MET CS782

IT in the Super-Training Corporation

Assignment 2

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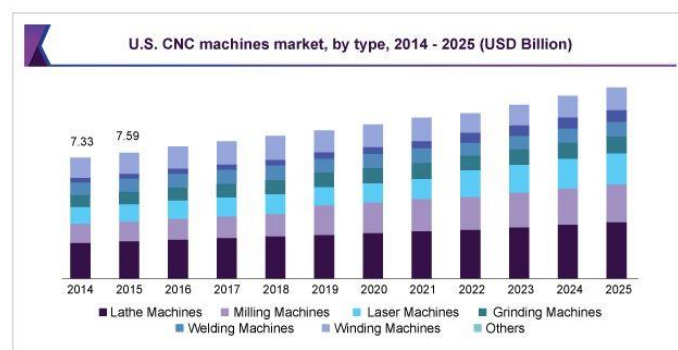# Contents

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Abstract

In this paper, we talk about how the IT technology leverage data and drive training business to serve the need on-demand of manufactures and potential machine operators through online and on-site training. In addition, we will determine which IT tools are required for achieving this purpose.

Introduction

Operate sophisticated machinery such as Computer Numerical Control (CNC) machine is a vital part of manufacturing industry. Super-Training academy offers, CNC machinists combine elements of mechanical design, technical drawings, mathematics, and computer programming by on line programing and hands-on training sites with financial aid, internships program, and job placement services.

Super-Training Corporation offers CNC Machining programs at certificate and associate degree levels. Both integrate an understanding of the manufacturing processes, knowledge of materials, and a working comprehension of manufacturing mathematics. Combined classroom instruction and hands-on operation will provide knowledge and machining experience that students need to be successful in this field. (Tukeli K. 2017)

As a Super-Training graduate with a solid foundation of the CNC Machine Operator or Set-up Technician, students will prepare for various types of advanced manufacturing facilities. Most work environment for CNC operators are machine shops, motor vehicle parts industry, fabricated metal product, metalworking machinery manufacturers and aerospace product. (Lincoln Ed. 2016)

According to the US Bureau of Statistics, staff of computer machine operators are, expected the CNC operational programmer's job between 2014 and 2025 increase by 15%. In comparison,

U.S. CNC machines market, by type, 2014 - 2025 (USD Billion)

the projected growth for all jobs is 11%. (Market research report, 2018)

Section 2 Communication and Collaboration Systems with User Communication System and Audio & Visual Streaming

Communication and Collaboration Systems such as electronic mail, videoconferencing, computer conferencing, and communication centric applications enables more effective communications between students, Instructors, and staff in Super-Training corporation to enhance their ability to collaborate. (lecture2)
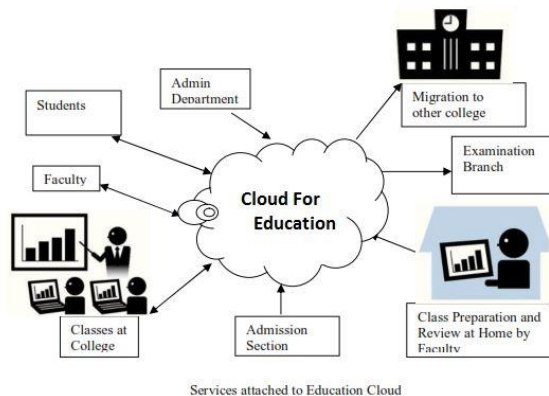
User Communication Systems is actually sub directory of communication system where it focus on user correspondence taking in to account characteristics such as media composition, media format, user interaction, cognitive capabilities and physicality. Audio and Video Streaming provides a suite of protocols, which support the play back or live transmission. For example, students could benefit from live streaming classes and then having those available as on-demand audio or video-recorded file. This can be helpful for later on-demand playback recording a live lecture.

Section 3 Cloud Computing and Software as a Service (SaaS)

Accordingly, by implementing cloud-computing innovation, we can guarantee that all students, instructors, and Super-Training staff have access to basic data utilizing from anywhere. (Lad N. 2016)

Cloud-based administrations can help Super-Training to decrease costs and making a situation where all students can have admittance to amazing instruction and assets. Students can utilize office applications without purchasing, install and stay up with the latest on their PCs. Other benefits of using cloud based computing are

Services attached to Education Cloud

Source: http://www.ijircce.com/upload/2014/february/21_Role.pdf

effectively transferred lesson arranges labs, grades, notes, PowerPoint slides and anything computerized during training.

