MBA 514 - INFORMATION ANALYSIS AND MANAGEMENT

Final Exam: Learning Reflection Report

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Question 1:

Describe one concept/principle/lesson learned from this course material (lectures, readings, cases, discussions) that you have applied to your own workplace with respect to the IS environment. How and why did you apply this one thing? How has this course helped you be more effective/efficient in your work – either currently or for future implementation?

Been in the IT industry for more than 18 years, I thought I might know a lot in the Information Systems area. But I was wrong, some of the topics and specifically the Harvard cases really were something which I never thought of. IT in the Airways industry and specifically in industries like the Cirque De Soleil case were so informative on how IT could change the way a specific industry can do business.

While all those cases were informative and fascinating, the one case I want to discuss here is the Stanford Medical Case. When I prepared for the discussion of this case, I was boggled on how electronic documents management is helping the medical industry keep the customer records stored digitally and share between the different medical centers easily. I applied this to my current workplace because of the knowledge sharing between the different teams. I work for an Internet service providing company and on the IT side of it. I come under the Operations side where we support the maintenance of the applications in Production. To maintain the applications and keep them up and running in the production environment, we need the correct, detailed and up to date documentation. Though the context of knowledge document sharing is different here, the essence is still the same. Here, in place of the patient's data, we are dealing with the application's data, so without the correct documents we will not be able to provide the necessary care that the application needs.

We support about 20+ applications which cater to the needs of the contact center agents. So, we need to have these applications up and running at any point in time to enable the agents to access the details that they need while helping a customer. To help us to keep these applications up and running, knowledge about how these applications were constructed, infrastructure details and an in-depth knowledge about the different functionalities, connectivity's, etc. is particularly important. We already have a process wherein an initial hand off document is provided to the operations team from the development team. But the problem was to keep that document updated. That was a missing piece in our area, as engineers who work on these issues build the knowledge over time but never update the documentation for future references.

To mitigate this, I improvised my learning from the course to produce a centralized location where the documentation can be managed and kept up to date. Confluence Wiki was the tool I utilized. This central location would not have the traditional word or excel based documents, rather it would be like a live web page with a history of updates. This location was made accessible to development, QA, Ops and PMO teams, and the responsibility to keep this up to date was entrusted on the PMO team. As PMs are the ones who plan and co-ordinate the changes/enhancements/fixes for these applications, they would have the needed information to update these pages after the corresponding sprint is completed. This has been successful so far and is being welcomed by the different teams as well. Another valuable tool

that I learned through this class is MS Access. I am more of an Excel person and have never tried MS Access before. The step-by-step instructions helped me to learn the tool very easily and made me amazingly comfortable utilizing it. MS Access is my go-to tool for my everyday data-based analytics and especially for my reporting needs, which I usually used to do with Excel before. I have never felt this comfortable creating and using queries, that too when you can store it and reuse it just makes my analytical work quite simple, quicker, and smooth.

As quoted by Ryan Carruthers (Ref 1) “Knowledge sharing is defined by organizations that have processes in place to exchange critical information across the workforce. Organizations that do it really well have a culture of knowledge where employees are encouraged to share what they know with others instead of hoarding it.”, it is very important for sharing the knowledge between the teams as at the end of the day it determines the quality of the work that was delivered and will in turn increase the bonding between different teams as well to support each other.

The main key benefit of encouraging knowledge sharing is to standardize learning. Having experienced employees working together and as well as with other employees, we can increase the collective knowledge of the organization. All this collected knowledge will eventually become the team/Business Unit’s best practices. This is a wonderful way for organizations to get all the teams on the same page.

The course really helped me in understanding how IT is utilized in different industries. Importantly, it helped me understand the direct connection of how IT is helping organization's business grow. The days of desks filled with paper-based work and pens are gone. Every business in the market has a PC/Mac as their employee's working medium. And all the data is stored in hard drives and not on paper anymore. Even in the Cirque de Soleil case, the performers referred to the preserved data, all those different applications only aided the way data is retrieved. This is exactly what I learnt from the course, on how data is being stored digitally and utilized, how all forms of transactions which are made digitally are helping organizations. The learning is up to an extent that I have started noticing what people do in different stores and offices, specifically how it has changed their and the customers' lives. I imagine how these places would have operated before the advent of IT.

Total Words: 942

Question 2:

Throughout the course, we discussed artificial intelligence, blockchain, and the Internet of Things. Discuss how one of these three technologies is currently being implemented, considered or might be applied in your industry or workplace, as follows:

- Include an explanation of why you consider the technology that you are referring to, to be one of the three technologies: For example, why is what you describe actually artificial intelligence, rather than predictive analytics? How does this particular technology fall under the umbrella of the Internet of Things?
- Describe how this technology could prove to be a disruptive technology.
- Explain some of the challenges that you expect with respect to diffusion of the innovation.

