

Programming language and a personal identity english language essay

[Linguistics](#), [English](#)



Our daily life is surrounded by all kinds of technologies and electrical appliances. Every machine has its unique integrated circuit and usage, which is basically created by programming languages. In the past few years, more and more researches have been made to explore the human-machine interface. The ways we communicate, study or work are all different from others. Basically, everyone is a separate image of the condition of the whole human beings. For me, I also have my own concepts and living methods under an unique personality. But typically, as a student of computer science, my identity is greatly influenced by my major. Most of the time, how I think and behave is inherited from the method how I program and coding.

Programming Language Most programming languages are object-oriented. That is, when we plan to achieve certain purposes, we need to tell the computer how to do it rather than what to do by using programming languages because the computer is not smart enough to figure out the way of handling various problems by its own. For example, if we want to calculate the $n!$, then we need to create a for-loop and let it circle n times instead of typing $n!$ alone. We need to oblige ourselves to thinking like the way machines prefer, which is the reason why lots of students always failed in this kind of course. It is not because they are stupid, but unsuitable. They can't assume themselves as a machine. In other words, they have relatively independent personalities to deal with matters. Professor Woszczynski made a research between the different groups of students who are taking computer science courses. He found that " those students who are fully motivated and capable of struggling with the method of programming principles are more easily to success in the computer science courses" (9).

For me, I don't think I have such suitable innate talent of programming. I was born as a normal person. So just like many other students, I failed a lot at the beginning of coding. I remembered when I enrolled in programming class at first; I cannot totally understand those strange, abstract language structures or thinking methods. They are totally different from any other courses. I even doubted if I was the right person to study programming language for a moment and whether I needed to drop the class or not. I was afraid that I do not have such good talent, suitable personality and intelligence quotient to learn it well. But on the other hand, I did not want to be a loser. I viewed it as a challenge and choke point of my life. Then I obliged myself to learn and think the way machine does. Finally, I passed the course with a B+, which might not be a perfect grade for others but really precious for me. It is important and meaningful because the process of learning makes my willing stronger and more confident. I feel my mind grow up in the process of coding. On the other hand, just like we need to speak differently in different situation, different kinds of programming languages also have different syntax, structure rules and usages. A good engineer should know as many programming languages as possible and be able to switch them into various circumstances naturally as a linguist who knows multinational languages. Similarly, just like the language has grammar and vocabulary, programming also requires a lot, which includes " standard programming constructs, problem-solving strategies, the concept of an algorithm, and fundamental data structures" (Woszczyński 1). They are complicated and hard to understand. According to the research made by Guthrie, he found that " the overall probability of passing CSI the first time was 40% across all majors,

with an initial failure rate of 19.5%, and a withdrawal rate of 40.5%" (2). I remember when I was very young, I really did not know so much about the programming structure. What I know is only a little brief ideas and thoughts of computer. However, at that time, I admired those hackers and programmers only because they could login the computers so easily by ignoring the firewall. They create viruses to break the system; they type codes, create applications and make the web pages. They are like magicians, which is the initial childish reason I decide to take computer science major at first. But now, after I began to learn it by myself, I realized that passion and enthusiasm is meaningless. What we needs is a lot of diligence and hard-working if you want to be a hacker. Nothing is easy to approach and realize. Personality However, just like Woszczyński said " Personality offers great potential on the success rate of programming" (5). Different person has different personality and identity. We all have some aspects that we are interested in and not all the person is suitable for programming. Always the stricter people prefer rational majors and creative person prefer art and science activities. According to Shneiderman, the professor of the department of information systems management in University of Maryland, " There are two personality dimensions, assertiveness and locus of control, influence a programmer's choice of batch or interactive processing for program development" (2). Every programmer has their own kinds of ideas and programming style, which is be defined as personal algorithm. When programmers start to think about a certain function, they are trying to choose the most efficient way and methods to realize the purpose ideally. Programming is a boring job because people will sometimes cost lots of time

compiling but get nothing in the end. So it requires the people who has locus of control and patience. It is fairly normal to see a person costing one or two days to achieve a single process. In my UNIX operating system class, one of my tasks is to write an interface between human and computer. I need to create two processes: server process and client process. The server side is responsible for sending back the information the client requests. They are all running in the background of the system terminal, which are shown in the command lines. It is a basic process of our system and I almost use 3 days and read two books in order to finish it. Sometimes I will become crazy because there always exist errors in the process and you cannot even find them. Also, after finishing the whole project, the most important thing is to debug and prevent injection because you don't want to leave any chance for your opponents to get access to your system. Moreover, the assertiveness is also an important element for programming. It seems that " more assertive programmers would not let the intimidating terminal inhibit them from learning and using interactive equipment" (Shneiderman3). They will ask others the problems they meet and try to solve it together while the introvert will keep thinking by their own. There is no doubt that we can resolve any questions by our own by ignoring the time usage. But sometimes sharing information and get assistance is a relatively better way. It is hard to define whether women have more assertiveness than men. Some people like my roommate, Ying Huang will hold the opinion that men are more suitable to learn engineering courses than women. She said, " I cannot imagine a girl who are willing to choose computer science major and you are first CS girl I have ever met." But when I asked my other male friend, Matthew McDonald,

he has the totally different opinion with Ying. He claims, " I think there is no evidence shows that guys are easier to learn programming than girls. Learning computer science major is no difference from learning other majors." As for me, I think it is difficult to define whether I am suitable or not because everyone is easy to plastic. We can change our behavior and minds according to the environment. Maybe almost everyone thinks the students who study computer science are smart. However, I think no one is born smart. We are trained to be smart. According to Boyd, " humans ' only' employ 10 percent of their brain and if someone can use the other 90 percent of the brain, they could easily remember π to the twenty-thousandth decimal place" (3). So we all have great potential to be smart and programming. We do not need to be jealous of those scientists. If you want, you can also be Newton or Albert Einstein, which is my life philosophy.

