

Co-op and software technologies for stores would



CO-OP WORK TERM REPORT COVER PAGE Last Name:

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First Name: Darian Student Number:

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Program: Business Technology Management

Employer Information Employer: Staples Canada Division/Department/Unit:

Information Systems Supervisor Name: Tim Ng Supervisor Title: Team Lead,

Support Services Supervisor Phone: 905-737-1147, Extension: 2478

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ca Work Term Report Information Student Job Title: IT Support Services

Analyst (Co-op) This report covers employment for the period: (May 1st,

2017 – December 22nd, 2017) This report covers: Work term(s) – Check all

that apply: 1 ü 2 ü 3 ? 4 ? 5 ? Total Actual Hours Worked in this Period: 34

weeks @ 37.5 hours/week, 1237.5 hours Date of Report

Submission: Student Signature: I. COMPANY/CLIENT

ORGANIZATION During my first two co-op terms, I've been learning from Staples Canada at their head office located in Richmond Hill, Ontario. Staples Canada, founded in 1991 under the name "The Business Depot", is one of the world's leading office supplies company. Throughout the years, Staples Canada has grown to over 300 stores, over 15,000 employees, and generated about 32 million dollars in sales every year. With the recent change of becoming a private company, Staples Canada's future plans are to "Sell to more (customers)" and "Sell more to (customers)". Staples Canada is offering more to their customers by adding services and products to attract different types of users and also competing with other competitors with better customer service and price value.

Over the next coming years, Staples Canada will also be re-launching websites and modernizing stores with newer technology to attract a younger audience, a struggle that they're currently dealing with. The new websites would provide customers with easy-to-use web interfaces, and the new hardware and software technologies for stores would offer associates with newer and faster ways to service customers. This current push to modernizing stores and websites relies heavily on the efforts of the information systems (IS) department. II. DETAILED JOB DESCRIPTION I've spent the last 8 months working closely with Staples Canada's information systems department, particularly the support centre.

My role at the support centre was broken down into three parts; retail support, home office support, and special project rollouts. The support centre was open for all Staples Canada associates, and provided technical troubleshooting steps to fix technology related issues. Users would call the support centre telephone line, and generally call for password related issues, store emergencies, or any other inquiries. Instead of calling the support centre, associates also have an option to place a self-serve e-ticket, which would automatically be forwarded to our support centre via ServiceNow, an IT service management software that housed all of Staples Canada's phone call incidents, e-tickets, and Staples associate information.

There are a few routine duties I would need to perform daily. Right when I arrived into office, I logged onto ServiceNow and checked how many tickets were generated for the day. After checking, I would send that information in a short e-mail informing the entire support centre. This provided a basic overview of the workload for the team, informed them about any Staples

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wide issues, and also helped keep track of incident volumes for future planning.

I then started to distribute the e-tickets that were assigned to the support centre. Some e-tickets went to different departments that were experts in that specific subject, some go to our analysts to do basic troubleshooting, and if capable I would assign myself e-tickets. This was at first challenging as there were so many internal Staples groups along with the amount of details that needed to be grouped along with the ticket. After months of this work, I can call myself an expert using ServiceNow and even sometimes help other analysts with issues. After that, I assisted in any support centre calls if call volumes were high.

I was trained to help associates when they called the support centre about password related issues or about other inquiries which mainly included store register issues, printer issues, and computer related issues. Password related issues were often related to websites store associates used daily, or the network computers for associates at home office; an easy password reset or unlock would often be suffice. These issues were the most common and the easiest to resolve, but involved a lot of detail when keeping track of the call logs and notes as this could be a security and privacy issue if not handled properly. For store register issues, associates generally called for freezing, lagging, or errors that occurred during transactions. Depending on the situation, using tools to refresh, update, or re-build the registers were needed. For more drastic measures, the support centre could also arrange technicians from vendors to arrive on site, or order parts and pieces to maintain the registers. If an issue was not resolved during the initial call, I

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would call the stores back to confirm if the issue is resolved, if not I would continue to troubleshoot and progress the issues this way. Away from the support centre's main duties for retail stores, I was part of a group called Technical Service Request Fulfillment (TSRF) and PC Support that was for home office associates.

TSRF was a process where home office users would submit orders to grant access to certain applications or request for new hardware. I would assist the TSRF analyst in managing the incoming orders, arrange appointments with users, grant access, and set up any new hardware requested. This role challenged me not in a technical aspect, but by being able to manage time, appointments, and prioritizing the tasks needed to be completed. My last daily routine was the PC Support group. PC Support was a small group of analysts that provide very technical support to home office users. Often issues were hardware related to computers and laptops that required parts and pieces to be swapped or replaced, software related that required operating system settings changes to maintain the usability, or troubleshooting any other part that would take a long time to do or that required physical assistance. At first, I did not really have any experience in this field but slowly others had taught me the tips and tricks to become successful.

I had grown to enjoy this role the most and would even become my greatest accomplishment. III. ACCOMPLISHMENTS/ACHIEVEMENTSA special achievement to me is successfully performing and completing a project or task that exceeds everyone's expectations.

During my co-op term, I was fortunate enough to work on many projects and tasks that helped maintain the operation of the support centre, but a few stood out to me as it had an extraordinarily positive impact that I did not foresee. These included scripting a Microsoft Excel VBA code that automated the monthly support centre call statistics, as well as building a Microsoft Access SQL database that greatly improved the way the support centre tracked inventory and assets. Every month, the support centre generated a document full of numbers that described the performance of every analyst as well as the overall performance of the support centre. The numbers on this document were then manually transferred to an Excel spreadsheet, calculated, and finally formatted for presentation to vice presidents and managers located in Staples Inc US. Although this manual method of creating the report had been done for years, it was time-consuming and very prone to errors by calculation or misplacement of numbers.

