Assignment P5

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Question 1:

Positive Effects of OMSCS

As mentioned in the question, it is true that OMSCS program is an excellent example of place where technology and society are intersecting. OMSCS is the most flexible program in formal education. It gives opportunity to perceive degree while doing a full-time job which in my opinion, is the powerhouse of this course. Many students could not earn their master's degree simply because of budget. In today's world master's programs are very expensive and, they require full time presence on campus which is main hinderance for many individuals. From my experience I can surely say that while working full time, satisfaction I am getting of earning a master's degree is simply priceless.

If we consider OMSCS as an example for positive effects of intersection of society and technology, considering its asynchronous structure and low cost there are following points which I can think of:

1. As mentioned above, with OMSCS program the classes are offered online and hence are economical compared to traditional on campus courses.
2. Students are getting freedom of working full time and gain practical work experience while earning degree.
3. This is the unique program where all the modules such as assignments, projects and even exam is online so student can work on these modules in his free time.
4. This course offers recorded lectures, which allow students to rematch all the parts of the course. Every student will have his own speed of learning. With online recorded lectures each student has control over the content speed. He can listen to the part of lecture twice, thrice to get the concept clear. Also, in the parts where student feels comfortable student can increase the speed of the lecture. This essentially allows the stronger understanding of the material.

Negative Effects of OMSCS

If we consider negative effects of this program considering its asynchronous nature and availability over internet following are the points which I can think of:

1. There is no direct contact between students and instructor. Even though there are tools like Canvas, Piazza which can give student feedback, nothing can replace physical direct interaction.
2. Also, student is getting less feedback from peers in online program. Adding to this when students learn in the class room there is a bond which gets created between them. This is lacking in OMSCS program.
3. Adding to this, OMSCS is only available to the people who have access to the internet. People who do not have this facility, may be living in the remote region, will not be able to perceive this course.

Redesign Suggestions

To emphasize learning and enhancing positive effects of this program I have following suggestion:

1. To increase personal touch in the program more, emphasize should be given on informal discussion. This includes slack channels. This is different from Piazza students discusses their problems more in informal way which in turn can help to increase bonding. Also, with this even recent messenger apps like facebook messenger, whatsapp can be used. I have whatsapp group of friends doing OMSCS. I can confirm from my personal experience that it helps a lot in learning and bonding.
2. More group projects should be created to build team spirit and increase cross cultural experience between students.
3. There should be some mechanism where individual student should be able to video chat with instructor in some special cases.

Question 2:

In today's world where money is virtual banking industry is growing at its best. In today's world it is not required to go the bank for doing banking transactions! When I was working with Oracle, I was working on the banking software and I think this is the best example to describe how political motivations are specifically affecting the design of technology. To appreciate just try to think how banking transactions were done just ten years back. This is the industry where technology

has changed the user's behavior for doing certain things. For ex. Few years back if someone wants to withdraw money from bank account one must visit his bank and his home branch and do the same. After some years universal banking came in to existence where user can do any transaction with any branch of that bank. In today's scenario we must just visit ATM and our task is done. If user do not want to withdraw physical money-cash, then everything is just on his fingertips. With internet banking, mobile banking he can perform all banking transactions.

Stakeholders in this area are the bank officials, bank customers and software vendors- people who make banking software. The motivation for each of this stakeholder will be as follows:

1. **Bank officials**

   Bank officials will always demand for a piece of software which can make their life easy. There are thousands of transactions going on every day in the bank. Bank officials will be having motivation to run those transaction smoothly. They would also have security concerns especially at points when bank is communicating with external agencies. Bank officials would have another motivation of having minimum customers in physical branch. When a customer comes to the physical branch for a simple transaction, bank officials find it hard to manage time for the customers who needs attention for their serious issues. So, for bank officials it will be ideal situation where the daily banking transactions are done by customer itself with mobile banking/ internet banking/ ATM etc. smoothly.

2. **Bank Customers**

   Bank customers have motivation that there should be minimum time required for their daily banking transactions. At the same time there should not be any compromise with their privacy. The banking transactions should be secure, easy, and properly responsive. There should not be any situation where their transaction is under progress for log hours or days. In this instant world everything should be completed and their communication with bank as an entity should be always synchronous.

3. **Vendors – Product developers**

   Product developers will have motivation to implement new technologies which can address all the needs to best possible extent. As a developer their motivation will be to have less development life cycle and less time to market.

In this huge competition, developers would try to implement such process for different scenarios where people will get maximum comfort without compromising on security.

In this context all these three stake holders are having their own motivations and those are conflicting! So, the important point here is to find a proper tradeoff for this situation. Following are the examples where motivations are specifically affecting the design of the technology in Banking sector:

1. With easy to use and handle for both bank officials and customers, we all now have internet banking, mobile banking on our finger tips. It is easy to use. User with some knowledge of computer and/or smart phone can easily operate on the transactions through online mode.
2. At the same time there is concern of security which makes easy to use motivation conflicting. For security different banks have different mechanisms such as some banks send OTP (One Time Password) on registered mobile number for logging to internet banking. This creates restriction of carrying mobile phone while logging to internet banking on browser. So here security has given more importance than ease of use.
3. One more motivation is availability. Physical branches have very limited availability as banks have lots of backend office work. This causes very uncomfortable experience to the customer. With the introduction of virtual banking now customer is having bank access 24*7 time. Of course, there are planned and unplanned downs however customer today is satisfied and can avail the service most of the time.

