agree.

Interviews were also conducted with 28 students to collect information about the desired features students would like to have in the system. The responses for both the survey and interview are summarized in the next section.

4. RESULTS AND DISCUSSION

The survey respondent demographics show (see Table 1) that the students are primarily in the College of Business (58%) and in their Junior (32%) or Senior (37%) year. This is a desirable sample since we were primarily interested in Business students who had some previous experiences with the current advising process.

What college are you in?					
Arts & Humanities	Business	Education	Science & Technology		
6	64	14	26		
5%	58%	13%	24%		
What year are you?					
Freshman	Sophomore	Junior	Senior	Graduate	
19	10	35	41	5	
17%	9%	32%	37%	5%	
On, average, how many times do/did you see your faculty advisor per semester					
0	1	2	3	> 4	
13	60	26	8	3	
12%	54%	24%	7%	3%	
How long does it take to make an appointment with the advisor? (one response missing)					
1 day	2 days	3 days	4-6 days	1-2 weeks	> 2 weeks
17	15	6	25	25	7
18%	16%	7%	26%	26%	7%
It usually takes me ___ minutes to complete the advising process					
Never met	<10	11-20	21-30	> 30	
9	54	32	9	6	
8%	49%	39%	8%	5%	

Have you ever had a walk-in appointment at your school office?				
Yes		No		
38		72		
35%		65%		
If yes, then on average, how many minutes did you have to wait for an appointment?				
0-10	11-20	21-30	31-40	> 40
8	10	11	9	-0-
21%	26%	29%	24%	0%
Did you think this was a reasonable time to wait?				
Yes		No		
13		25		
34%		66%		

Table 1: Survey Respondent Demographics

It can also be seen from Table 1 that the current system is neither effective nor responsive. Fifty-nine percent of the respondents indicated that it took four days or longer to make an appointment and 49 percent of the time the advising process was completed in less than 10 minutes. For those having walk-in appointments (35% of total), more than one-half of the time the wait was longer than 20 minutes and 66 percent felt that this was not a reasonable time to wait.

The results of the effectiveness of the current system are shown in Table 2. Based on the relatively low mean scores (on a seven-point Likert scale, with 1 = strongly disagree and 7 = strongly agree) it is apparent that the current system is not particularly useful. It can also be seen that students perceived that the advising process is not adequate. It is ineffective and not available nor responsive.

Several of the items were also included in a University-wide survey done in March, 1998. This survey was done using the Noel-Levitz Student Satisfaction Inventory. A total of 629 students on campus took the survey. This survey has national means based on a comparison group of 104,532 students.

The results of the four questions that correspond to those in the 1998 survey are shown in Table 3. It is fairly clear that the current survey results are all below the March, 1998 results and the national mean scores. This could be due to several factors. First, the current survey has a higher percentage of respondents that have experience with the current advising system and process (the 1998 survey population had 32% freshman). Secondly, with the continued growth of the University, it could be that the advising system has further deteriorated.

Item (Responses based on seven-point Likert scale with 1 = strongly disagree and 7 = strongly agree)	Mean
The current system is useful in the following areas:	
• Selecting classes	4.29
• Fulfilling requirements toward graduation	4.31
• Helping choose majors or concentrations	3.62
• Helping deal with academic problems	3.46
• Suggesting career options	3.11
My advisor is knowledgeable about requirements in my major.	4.56
My advisor provides effective advice when discussing my semester schedule plans.	4.21
My advisor is available when I need to get his/her advice.	3.47
My advisor is concerned about my success as an individual.	3.77
My advisor helps me set goals to work toward.	3.41
Major requirements are clear and reasonable.	3.89
I consult with my advisor outside the advising/registration period.	3.41
Overall, the advising system at TAMUCC is effective.	3.17
I would use an alternate means of course selection advising if one were available.	4.79
It is beneficial to have the advising system on-line.	5.76
If the Internet-based advising system is available, I will use it.	5.66

Table 2. Survey Results

Item (Responses based on seven-point Likert scale with 1 = strongly disagree and 7 = strongly agree)	Current Survey 5/02	University Survey 3/98	National Mean (1998)
My advisor is knowledgeable about requirements in my major.	4.56	5.14	5.30
My advisor is concerned about my success as an individual.	3.77	4.82	4.89
My advisor helps me set goals to work toward.	3.41	4.55	4.52
Major requirements are clear and reasonable.	3.89	5.14	5.09

Table 3. Comparison to Prior Survey

The responses from the focused interviews with 28 subjects reveal that the following features are desired as part of an Internet-based advising system:

Features on the front-end:

- 1) Based on the courses already taken by the student, recommend all remaining courses they need to take for graduation.
- 2) Provide statistics on the schedules of the courses needed. For example, “there is 80% chance that the course will be offered during the next semester.”
- 3) Check if students need any prerequisite courses before getting into the courses needed.
- 4) Forum for online chatting with advisors.
- 5) Updated changes on degree plan.
- 6) Access to advisors’ e-mail address.
- 7) Help on choosing majors.
- 8) Career choices for specific majors.

Features on the back-end:

- 1) How many students require specific courses for graduation. Then, the college can use such information to plan courses to be offered during the following semesters.
- 2) Provide feedback on how many students utilize the system

5. CONCLUSION AND FUTURE RESEARCH

The results of this research confirm the problems with the current advising processes. Most of the students seem to be dissatisfied with the current system. Ninety-eight percent of them agree that it is beneficial to have the advising system on-line. Eighty-eight percent of them also responded that they would use the Internet-based advising system if one would be available. The second phase of this research intends to develop such a system. If the system proves to be successful, the benefits of this system may be divided into three different areas as follows:

- Benefits to Students: Convenience, efficiency, and consistency in obtaining advice on course selection. Students would be able to access the system in a timely fashion and request the classes they would

like to take. The advising system would validate the completion of prerequisites and inform students. The system would provide consistency of advice provided.

- Benefits to Faculty: The system would allow time for less routine activities, for example, advising on “exception” cases, major, career counseling, graduate school preparation, course development, research, or other more purely academic issues.
- Benefits to the University: Students should be more satisfied with the quality and convenience of results. The problem of increasing advising resources as the student population grows would be curtailed.

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