

## **E-COACH: Successful Career Advising Tool for High School Juniors**

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### **Abstract**

E-COACH (Electronic College Optimum Advisor and Career Helper) is an effective tool for assisting in career guidance of juniors in high school. Typical juniors at Frenship High School are students who are unsure of what field of work they want to enter and are unsure of their post-secondary educational needs. Individually advising 200+ students on the world of work can be daunting for one counselor. However, in groups of 15-18 students in a computer lab situation, students were introduced to E-COACH. They received an explanation of the purpose of the inventory, and then they were asked to complete the inventory. Results were discussed with the students both as a group and individually as requested by the student. An explanation of the categories and coordinates were given to the juniors. Students printed copies of their results and placed them in career folders for further reference, career discussions with their counselor, and for conferencing with teachers and the students' parents. E-COACH is an efficient process to assess student interest toward careers and majors in college. E-COACH was both an effective tool for career advisement and a helpful tool for assessing learning strengths and weakness, including detection of risk of some learning disabilities. Out of the 200+ students who used E-COACH, two students were detected as having possible learning disabilities that had not been detected previously. Included in this report are the results of student reactions to their career maps, post-secondary education and career possibilities, and their learning styles. Based on the success with E-COACH this year, Frenship plans to continue to use it again next year.

## Introduction

Frenship High School is a suburban high school of approximately 1270 students. Almost 80 percent of the students at Frenship High pursue some form of post-secondary education. Some students will attend the local community college; others will attend one of the local parochial colleges or Texas Tech University. Still others will pursue their post-secondary education at one of the other universities in Texas. Only a few of the students will venture outside the state for their education. Texas Tech is the university most attended by the students from Frenship. The reasons for attending Texas Tech University are varied. Some students' parents attended TTU, some are Red Raider fans, some believe that they can obtain the best education at TTU, and some attend because they have no set goals in mind but think that they have to go to college and therefore attend a college close to home.

Most of the Junior Class of 270 students come from homes where college in some form is expected. The process of career decision-making began for these students in their ninth grade year. During that year they were expected to declare a four-year plan of courses that would lead them to an eventual career or a post-secondary education major. However, missing from that process was an evaluation of their interests and skills. As sophomores the students continued taking courses in high school that fit their plan; however, by this time their interests were changing or in some cases deepening. In the fall of their junior year, these students were beginning to look seriously at college and careers. In November they were asked to use the E-COACH website.

One of the many tools available from E-COACH is a tool designed for assisting in career guidance. The career-mapping tool aids students by offering career and learning style assessments. The advising tool was designed by the College of Engineering at Texas Tech University to provide assistance in career decision-making for students in the College. However, this guidance inventory can be effectively used by students in other colleges and by high school and junior high school students.

## Objective

This paper does not reflect research as is common in most journals but gives an account of and evaluates the usefulness of E-COACH for high school students and high school counselors. This paper has three objectives:

1. To report the results of the use of E-COACH with juniors in a high school setting.
2. To report student and parent responses to the inventory.
3. To report the value of E-COACH as a career guidance tool.

## Population

Of the 270 juniors at Frenship High School, 181 students participated in the career counseling sessions. One hundred and seventy-five students provided results from the interest inventory. The students were diversified in race, gender and background. African American made up the smallest ethnic group, Hispanic American was the next largest

group, and Euro-American was the largest of the ethnic groups. This population distribution reflects the distribution of the high school, the community, and the region. The students were asked to report to a computer lab from TAG classes which were classes designed for tutoring, advisement, and guidance. Over a period of four days, students in groups ranging from 12-20 students reported to a specified computer lab for participation in the career guidance sessions. Each student participated in only one session of 40 minutes.

### **Counseling Process**

Students were asked to report to the computer lab on the specified day to engage in career decision making. During the 40-minute session students were introduced to a variety of means of pursuing information on careers, colleges, scholarships, and financial aid for post-secondary education. The first 20 minutes was devoted to online opportunities for the students. During the last 20 minutes of class, the students were given instruction on E-COACH and given sufficient time to answer the questions in the tool. Students were instructed to answer the questions with their first impressions and not to study each question. They were informed that the counselor could discuss their results on an individual basis as each of them finished if they wanted the assistance. The students finished at varying times, most finished in 10 – 15 minutes, printed off their results so that they could place the results in a career folder for further reference and for guidance from teachers, parents, and counselor.