Relationship between programming and identity ---- Internet

Finally, the most fantastic thing of programming is debugging and maintenance. " If live coding is an ephemeral product that is tied to a specific venue, audience, time or atmosphere in the same way as any other musical improvisation, then live programmers might be considered most fortunate among programmers, in that they never have to do maintenance work!" (Blackwell 13). From debugging and maintenance, I can develop my patience and exercise my problem-solving skills a lot, and that is why all science major students look more organized and rational. We create many small cursor and points that can reveal the problems more quickly and use backdoor system to protect ourselves. Also, internet is a connection between the real life and virtual world. We can know different people from the all world and extend

our knowledge via internet. Amy Tan used her personal passion, method and rhythms to learning English from her mother; Robert Levine claimed his time theory and experience. All of the above we can easily found in the internet and make a link to our personal blog because blog is the most popular methods to show the identity and personality as we are now. We can change colors, insert table, quote picture and provide links to other websites by using various kinds of methods. But if you know the advanced programming language, you can do various unique changes by coding. There are several websites that sell such kind of features that have been made. I have made a website for my family; it shows all the family members from the first generation until now. Everyone in my family has an access to edit and we can update it whatever we want. The people all around the world can know us and share both our happiness and sorrow by browsing the webpage. The internet popularized my family to everyone, which are the most amazing element and reason I love programming. My goal is to be an independent with ability. I do not want to rely on someone else to live. At first, my parents cannot totally understand why I choose computer science major because I was in music major before and have played the piano and flute for 15 years. I have my flute students and have held a concert in Shanghai. They think a girl should be elegant and tender rather than to be an engineer. Also, maybe someone will argue that programming is not suitable for women because women's brain is not as rational as men. And my roommate, Ying, also thinks it is an impossible task for her to program or restore a computer. She has never met a girl who likes coding. But in my opinion, I cannot totally agree with them. I think I have a programming brain and I need to use it in a

proper way. Also, from some areas in science, women are more competitive than men because we are more careful and sensitive to finding the potential problems and bugs. And big companies are also willing to hire female engineers in order to balance the gender ratio. Furthermore, when I learn deeper in the computer science, I find there are a lot of similarities between music and the programming language. I can use my past experience as a reference when I learn programming. First of all, writing a program is very similar with composing music. We create functions like finding tones. " Written music notations have many features in common with programming languages, especially when analyzed in terms of the Cognitive Dimensions of Notations framework" (Blackwell 5). I have a lot of fun when I am coding just like I am playing. Therefore, programming may be scared to others, but fairly familiar to me. Secondly, they are all the world-wide language and can be understood by every race. In programming language, there are PHP, Java, and Html just like the music has Presto, Sonata and Etude. They can be transferred to each other very easily and also indispensable usage. " PHP is a widely-used general-purpose scripting language that is especially suited for Web development and can be embedded into HTML." () It is run on the server, which relates to the database and store our information. In reverse, " JavaScript is the programming language that runs on the client to add functionality, validate forms, detect browsers, and much more." " On the dimension of provisionality, ableton can offer immediate gestural rate control via the definition of MIDI mappings and shortcut key commands for toggling mixer states. These allow the live performer to adapt sound immediately and continuously" (Blackwell 8). From my part, I do not want to give up my music

as well as the programming language. So I try to find a way to combine them together and create my own way and style to work. In conclusion, the spirit of programming is a part of my identity and personalities. I learnt and received a lot after I joined in the department of computer science. It makes me to be more careful, patient and smart; it guides me to find a perfect combination between music and programming, which creates my own style of coding. Work Cited Blackwell, Alan and Nick Collins. The Programming Language as a Musical Instrument. In P. Romero, J. Good, E. Acosta Chaparro & S. Bryant (Eds). Proc. PPIG 17. Pages 120 – 130. Boyd, Robynne. " Do People Only Use 10 Percent Of Their Brains?" Scientific American February 7, 2008. Levine, Robert and Ellen Wolff. " Social Time: The Heartbeat of Culture." Guidelines: A Cross-Culture Reading/Writing Text. 3rd ed. ED. Ruth Spack. New York: Cambridge UP, 2007. 75-81. McDonald, Matthew. Personal Interview. 01 Dec 2010. Shneiderman, Ben and Jeanne M. Lee. " Personality and Programming: Time-sharing Vs. Batch Preference." ACM '78: Volume 2. Tan, Amy. " Mother Tongue." Guidelines: A Cross-Culture Reading/Writing Text. 3rd ed. ED. Ruth Spack. New York: Cambridge UP, 2007. 46-51. Ying, Huang. Personal Interview. 25 Nov 2010. Woszczynski, Amy B and Tracy C Guthrie. " Personality and Programming." Journal of Information Systems Education. Fall (2005): 3-293.