Student Name: Jatin Chowdhary
McMaster ID: Chowdhaj

McMaster University: Self Reflection

Part I: Re-Assessing Project Contributions

1. What was your most valuable contribution to Group Assignment 1? What did you learn about your strength and weaknesses?

Answer: My most valuable contribution in Assignment #1 was persuading my group members to pursue a different idea. Initially, we were going to proceed with the idea postulated by Dr. Danny, and create an app centered on campus safety. After debating with my teammates, we quickly realized that this idea is too narrow for our ambitious personalities. Our main goal was to create a product we can stand behind and proudly showcase for the world to see. In addition, we wanted to create something we can upload to our GitHub for future employers and prospectors to see. Armed with ambition and the desire to succeed, we collectively came up with MacLib – an app to find and reserve study spaces on campus. Once we settled on the major details, I immediately sent an email to Dr. Danny about our new idea, and *got the ball rolling*.

With respect to Assignment #1, my strength was determining the uniqueness of our idea, and what value it brings to our primary stakeholders. This proved to be invaluable because Assignment #1 required us to answer a question about, “What value does your project bring?”. I was able to pinpoint, with great accuracy, exactly how our app will bring value to th e stakeholders. In addition, I was able to forecast which features would provide the greatest benefit to the greatest amount of users. This information proved to be invaluable because it greatly influenced the rest of our app and design cycle. My teammates and I tailored some parts of the app to the features I predicted in Assignment #1.

For Assignment #1, my greatest weakness was my inability to effectively lead my teammates. Due to my inadequate leadership experience, or lack thereof, I was unable to effectively lead my group members, and delegate work based on their strengths and weaknesses. If I had better leadership skills, then we would have done a better job, and we would have been able to create a functioning prototype, instead of a mockup. For future projects, I need to step up and take charge; which is exactly what greater leaders do. In addition, I have realized that leadership is an essential skill.

2. What was your most valuable contribution to Group Assignment 2? What did you learn about your strength and weaknesses?

Answer: My most valuable contribution in Assignment #2 was assessing the feedback we received during the Pilot Testing phase and applying it to the questionnaire. Using the feedback from the participants, I was able to improve the initial questionnaire by modifying the format and questions to appeal to a wide range of stakeholders – mostly students. For example, the feedback we received made us realize that some of the questions on the questionnaire are too specific and do not apply to all

stakeholders. Armed with this new information, I advised my teammates to create a multifaceted questionnaire with multiple parts, allowing us to include a wide range of stakeholders. Furthermore, I simplified the questionnaire to only include relevant questions in the questionnaire. This ended up being beneficial for both the stakeholders/students and the developers/designers. The stakeholders and developers found the new questionnaire to be much more concise than the initial questionnaire. In addition, the developers/designers were able to extract more information in a shorter amount of time from the questionnaire. As a result, time spent on research was significantly cut down.

During Assignment #2, I realized that research and development are part of my strengths. Assignment #2 made me realize that I am effective at gathering and processing an inordinate amount of data. The Pilot Testing phase required me to collect ample data from research participants, and comb through their responses for key pieces of information that can be used to benefit the developers and designers of MacLib. Normally, this task is considered to be arduous. However, I had no issue in completing it in a timely manner, without compromising on the quality of my work.

My weakness, with respect to Assignment #2, is my inability to design good surveys that are easy to answer with little to no ambiguities. The initial surveys that I created were lack lustre in terms of clarity and consistency. The initial questionnaire was only focused on students that study on campus – I forgot to factor in students that do not study on campus; instead, they study at home. Due to my lack of experience in designing good surveys, I excluded this cohort from the questionnaire. I realized this after the Pilot Testing phase, once feedback was collected from students. Going forward, it may be a good idea to design multiple questionnaires, and then select the best one, or mix and match between multiple questionnaires.

3. What was your most valuable contribution to Group Assignment 3? What did you learn about your strength and weaknesses?

Answer: My most valuable contribution to Assignment #3 was conducting preliminary interviews with McMaster students to get a rough idea of where they stand on the issue we were tackling. The issue our group was solving is the inadequacies of reserving study space on campus. Currently, there is no effective – nor centralized – way to reserve study spaces on campus; whether it's individual study or group study. For Assignment #3, my job was to conduct preliminary interviews with McMaster students to gauge their interest in this area. In total, I formally interviewed 5 McMaster students. Each student was asked the same question, in the same order. For example, the first question pertained to whether or not the interviewees have setup studying arrangements, on or off campus. Other questions include, but are not limited to, "How much time do students waste on finding viable study spaces?", "How accessible do students find the current reservation systems?", and "What do students think about a central study reservation system?". Part of my contribution for Assignment #3 was to categorize the responses given by the participants and find commonality across the responses. This helped us figure out exactly what students need and/or want. Based off this information, we were able to discern several important bits of information, which is outlined in the final report.

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Conducting preliminary interviews made me realize that communication is one of my strengths. Whether it is public speaking, interviewing, or articulating in front of an audience, I have no issue in effectively communicating my ideas across a large or small audience. In the beginning, I was a bit nervous about asking questions and I was unsure about a lot of things. However, when the interview started, everything flowed naturally. Even though I was semi-unprepared, the interviewees/participants had no issue with the interview with respect to professionalism, articulation via communication, presentation, etc. Going forward, if I get the privilege of doing something similar, I will lead interviews and presentation for my group/team.

