Imagine the whirring sounds of computer produce from sending data from another in a fraction of a second across the globe. The fans calmly spinning air exchanging the melting air with a cold refreshing breeze as the computer hums happy tunes. The people looking down on a screen with various projects and tasks being completed or started from talking to 1’s and 0’s through programming to enjoying some drawing on paint. These incredible actions preformed however mundane are possible through a complicated series of connected pieces of technology that has changed the world. The way computer has shifted people lives including my own really encapsulates the power through giving opportunities in various field and the ability for expressing various aspects and details that can be fundamentally in society. Dreams of creating distinct types of information which the computers and the internet has facilitated including creating websites to delivering media such as: books, videos and more has changed the how we collaborate and interact with others. The possibilities that have enabled through the computer have become limitless and I will be introducing aspects of both surface level and beneath the iceberg of how I have change through the literacy of computers. I will provide the experiences that have shaped my literacy of computers discussing programming and cybersecurity specifically.

I would say another literacy I learned through my interactions with all these groups would public speaking and effective communication regarding the considerations of the different groups. As well as the change in how I approached reading literacy and writing. In high school I had this writing assignment for the Great Gatsby I had to draft an essay dealing with the central themes of the story. At first, I had been nervous as I read the novel and at the end none of the theme I could really write with confidence. After looking over my notes before starting this essay I had a lightbulb moment I could talk about growth as the novel depicts the growth of the characters in different facets some of material wealth others of metaphorically growth of the soul. This connects with the aspects of how I learned literacy through discover of fascinating aspects of novels and my bookworm phase instead became one of a book lion always desiring to find the message the story wants the reader to take away. I can say that after rereading novels from my childhood such as Daniel Keyes novel *Flowers for Algernon* that I recently read again changed my in my literacy for the better. The message of the finite life and how the gifts e we are given should not be taken for granted and that reading can be gateway for further exploration. This cemented both in middle school and now the importance of writing and literacy in that no matter where we are in life a cheerful path can come before us if push through the hardships we face. Fundamental way I gained literacy in the sense of reading and writing from my life was through the different novels that changed my perspective. Even motivating me into wanting to write and provide meaningful messages to others from simple paragraphs to researched essays that offer the reader a compelling experience. This like how when I first learn coding it original affected what I could do but eventually the activity circled back into my thoughts and perspectives.

The first experiences that led me through programming was in middle school when the teacher in computer class did a lesson about programming this inspired my interests in creating programs by seeking out more information. Thus, propelling me to learn through using the internet everything I could about programming from how to make websites to simple games such as tic-tac-toe and pong. The rabbit hole of coding had led for me discovering how computers communicate different information from displaying text, visual, and audio elements. A program that I created during this period was a store program that simulated the experience of going through a store or grocery store using text I provided different assorted items for purchases from food to electronic this took a considerable amount of time constantly finding bugs and issues that took time to iron out for the final version of the store program. This taught me various lessons about projects and programming that has transferred beyond the scope of programming. These include setting realistic goals, effective timelines, and more. Brandt details the several types of literacy here “Raymond Branch in computer programming and Dore Lopez in biliteracy” (Brandt 172). Brandt discuss that literacy often come in numerous ways from English literacy to programming literacy as each has specific terms and avenues of depth from having a beginner to expert level understanding and many differing levels in between. The literary sponsors that I have accumulated from programming are teachers and mentors that I have had in various years of school the most significant ones have been my teachers for cybersecurity and two mentors for robotics during high school has they gave me tools that impacted the knowledge that I currently have. For example, both my teachers for cybersecurity enabled to explore this avenue that I was unaware of until I was introduced heavily to the Creekside Cyber Patriots Club this with both having classes related from learning about: Operating systems such as Linux, Computer Networking, and more Cybersecurity related topics and tools that expanded my knowledge of the inner and outer workings of computers. These would be how the literacy sponsors enabled for my growth in a domain of computer literacy that I never considered before leading to further learning and exploration through doing competitions and activities related to Cybersecurity such as Cyber Patriots, CTFs (capture the flag), and HackTheBox which are various way that honed this aspect of computer literacy for me through which my literacy sponsors helped achieve this outcome for me. While Cyber Patriots and CTFs are competitions which are collaborative. Whereas HackTheBox is more getting into an operating system such as Windows or Linux and trying to find different clues that leads to the discovery of vulnerabilities that then are used to find information that supposed to be secure being a flag (a string of letters, numbers, and special characters). In comparison to CTFs which are challenges either jeopardy based or attack and defense giving from getting encrypted passwords and cracking them to find the password to finding vulnerabilities in a site to expose administrator access. For further illustration, of the components in programming I will discuss the key aspects of what most programming languages have such as: variables, operators, functions, and more. Beginning with variables which are one of the most internal parts of programming allowing the storage of values for calculating, comparing, and collecting data. This also depends on the type of variable whether one is an integer, float (anything with decimals), or string, and more these several types of variables are used by different functions as stated above. Operators enable interaction between variables these such as: addition, subtraction, multiplication, division, etc. This enable programmers to modify variables to be something different based on what a user might for example with a variable named paperclips, the user might want to add more to the paperclips variable which would be initially 0 but through operators the variable can be changed through using operators. The last key point I would discuss for provide a backdrop into the further experiences that shaped my computer literacy are functions which provide the ability to develop projects on a massive scale as functions enables a program to be divided in digestible and reusable chunks of code. A discourse community that affected my literacies were robotics that helped me see that I had that I literacy in programming. The experience of robotics was a one about building something unique with programming combing multiple disciplines of stem to create a robot that performed tasks from shooting basketball sized golf ball into either a high or low hoop, autonomously navigating, and climbing up bars. This starts in 2022 at the beginning of senior year when the Creekside FRC club was starting after being on break for the previous 2 years. The team needed a programmer that could manage others as at that time we lacked a mentor and preciously experienced people in this specific area of robotics programming, so I decided to take on this challenge. First this was difficult as we never got the robot working in the previous year’s however, we were able in only two weeks to make the robot move even though it was basic and turned in circle due to a motor being faulty this made everyone proud and ecstatic on what we could do. This optimism was short lived as this robot, we had made two years ago and finally got working was given back as the organization that loaned us the robot parts for the team, we were competing under were making another team. So after a decision making process through the engineering program and a grant for FRC(First Robotics Competition) the funds to create a Creekside Team was finalized but we had to start from square which took several weeks starting from the mid-January to completely build a new robot with a design that would work for this competition this would several weeks of iteration and troubleshooting through constant obstacles we were able to complete this journey with me helping through leading the programming effort. At the completion we able to receive the highest ranked rookie award which was a huge accomplishment to entire Creekside Robotics Club. This taught me valuable lessons that I had yet to encounter such as the diverse ways that the electronics had to work in tandem with programming to create even the simplest of movements. This with additionally needing a mechanically sound design on the engineering aspect so all the components could produce a well-oiled machine. As Melzer states regarding discourse communities, one must have “1. A broadly agreed upon set of common public goals 2. Mechanisms of intercommunication among members 3. Use of these communication mechanisms to provide information and feedback 4. One or more genres that help further the goals of the discourse community 5. A specific lexis (specialized language) 6. A threshold level of expert members” (Melzer 102) In FRC at Creekside what this is clearly a discourse community would be clear we utilized discord and remind for communication. The goals we had were that of the FIRST the organization and as well as aspirations of a rookie to learn and grow with a possibility of even scoring points and winning rounds in competition . We used Remind, Discord, and the Google Suite to share the progress we were making on the robot as well as how each person was contributing and learning how to contribute by learning CAD or learning how to program for the first time with a robot. The genres that help further the goals were specifically engineering in that we design and implementing those designs to provide mechanical functionality with the robot and programming which gave instructions to drive the robot around and preform actions. The specific lexis we used was the terms for robotics such as the game rules that specific year and the strategy for it require us to develop terms such as lower bar and high bar which represented how far we could climb. With expert members were the mentors that taught us how to work on the robot and gave guidance while helping provide the tools and facilities for us to work on the robot.

