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# Career Exploration for High School Students

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**Abstract**

Our proposed system addresses the needs of high school students exploring career paths. The research instruments that we used on our target audience consisted of a questionnaire and interviews. Our team also observed high school students in their natural environment (high schools).

Using the iterative design method, our group researched high school students, designed a mockup, and had our prototype evaluated. The preliminary results of our research showed that most high school students have absolutely no idea what career path they want to choose. These interviewees told us that personal help was limited to guidance counselors and parents. When it came to external help from the Internet, most websites were exclusive and held boring blocks of text and information. The conclusion can be drawn that students wish to have a more personal and user-friendly design when it comes to help from online.

Our design completely centers on the user and the final prototype is interactive, fun and engaging. Its inclusiveness allows the user to be in control and plan for his or her future completely.

### **Author Keywords**

Career paths; High school students; UX/UI design;  
User-Centered Design;

### **ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

### **Introduction**

Every high school has to make a decision on what he or she wants to do in the future. Although going to a post-secondary school is optional, students still have to find a career they want to invest themselves in. Our team decided that focusing on high school students would be the core group of our target audience since high school students start off with a clean slate. This means that high school students can make as many errors as possible without a net loss. For example, switching programs would not be a “waste” of money or credits as it would be if they were in a post-secondary school environment.

As stated, the purpose of this project is to help high school students find a career path. This paper presents an overview of the process of creating our final system since its inception. Each step of our development is documented and explained in full detail.

Note: The authors of this paper would like to address that our proposed solution will not provide the most perfect and ideal career path. Not only is there no such thing as perfect, but also, this system cannot account for a user’s financial and socioeconomic background. Furthermore, it is ultimately up to the user to decide what he/she wants to do with his/her life.

### **Problem space description and high-level plan**

Finding the right career path is a fundamental aspect of living and succeeding. A reason why our team decided on this problem space is because we felt that this is a constant problem many high school students face. In fact, some of our team members still joke about not having found the right career path today. Overall, our team related to this problem space. No one wants to be unhappy, and finding a solution has the capacity to let people live a more fulfilled and happier life.

Our high-level plan at the time was to conduct interviews, questionnaires and observations to find the main problems that lay within the problem space.

### **Detailed user research plan and instruments**

After extensively discussing our problem space, our group had to come up with a detailed research plan that included our research instruments. The research instruments that we finally proposed consisted of interviews, a questionnaire/survey, and observations.

Interviews are in-depth and detailed. Every student has his or her own reasons for why choosing a career path is difficult. We thought it would be a good idea to hear everyone’s reasons to account for different users.

Interviews, of course, are very time-consuming. Because of this, we incorporated a survey/questionnaire into our research plan to compensate for this issue. These surveys would allow us to easily compare across a wide range of users. Our team is diverse, and some members of our group grew up in different parts of the world. We thought it would also be interesting to send these surveys to those

across the world. Therefore, we would be able to see some of the universal problems high school students have when they choose a career path.

Another research instrument we planned on using was an observation. Our team thought it would be an excellent idea to observe high school students in their own high schools! It would be important to note the different kinds of artifacts contained in a guidance counselor office and different classrooms. Our goal with the observation method was to see how many students would interact with these artifacts.

### **User research results, systems requirements, and problem definition**

Our initial research results showed us that most high school students have either no idea career path they wanted to pursue or completely know what career path they wanted to pursue.

The majority of high school students did not know what career path they wanted to pursue. The reason why these students thought picking a career path was difficult was because they did not have a specific interest in mind. They wish that they could have been more exposed to different career paths. Although almost all students said that they preferred passion in a job over money and income (this matched with our initial background research. Studies show that the three highest ranked factors in choosing a college major is "match with interest," "job characteristics," and "major attributes" [1]), these students voiced that it was hard to find a balance in both.

As for help in making a decision, most high school students thought that physical help was limited to

guidance counselors and parents. Guidance counselors were not usually helpful, whereas most high school students were already influenced in what parents already had to say. However, when it came to help online, most high school students thought that career-searching databases were not useful. Not only was the information presented in a dull and boring way, but most sites were exclusive. Unless those students had access to their high school's login information, they were locked out of the web application.

Therefore, there are *two* main problems for students when choosing a career path:

1. Exposure: Most high school students do not know what career path they want to choose because they have not found what they *love* and are *interested* in. Our research also shows that some students pursue a career path that they *think* they will be interested in. But because they have not been completely exposed to the career path, they are not sure if they will definitely love it.
2. Balance between interest and income: This is self-explanatory. Some interviewees think that pursuing a career based on interest is not enough to live successfully while others think that pursuing a career based on income is not enough to live happily.