Artificial Intelligence is all set to take the center stage in the upcoming years. As I mentioned previously, I work for an ISP providing company. Customer support is important in this industry, as the service is being provided to everyone who might or might have a strong technical knowledge. We have customers calling for even the simplest of things "What is my current internet speed?". So, one of the main goals of our company is to know how to make these types of queries answered easily, quickly and at the same time how to save the cost in answering such simple queries. As part of this analysis, it is not just the ISP industry, in fact most of the major service providing companies have two systems to handle this effectively – IVR and Chatbots.

Before getting into the details of these two systems, I would like to provide a small explanation of the difference between Artificial Intelligence and Predictive Analytics. As quoted by Amar Nadi (Ref 3) "AI is completely autonomous while predictive analytics relies on human interaction to query data, identify trends, and test assumptions. Due to this, AI possesses a significantly broader scope and more applications than sole predictive analytics". A simple example is how ChatGPT works when we search/ask for any information against a similar search in Google.

Getting back to the topic of IVR and Chatbots. Chatbots were introduced in our organization a few years back and I lead the operationalization of the Chatbot application into our company. With more people using the messaging/chatting applications, they feel comfortable chatting with someone to get the simple answers they are looking for instead of trying to make a call to get the same answer. This makes the chat support an instant hit with these group of people. Chatbots operate on pre-loaded information and rely on its ability to integrate with some of the internal systems to read and provide the answers to the customer's questions. Again, these interactions are completely based on certain key words that the customer keys in. For example, "Is there an outage in my area", here "Outage" is the key word, using that key word the Chatbot calls the preprogrammed steps to determine the information and gives it back to the customer. Chatbots were an instant hit and it started to deliver the expected results quickly and was widely implemented across all the forums through which the customer interacts with the company – company website, customer portal and the mobile application. It did reduce a good volume of calls coming in for simple queries, eventually reducing the cost for the company. While Chatbots are

not a direct example of Artificial Intelligence, it is a perfect example for Machine Learning which is an application of Artificial Intelligence. Here we give access to the Chatbots to the different systems for it learn with different issues and updates its knowledgebase.

The area where our company is trying to introduce Artificial intelligence is in the IVR (Interactive Voice Response) space. IVR is a particularly valuable tool for any organization as it helps simplify the call routing features and helps answer simple customer queries without even the need to reach a direct agent. Like the chatbots, IVR has similar access to different internal systems and answers the customers on simple queries like “What is my bill” etc. It helps with the call routing as well as it prompts the user to select a number or say a key word to help it connect to the correct agent. Briefly, it acts as a first level agent/assistant. IVR has evolved over the years and currently there are companies which utilize IVR more than ever before. These IVRs are called conversational IVRs, meaning they can converse with the customer the same way an agent does. This is where Artificial Intelligence comes into place. This is beyond the preprogrammed scripts or set ups. These new generation IVRs are much more capable of making smart calls to the needed internal systems and making decisions. An example to this is when a customer asks “Is there an outage in my area?” the IVR checks for that information and provides the answer to the customer, in addition to that say if there is actually no outage, IVR takes the next step as well by trying to connect to the customer’s account and devices and performs a check to see if everything is connecting fine. If it finds any fault it will check if it can be resolved remotely and fix it, if not create a ticket to the corresponding team to schedule a technician to the customer’s place.
There are certain companies which have implemented such advanced IVRs already, and our company is in the process of developing and implementing it soon. This exactly falls in line with the explanation of “Internet of things” as these IVRs are connected to a lot of internal as well as external systems and applications to help enable it to perform such Smart and advanced tasks. With more innovation these Smart IVRs will disrupt the contact center market. While it might slowly but surely take away more people’s jobs, specifically that of the Call center agents, it will make customer experience increasingly effective and easier.

The next stage of AI is the Generative AI, ChatGPT is the best example for this as it falls more into the category of Generative AI than of just an AI. Similarly, the next stage of IVR systems is to power it with Generative AI capabilities which would make IVRs to handle any type of customer issues End-to-End. But the main challenge that I see would be the resistance from the customers as the human touch would be lost, which to me is the main aspect of customer support.

Total Words: 962

References:

Main Reference: *My own experience in the IT industry*

Ref 1: Ryan Carruthers (2021, December 22) *What is 'knowledge sharing' and why is it important?* https://www.togetherplatform.com/blog/knowledge-sharing

Ref 2: Emily van der Harten. (2019, September 24) *Knowledge Sharing: The Importance of Documentatio*n https://patronmanager.com/blog-knowledge-sharing-the-importance-of-documentation/

Ref 3: Amar Nadig .(2022, June 30*) Is Predictive Analytics the same as AI?* https://www.linkedin.com/pulse/predictive-analytics-same-ai-amar-nadig/

Ref 4: Piccoli, G., & Pigni, F. (2022). *In Information Systems for Managers in the Digital Age. Prospect Press*