Question 3:

If I were to redesign a piece of Piazza, I would choose single message threads. I would redesign the interface with the help of following design principles in unit 2.

1. **Direct Manipulation**

   If a user is logging to the piazza after break of few days, there are plethora of posts in piazza and user gets lost. It becomes very difficult for the user to locate and check the relevant and important posts. Also, there is huge chance that user can miss some important notes of his interest. Adding to this, user may have created posts for which he might want to check update. So, in case where user want to find relevant post amongst all the posts, it can be very

overloading. To reduce clutter on screen and not to give overload of information I would like to introduce hide button on each message. This button will allow the user to hide the messages in which user is no more interested. There will be a separate tab where there will be list of hidden messages. User will have option of unhide the post by clicking on unhide button on the list if at all he wants to check the message again.

2. Simplicity

When a Piazza user makes a login as a part of redesign, I would like to show him posts which are relevant to him especially the posts for which there is some update which he has posted as well as the posts in which he has been referenced. These posts are not only relevant to the user but also there might some actions which he needs to take. So, with simplicity, if we show him those posts first then he can jump on to the other posts. With this approach user will be not be missing important and relevant posts.

3. Visual Perception

As part of redesign with visual perception I would like to implement some mechanism which will give alerts for the messages which are relevant to the user. This alert will prompt on user's desktop even if user is involved in some other task. The alert will have an option to open that Piazza thread or user can choose to ignore the alert. With this implementation user will have a better visual perception and can be always informed about the posts which he cares!

4. Usability

Usability refers to the users experience of how easily the application is handled. While using any software there should be maximum user comfort. As a part of implementation of this principle I suggest a card type view for references of the other posts in Piazza. For ex. Suppose there is a post on Piazza referring other post. This is usually shown with the number and that number is hyperlink which takes user to the post in new tab. In many cases this is very frustrating as user may not want to check that post in detail. This also increases cognitive load of user as he must remember that the main post is different, and the current post is just referred in the main post. I would suggest having a small popup which will appear on hovering over this number hyper link. So, in our case, suppose instead of clicking user just hovers mouse pointer over the link there will be small pop up appear on screen showing the details of the post. Now if user wants to see that post in detail he can click on the hyper link

and check the complete post otherwise if he thinks he has enough idea of the post he can simply move to the next part of the main post.

5. Cognition

Cognition refers to the mental action or process of acquiring knowledge. While using any software there should be minimum cognitive load on user to user the software effectively. To implement this principle, I would like to suggest one more field in searching. Many times, user wants to search the post in the date range. User is not sure about the exact date but can be sure on the time period. There should be provision in Piazza to filter out date in particular date range so user can search those posts accordingly. This is going to reduce cognitive load on user as he do not have to remember the exact date of the post.

Question 4:

Paper I have selected for this assignment is:

Title: App Movement: A Platform for Community Commissioning of Mobile Applications

Authors: Andrew Garbett, Rob Comber, Edward Jenkins, Patrick Olivier

Summary

In today's smartphone world mobile applications are infinite. Mobile application development is expensive. As a result, there is an increasing demand to encourage inclusivity in the digital service design. As per our previous experience we can surely say that inclusivity only comes when you have a strong support of a community. Community makes many things easy leading to increasing usage and consumption of products.

To facilitate this smoothly authors have designed an App movement can be called as a platform which allows promotion, collaborative design and deployment of community-commissioned mobile applications. To grow technology or to allow technology to penetrate to last level of society only way available is to make a stronger community. There are some crowd funding platforms which act towards inclusivity of design and ideation of these services. However, it is often seen that the motivations and perspectives of the campaign creators themselves rather than the desires of the funders. On the other hand, in industry commercial value of final product is the deciding factor for level of motivation and commissioning

technology. Tis has very less reach. Authors make their point with above examples saying that despite this reality, communities have demonstrated their ability to appropriate technologies in order to address current needs.

With all this background, this paper presents a design of system for community commissioning of mobile applications. Only design would probably just be imagination, keeping this in mind paper posits actual numbers: its usage within 8-month period where in 27 campaigns were created and over 1600 users which result in 7 mobile applications with overall userbase of 6000 members. The numbers can be a good representation of the potential. We can very well see that over 8 months getting user base of 6000 members from scratch is amazing. Certainly, it can increase exponentially in future.

The backbone of the design is App movement. App Movement allows communities to commission, collaboratively design and automatically generate their own mobile applications. The overall process is as follows:

1. App movement is allowing to establish campaign can be called as movement. This page allows to communicate concept to others.
2. Throughout the system users can also participate in discussion around the campaign idea, overall design and specific design tasks
3. This movement is passed through three phases: Support phase, design phase and build phase.
4. Every phase is interactive with promoting the campaign page, contributing ideas to the app's design, voting on submissions, downloading the app and finally publishing content within the app.

The detailed description of each phase- support, Design, build is given in paper with example. Main idea here is to have a community support in each phase allowing to reach the app to maximum users.

Paper also describes detailed case studies stating how efficient this platform is for the developers.

Finally, I selected this paper simply because as a developer knowing new platforms for supporting development is always useful. Adding to that as we know community can do great things! Not just it is economical but also innovative. Having a community to support development, production and even marketing is simply an ideal situation. In my opinion, in today's world having just a great product is not going to help. With a great product if one gets a great marketing then only there is some hope to survive in market.

References:

App Movement: A Platform for Community Commissioning of Mobile Applications published in Proceeding CHI '16 Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems Pages 26-37

Link: https://dl.acm.org/citation.cfm?id=2858094