Here are the *four* main problems our group summed up when it came to guidance/help in choosing a career path:

1. Parents are not too helpful because they either completely support their child's decision, or completely disagree with the child's decision

2. Guidance counselors were not significantly helpful.
3. Some high schools do not have a course in finding a career path. But even with a "career course", some students still found them unhelpful as well.
4. Website applications that "help" students find a career path were useless because:
  - Exclusivity: Students cannot browse the website without registration. Students get discouraged for having to register, and usually end up leaving the site. Also, a majority of these websites require a school's login and password information to access the information given. This also excludes users who want to use the web application but are not in high school.
  - Boring and impersonal: Students get discouraged with blocks of text and find it a chore to go through something uninteresting. When students find something a chore, they procrastinate and then they do not complete their initial goal.

#### *Users Needs and Design Requirements*

From this acquired information, we constructed a user's needs list:

- Accessibility
- Engaging and interactive
- Personal connection to recommendations

Our design would be as follows:

- Clearly organized and structured
- Puts user in control

- Plans for the future
- Sorting and filtering for quick access to career choices
- Easy to use and flexibility

#### **Evaluation of alternative prototypes**

Our proposed system is a web application that features a database where one could access different careers. It also incorporates the feature of talking to a professional in a specific field and finding a university that matches best with a certain career path. Most importantly, instead of blinding searching for a career, it is also possible to take a personality test. Since almost all students want a career they love, it is important to help students get to know what they are passionate about.

After each student exposes himself or herself to a career path, they are able to save the save that data into their profile if they wish.

Note: it is never required for the user to register. Registering would only benefit the user, but if the user wants, he or she may be able to look at different careers and take a personality test.

#### *Results of Usability Evaluation*

During the evaluation period, due to the tight time constraint, our group used a combination of observations and surveys. We used the survey to quantify what the test subjects thought about our web application. Then afterward, we watched them use the web application using the observation method. We wanted to make sure the system was intuitive and clear.

#### *Usability Testing*

## Individual Prototypes



**Figure 1:** Here are our screenshots of the individual prototypes. We performed cognitive walkthroughs to derive a combined prototype. These prototypes were designed by the order of Gilberto, Wei, Tyler, Kelley and Charga.

Through our testing phase, we found out that our site was a bit complicated to navigate. For example, there was no home page button that could lead the student back to main page. Aside from that, most reviewers said everything else was easy to understand. They also liked the aesthetics of the website.

When it came down to the specific features our system holds, our reviewers thought it was a good idea that we had options of either contacting a professional, "exploring yourself" to have an idea of what the user could want to do, and exploring different career fields.

### Usability Inspections

Given the expert feedback, we realized that there were four things that should be easily fixed:

1. A better color scheme for the different career listings. Apparently, users are extremely biased on their favorite/least favorite color. Users won't click on certain job depending on what color they are. Our final prototype only has the different colors in the broad categories of different careers. We changed each "job" listing to a gray table. Each row is clickable.
2. A more intuitive home page. We added text around the "get started" button to make the home page more intuitive.
3. A home button that brings the user back to the home page. Clicking the "back" button is more annoying than clicking HOME in a navigation bar.

Since given these constructive criticisms, we are able to produce the final prototype we have today.

## Accessibility

Our entire solution is designed to be accessible. We followed the guidelines outlined on the first day of class: "...the design of products and environments is useable by all people to the greatest extent possible, without the need for adaptation." We believe that our design is completely within this bound. For starters, our entire solution is made to be accessible and available. Many students have complained that some web applications require registration and login. It is a hassle to ask the high school school for a username and password to some website. Therefore, our solution does not need the user to adapt. Users can look for information without the need of registering.

Although our target audience is high school students, it does not mean only high school students will use this web application. Essentially, anyone can use our proposed system. If a student has graduated high school and decides that working for McDonalds is not what he wants to do for the rest of his life, he is able to use Career EXP without feeling like he doesn't belong because he is not a high school student. It is also possible for parents to view the web application and help their children. This works with guidance officers as well.

Our web application has the capacity to cater to anyone.

## Conclusion

Our team believes that our proposed system will greatly benefit high school students. We tackled the three major needs users currently need. Again, those three needs are accessibility, a personal and emotional attachment towards the results given, and an

interactive and engaging application. Our team strongly encourages different high school students to give our website application a try. We are open to feedback since it will only help us improve the site for our users. We hope the overall effort and passion we put into this project will be a success for the future of high school students.

### **Acknowledgements**

We thank all the volunteers who participated in our study as interviewees. We also thank everyone who gave us feedback (Samantha and Velian) about our

mockup that turned into the newly improved system we have today.

### **References**

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