Brandt states that sponsors also withhold access or get an advantage “all sponsors of literacy to think of them, are any agents… who enable, support, teach, model, as well as recruit, regulate suppress, or withhold literacy… gain advantage in some way” (Brandt 166). An experience where I had a literacy sponsor withhold access was when I had a Networking Design competition for FBLA (Future Business). My Networking Teacher at the time withheld me participating in the competition until I learn everything from a CompTIA Networking Textbook, she had provided which I then had to take a test on see if I was knowledgeable on Networking. This really helped in my understanding in Networking enabling me to go to the district competition where I got 2nd place. I also had to write notes on how and what I studied so I could give them next time to others that were competing in this competition. This shows that my sponsor got an advantage by withhold and making me provide notes that would help others learn about networking. Another way that my literacy was withheld in that I would not have received my position during senior year has head programmer if had not finished an effective and useful program for the robot. This has taught me that literacy sponsors withhold access to advancement in position or knowledge and even both if they feel the sponsored has not reached the point where they deserved it. This was additional in that I had to record everything I had done and provide in a detailed manner how and what to do with the robot from start to finish. In this case my sponsor gained a working robot with well written code with documentation and learning materials that would enable others to learn when I left the team.

Through the processes of literacy sponsors and a desire for learning about programming I learn valuable skills both applicable inside and outside of the computer discipline. The computer literacy that I have gained through these experiences have been valuable as method of expressing creative and unique aspects of what I find interesting and compelling to work at that time. From the various aspects of programming to cybersecurity I have learned knowledge has both effected how I look at everyday life from the various aspects that are hidden beneath the surface of those 1’s and 0’s. As I learned about language and literacy for which a whole host of details can be considered literacy opens a portal of possibilities unlimited potential in expressing what we all find important from writing to programming literacy can shape how we interact and why we interact with others including the world wide web of people. The future career opportunities that interested me are becoming are numerous but narrowed down into three I would love either work in, cybersecurity, web software development, or high-performance application/game development. The primary reason I chose to be a Computer Science Major stemmed from a desire to create things that I as well as others could use from simple enjoyment to helpful applications for day-to-day use. As different experiences have shaped how I service software combining different components of literacies from reading feedback to writing helpful documentation and guides on how to use an app. What drew me to UCF was that the Computer Science program is one of the best in the state and started by teaching C which is a language that I’ve always wanted to master. Which Through the rigor that the program provides I knew I could learn this language with a good understanding of the theory which has helped me understand how to be a better programmer in both creating solutions and getting the best possible performance by understand the foundation that many other modern programming languages are built on. Also, the Clubs and similar opportunities that those provide in finding an internship and gaining useful skills for my future career. In total the program and the overall opportunities outside of the classes that UCF provides for their students drew me in. After taking this course and so in the semester through the obstacles and challenges I have continuously been to overcome them from various aspects of this semester. Through this semester, I have had issues about how this literacy fits into myself and how exactly to explain it in fashion that can effectively understood. As I have faced these challenges, I have realized that I have change where I have multiple interests that I did not know before from talking with others about philosophy after I met friends from my Introduction to Philosophy class. This experience extends to other clubs and classes as I have made friends in Calculus that share interest with me and have encouraged me to be more excited about learning about calculus and other subjects. These experiences so far at UCF have made me a Healthier person, avid learner of subjects I had no interest in before, and even optimistically positive about the future.

MLA Works Cited Page:

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