My weakness, with respect to Assignment #3, is my lack of time management. This applies not only to my day-to-day life, but also my presentation skills. During presentations and interviews, I tend to exceed the allotted time by a sizeable amount. I need to work on delivering content in a given time frame. Going forward, my goal is to be able to present material in less time than what is allotted. This is because it leaves room for discussions, questions, comments, and concerns, all of which are key elements in conducting a thorough interview. The most effective way for me to alleviate this issue is practice. The more I practice, the better I will become in reaching, and not exceeding, the allotted time slot. In addition, doing practice presentations and interviews will give me the foresight to refine the questions, content, and delivery (of the material). Finally, it may be a good idea to practice with other group members or teammates.

Part II: Self Reflection

1. What have you learned about Human Computer Interaction that challenged your beliefs before you started the course? How will you apply this to future projects? (i.e. Theories/models)

Answer: Before I started Human Computer Interaction, I believed that marketing was the greatest tool in promoting a product and getting people to purchase it. After taking Human Computer Interaction, I have realized that *Jobs To Be Done* is more essential than marketing. The greatest example of this was shown in lecture via the 3M video. The company, 3M, wanted to understand why customers were buying hammers and nails. After interviewing several customers, the researchers realized that people were buying hammers and nails to service an emotional need – hanging a painting/picture on the wall. However, hanging a picture/painting on the wall with nails is a cumbersome task with many caveats. The researchers at 3M realized that they can create a better product to service their customer's emotional needs, without the caveats of hammering nails into the wall. Thus, the sticky picture frame hanger was born; and it was an immediate success. In this case, marketing a hammer and nail to hang pictures on a wall would not work at all. But, creating a new product that services the *Jobs To Be Done* – which is hanging a picture on the wall – ended up being the best strategy. Therefore, for all future projects, I will focus on *Jobs To Be Done* first and foremost, and marketing will be an afterthought. Not only can this be applied for future projects, but it is also highly applicable to entrepreneurship.

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2. What insights from your participation in tutorials has allowed you to look at issues (in class or in real life) from different perspective?

Answer: In tutorial we reviewed several websites with what we thought was horrible design. However, in an interesting turn of events, the TA (Nasim) revealed that the website in question is considered good design in different parts of the world. For instance, we reviewed a used car website that violated all of Norman's design principles. The entire tutorial collectively agreed that the used car website does not deliver a good experience. However, Nasim revealed that the website is extremely popular in Japan, garnering millions of views per month. I found this very interesting because it demonstrates that Norman's design principles, or any design principles for that matter, do not have to be strictly followed. In a nutshell, the used car example shown in tutorial made me realize that design is about what users need and want. Design is not a checklist where you tick boxes after satisfying a design principle. Sometimes, violating design principle(s) is required to go beyond the norm.

3. As a result of the answer to the first two questions, what will you do differently going forward (in class or in real life)

Answer: Going forward, I will focus more on the customers needs vis a vis *Jobs To Be Done* and design. I have learned that Jobs To Be Done is extremely important in addressing the customer's needs, and I have learned that good design is a continuum. Different people prefer different ends of the design continuum. In the future, I will employ these two vital pieces of information. When creating a product, my teammates and I will focus on what job needs to be done, and then we will tailor the design experience to the responses from our customers and surveys. In other words, the design of the product will be based off what job needs to be done, and not some set of design principles.

4. What would you improve in the course? (i.e. What was clear, what was unclear?) Your comments will shape the course for future students to improve their experience (i.e. Were the examples engaging? Did we do too many or not enough activities? Would you prefer the tutorials focused on the content or in class activities?)

Answer: Overall I would say that the course was fun, enjoyable, intuitive, and engaging. I learned a lot about design from Dr. Danny and Nasim. In fact, I am happy to admit that the instructors changed my views on product design and development – as stated above. However, there are some things about Human Computer Interaction that I would amend. First of all, I would add more programming – lots of programming. This is because design is something that cannot (effectively) be taught via textbooks or lectures. Learning design is akin to learning how to drive. An individual can read thousands of books about driving a car. They can write dozens of PhD white-papers about cars, internal combustion engines, etc. However, none of it is useful until the individual sits in the driver's seat and feels the steering wheel, manages the gearbox, changes lanes, and drives on the highway. As previously stated, learning design is very similar to learning how to drive a car. With design, the best way to learn is to create/code a product and deploy it into the real world. The best thing about the Internet is the ability to

get instant feedback. Designers can easily get feedback from millions of people at once. Even though this may be overwhelming, it is definitely a positive point. Anyways, this course needs more programming, more deployment into the real world, and less theory. Human Computer Interaction should follow the 80/20 rule. 20% of the course should be theory-based, and the remaining 80% should be application based. The theory portion of the course is centered on lectures and textbook readings, and the remaining 80% of the course is centered on creating an application and deploying it into the real world. In my opinion, 95% of learning happens during real experience in the real world. Learning theoretical concepts is very easy, but applying them to the real world is very difficult. Therefore, Human Computer Interaction can greatly benefit from focusing more on application and less on theory.

The tutorials for Human Computer Interaction should focus more on implementing design principles learned in class. For example, tutorials should teach students how to use design frameworks to create elegant GUIs. It would be extremely useful if students are given a GUI that incorporates bad design, and students are asked to fix the GUI based on Norman's design principles. At the end of the tutorial, a few students can present their amendments and explain their design decisions, and how they interpret Norman's design principles, or other design principles.

5. What were your expectations coming into the class and were they satisfied?

Answer: My expectations about Human Computer Interaction were satisfied. Throughout the semester, Dr. Danny did a great job on discussing design principles. Often times he would discuss his experience with design and how it relates to the theoretical content taught in lecture. I found this to be quite useful because it connected theory to application. However, I firmly believe that design should be taught by doing, and not by reading. Therefore, I would prefer if Human Computer Interaction incorporated more coding and designing via programming frameworks.