The counselor observed students as they finished the assessment and volunteered individual assistance. Many of the students indicated that they quickly understood the career map and learning style graphs. Those that did not understand the map and graph without assistance were able to grasp the interpretation with minimal assistance. None of the students found the information too difficult to understand and interpret. All students began searching the career fields and their links immediately after they understood their results.

### **Career and Learning Style Assessment**

E-COACH assessment is divided into a series of three tables. The first two tables are used to identify the types of careers that match their personalities. The first table asks the students' preferences in nine activities as they relate to things and people. The second table asks nine questions that refer to data and ideas. Students rate these activities as most preferred to least preferred. The third table contains twelve statements that the students rate from most preferred to least preferred, which deal with learning styles. The results from the career map and the learning styles assessment allow students to compare their interest and learning preferences to those of professionals in various fields of work.

### Interpretation Ease of E-COACH

E-COACH was easy enough for the students to use that most of them were able to interpret their own scores. Several asked for the counselor to come to discuss their scores with them, but none of the students stated that they could not understand what their scores meant. E-COACH provided the students with a career map of their interests. The career map was designed using four distinct coordinates: “Things and People” and “Data and Ideas.” These coordinates correspond to the Holland Codes: Realistic, Investigative, Artistic, Enterprising, and Conventional. Students were familiar with the Holland Codes because of previous discussions with the counselor about the world of work; therefore, they were able to understand and relate the coordinates easily. Two other coordinates suggest the personalities of the students. “Rules” correlates with the Conventional person who works well with things and data and is one who can organize, manage and supervise well. “Rebels” correlates with the Artistic person who works well with ideas and people and is one who is a free thinker and able to communicate ideas using art, literature, music, or media.

Below the Career Map is a list of 10 to 15 careers that align with their preferences. The first third of the list is in green so that the students tested could easily tell that these careers were their preferences. Each student was provided a list of secondary interest careers (in yellow) that suggest possibilities but are less preferred. A third group of careers that are not recommended for the student (in red) is also provided.

In the graph below, Student 1 has indicated a preference for careers that requires her interest in working with data. This student is ranked in the top ten percent of her class. She is organized, does required school work, is a leader, and makes sure that she has performed well in her classes. In discussion, she indicated that the E-COACH Career Map solidified her interests. She knew that she wants to work with math in a career, but she wasn’t sure how until she worked with E-COACH.

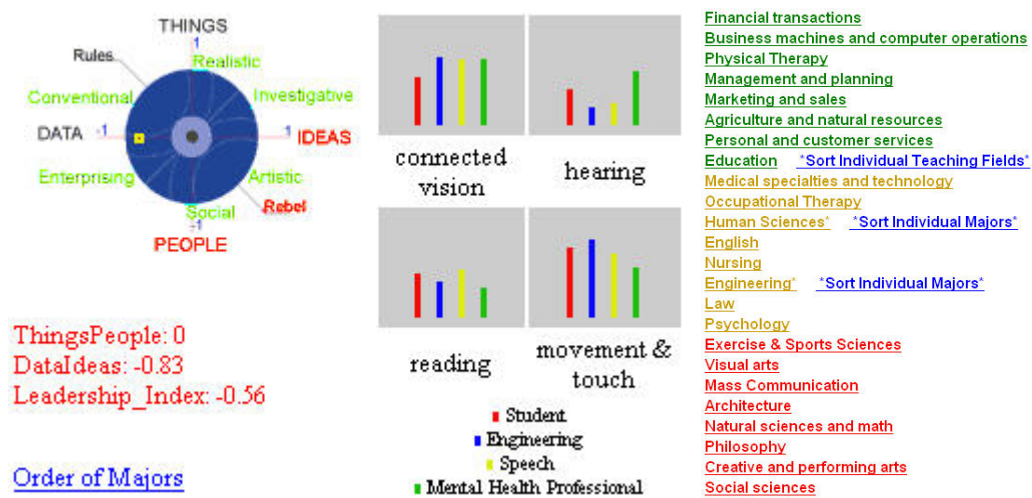


Figure 1. Student 1 career map and order of majors.