Security, share ability are other advantage of cloud based computing approach in online training.

One of the greatest focal points of cloud-based registering is the software-as-a-Service (SaaS) model. Lower ongoing cost of ownership, Practice environmental safety, easy update, faster initial time, elastic scalability; simplify administration and mobility with location independence are significant benefits of using SaaS in Super-Training corporation.

Section 4 Knowledge Management Systems (KMS) (Lisa A. 2003)

Super-Training organization has significant opportunities to apply Knowledge Management System practices to their mission. For Super-Training institute the practice of KMS is particularly promising and appropriate. Sharing data and information in organization environment influences people at every level of participated while mastering higher order skill set. KMS in Super-Training could help in the growth of learner-centered knowledge and action learning, growth in work-related learning, movement from closed to open knowledge systems and extensive development in computer-based communication technologies. If KMS is properly developed within Super-Training organization, it would improve performance and productivity.

Section 5 Mobile Communication and M-Business

Mobile technology makes the learning process in Super-Training organization more interactive and engaging. The mobile revolution is changing education in more fundamental in order to deliver information. Mobile Communication and M-Business are transforming education. One significant benefit of using this technology is Real time feedback in the learning process that enable Super-Training students immediately to apply the lesson learned. Hands on learning is other aspect of beneficial using this technology in learning how to operate sophisticated machinery. (Vali R. 2015)

Section 6 Social Media Communication

Social Media resources have significant impact to enhance educators' engagement in their learning. Educational social networks are one-of-a-kind, and working in classrooms with educational social networking applications offers a number of remarkable advantages. Super-Training's business includes advertising, tuition finance counseling, hands-on training sites, distance education, internships, and placement use variety of social media applications such as Facebook, twitter, link In and so on in order to build community; connect students to each and the global community and improve student attitudes towards the learning process. (Cotton S. 2013)

Section 7 Network Security, Firewalls, Cryptographic and VPN

All employees and educators in Super-Training organization need to be security savvy to help reduce risk. (9) Network Security firewall is crucial for Super-Training organization because of securing and protecting Super-Training clients' networks by attempt to block the spread of cyber-attack such as adware, hackers, ransomware, spam, spyware, Trojan horses and viruses. (10) Cryptography is also an essential for information security in Super-Training. Encryption technique, hash function and digital signature provide fundamental services like data integrity, authentication and non-repudiation services for Super-Training business. In addition, VPN access has become common and used considerably for different businesses and educational purpose. VPN remote access technology has many significant benefits for Super-Training business such as Secure and fast connections, easy a click operation / easy to use and administration, real time control, little expenses for support and high profitability through low operation costs. (11)

Section 8 Why I think that the remaining topics in this week's notes are less important for Super-Training IT.

Big data analysis is less important in Super-Training business because normally training institute does not involve petabytes of the data accumulated on daily basis.

Virtualization is not concern as a business training and collaboration system when corporation implement cloud computing and SaaS model.

DevOps implementing methodology is not for trading business like Super-Training Corporation that uses third party offering system for its training business platform.

Internet2 still runs its own test run with difficult to measure and it can be expensive so Super-Training IT team do not like to apply in this time.

Green Computing is not major concern of IT team, because as I mentioned before Super-Training use third party offering system as a cloud based computing and it is not owner of server hardware infrastructure.

Conclusion

Super-Training provide on-demand education through offering operate sophisticated machinery such as numeric control machines. It provides opportunities that are accessible, flexible and economical. The company implements cloud based computing and SaaS model to access data and education materials by anywhere and any acceptable device like desktop computer, laptop, tablet and smartphone. The company IT team by providing communication and collaboration system such as internal and external email, chat, blog, and Adobe Connect. This technology enable students, Instructors, and staff in Super-Training to enhance their ability more effective communications. In addition, social Media resources have significant impact to enhance educators' engagement in their learning and KMS improves performance and productivity by sharing data and information across business environment.

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