The next Career Map is of a student who also excels in academics, ranking in the top ten percent of her class as well. Like the first student, this student also enjoys mathematics, but prefers calculus to math as in accounting. She is presently taking Scientific Engineering, Research and Design mainly because she enjoys physics she stated. Her goal had been the medical field; however, after she took E-COACH, she stated that she realizes that she really does enjoy engineering related projects and work. She is now considering a career in engineering. Her Career Map indicates her interests in technology related projects such as that required in her engineering class.

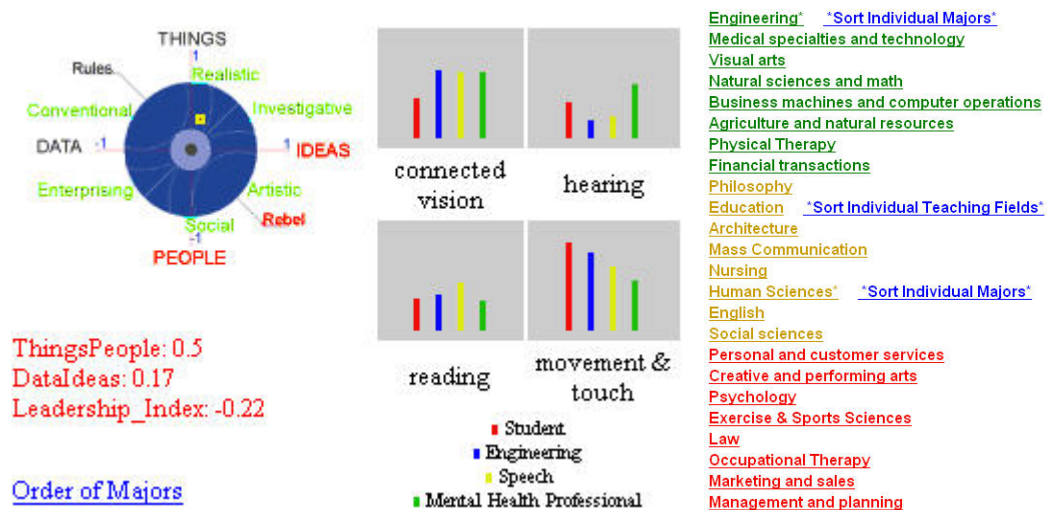


Figure 2. Career map and order of majors for student 2.

The two students, though similar in abilities and intelligence, show the precision of E-COACH. Both students acknowledge an interest in math. However, while the first student indicated an interest in working with data in a conventional manner, the second student's career map indicates a completely different picture. This student is not conventional and does not prefer to work with data. Instead this student indicates a strong preference for working with things. She is a realistic student who could find engineering, as well as medicine, a possible career.

The next Career Map is of a student who had decided to go into the field of engineering prior to E-COACH. His decision was based upon relatives who recommended engineering because they had heard the salaries were excellent. He had given no thought to his interests. This student's Career Map indicates a strong interest in working with people. Although his interests lie close to "Rebel," this student is not rebellious in nature, but instead enjoys changing the rules. He stated that law has always intrigued him, but he had not thought of that as a career. He is now considering entering South Plains College's Criminal Justice program. This student acknowledged that he realized that he was not interested in engineering, but relatives were pushing him in that direction. With his Career Map, he was able to show his family that he needs to pursue a different field. Unlike the previous two students, this student has not taken higher levels of math. He completed the introduction to physics class offered at the high school but had no desire to take higher levels of physics or the engineering classes offered at the high school. In this

situation the student was spared the disappointment that comes from majoring in a curriculum in which he has little or no interest.

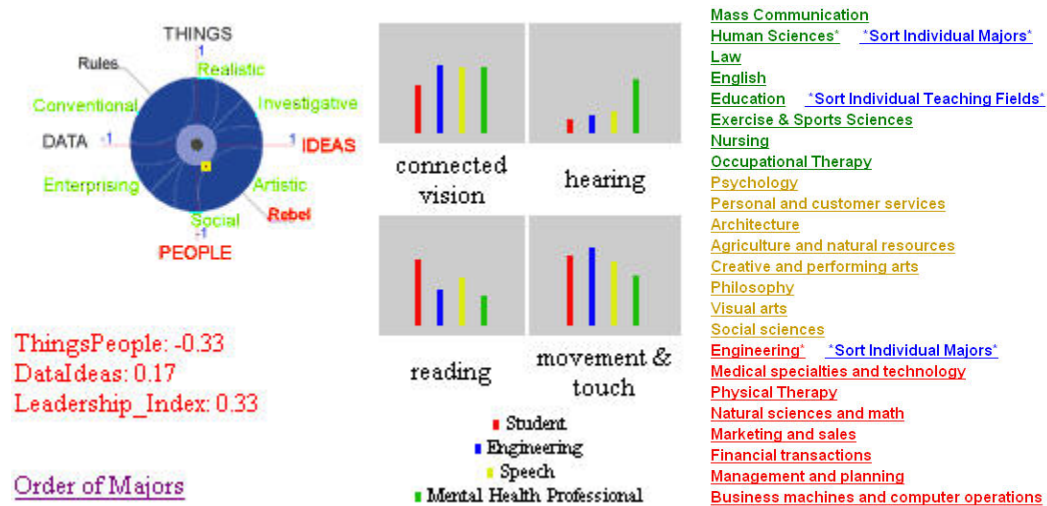


Figure 3. Student 3 career map and order of majors.

E-COACH has served as a tool for helping these juniors in high school move in a direction that is more interesting to them. In discussions, they considered their grades in school, the courses they like and why, and now they consider their interests. Students often following the recommendation of adults, look at what the popular careers are, or quite often have no idea of how to put their interests together as a career possibility. E-COACH has helped with this decision making process.

These same students took the ASVAB (Armed Services Vocational Aptitude Battery) in their junior year. The military gives this test free to all public schools. The purpose of the ASVAB is to determine the skills that a student has and for what careers that student is best suited. When the ASVAB results come back to the school, the students are given an interest inventory called the Interest-Finder. This inventory uses the Holland Codes much like the E-COACH to help students identify their work-related interests. Both aptitude and Interest-Finder are shared with the students. In contrast to E-COACH, the students required approximately one hour of explanation about the results of the ASVAB aptitude and interest inventory. Students who arrived late to school on the day of the testing, regardless of the reason, were unable to take the ASVAB or the interest inventory. Interest-Finder is given one time to juniors only and requires interpretation. Unlike Interest-Finder, E-COACH has been taken by students in their home as well as in group sessions, which indicates E-COACH's ease of understanding and interpretation. Of the three students' results displayed above, the results of their interest inventory are similar to the interest inventory given by the military.

E-COACH has been placed on the Frenship High School online library so that students can take this interest inventory at any time. It certainly has helped high schools students and will continue to be used as part of the career-counseling process at Frenship.

From the College of Engineering perspective, the use of E-COACH at the high school level is a win-win situation. It helps the high school and it advertises the College of Engineering and Texas Tech University to prospective students. It certainly has the potential to recruit more students to engineering and computer science and even to other non-engineering majors. Indirectly, by helping students with a superficial interest in engineering but with no interest in math and physics to discover other majors away from engineering, it helps with future retention in the college. Texas Tech University has developed strategies to encourage students to complete their college degree within four years. Obviously, by helping students to discover their major for college early and to even take high school courses to support the major helps students to graduate on time. Finally, it has been a good experience for cooperation across majors: two authors associated with the College of Education and one author associated with the College of Engineering. Together, we are improving the education process for all majors.

### **Summary and Conclusions**

This paper reports on the use of E-COACH as a career analysis and development tool for high school students. The E-COACH tool was developed by the College of Engineering at Texas Tech University. It was initially used in the College of Engineering to help college students. It is now being used in both junior high and high schools in select locations.

Use of E-COACH at Frenship High School is judged to have been a success with the 175 students who used the career mapping and learning styles assessment process. Students generally found the tool easy to use and found the results useful. Results generally were similar to results obtained by the Armed Services Vocational Aptitude Battery providing evidence that results are as accurate as other process even though the process is simpler and quicker to use than most other tools.

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Dr. Smith earned the Doctor of Education in Curriculum and Instruction from Texas Tech University. She served as adjunct instructor in Secondary Education at TTU, with a focus on post-baccalaureate students in teacher training. She serves as counselor for the Junior Class at Frenship High School in Wolfforth, Texas.

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