In response, my VBA code automated every part of the manual process. The results were very rewarding as the code was able to cut the time to create the report from 2 hours to about 30 minutes with no mistakes. My supervisor was very pleased as the code will continue to be in use for years to come. My second project included me to build a SQL based database from scratch to help improve the way the support centre tracked inventory and assets. The support centre was previously using multiple excel spreadsheets scattered everywhere across the network share, and analysts who used these spreadsheets complained about the inaccuracy in data. They would often forget to track information and make the data redundant. With my database, all the data is stored in one location, with an easy to use interface that

guided users with information they needed to fill out. The database included tables to track software licences, associate laptops, store computers and more.

After weeks of usage, I've received positive feedback and would help the analysts with searching complete data. My achievement that I'm the proudest of was being given the position of backup TSRF and PC support analyst. Throughout the term, I have learned a lot directly from the TSRF and PC support analyst that I was consistently able to handle 80% of the issues coming in.

Other analysts would come to me for advice or even instructions on how to fix user issues. This formed a positive relationship with my supervisor as I was handling more than just the co-op roles and actually had major responsibilities within the support centre. This showed my ability to quickly learn new concepts and manage part of the support centre which definitely would be a reference point for future career employment. IV. APPLYING WHAT I LEARNED The achievements I was able to accomplish during my work terms are credited towards the courses I have taken at Ryerson University.

IT Infrastructure (ITM 301) and Data and Information Management (ITM 500) were the two courses that have been the most beneficial to me over my work terms. IT Infrastructure during my work term was used every day as we needed to understand the structure of stores so we could support the technology in them. It taught me the basic model of how the different technology hardware, software, and networking worked together. The course was structured in a way that it gave me an understanding of what different

hardware pieces there are and what the uses of them were, while it also briefly talked about how it would be integrated together in a household or business environment which could be transferred to any organization and location. With the teachings of how it could be implemented in a business environment, this gave me an upper-hand at the troubleshooting work the support centre was handling as I already knew what the technology hardware being used should do and where it should go. Understanding where and how the methodologies came together allowed me to easily answer and explain any questions associates had, as well as guiding associates on how to approach certain issues. For example, when a store computer or kiosk wasn't connecting to the network, this knowledge easily allowed me to describe how items looked and where they should go in a store environment if we needed to do troubleshooting steps or to reconfigure hardware that wasn't working properly. Other issues included when store associates needed help setting up new computers and didn't know which port to plug cables into, this knowledge would allow me to walk them through and teach them on how to do it the next time.

This not only helped me easily understand the store infrastructure but also the infrastructure at the office. Often, home office users would need help with either connecting their computers to the network or have issues with certain hardware. This helped me with the quality and quantity of work I was able to complete during the work day as it strengthened my knowledge with hands-on activity. I was pleased with the results as I was able to contribute to the organization by fixing technology related issues quickly and effectively which in return made the organization function. Something that could be

improved within the course would be creating or using software that could simulate the infrastructure of a location.

The labs for the course did not really give me a better understanding of lecture topics. Data and Information Management was the other course that helped me become successful during my work terms. Data and Information Management taught me the basics of databases, how and why we should use databases, and the structure of one. It showed me how to take data and structure it that made it less redundant and how to answer common questions with code. This course has helped me create the SQL database that tracked all Staples Canada assets within the support centre. The SQL programming skills came in handy as I already had a good idea on how to create the code, as well as the structure, tables, and properties. The course definitely made me complete this project faster with fewer errors which in return gave me more time to test and collect feedback. The database became more advanced than the projects done during the course which proved the course being helpful.

What really assisted me during the course was not just learning about the code but being able to create one for a project assignment that gave me hands-on experience. Learning about the structure also helped me visualize how to formulate a database given a specific set of data. What could have been improved in the course would be using different software to create databases so it would give us extra experience.

No matter what software an organization would use, students would already be prepared. V. WHAT ADDITIONAL COURSE CONTENT WOULD HAVE

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HELPE My greatest accomplishment, being able to handle the PC Support group within the support centre, was also something that I struggled with early in my co-op term. The PC Support group was a specialized group that handled all user or technical computer issues within the organization. With so many computers being used within the organization, the amounts of issues were countless, making every case a different troubleshooting method and various steps and procedures to fix. An additional course that would have helped me with this would be a course that covers computer hardware and operating systems software. The computer hardware section could cover what parts a computer has, what each part does, and how they all function together. Further knowledge of how to set up the physical hardware in a computer could be featured in labs.

This could have helped me with quickly and easily identifying what physical part could have failed if the computer starts to run slow, if the computer is having trouble saving items, or why the computer can't run any apps just from taking a quick look inside if anything was not in the ordinary. Learning about operating system software could cover how it works, the advanced settings and the effects, and also special commands the average user won't know. The PC Support specialist has shown me many settings that dove very deep into the operating system that could solve many software related issues. This knowledge would have given me an upper hand of figuring out what could be wrong with the computer from a software viewpoint, and make my judgment based off if it. This course would be very beneficial to students looking into the IT field as organizations value these skills with

various companies offering certificates like A+ certificate and Microsoft Certified Professional certificates, proving it to be an important asset. VI.

USING ON-THE-JOB EXPERIENCE IN FUTURE COURSESThe two future courses I will be taking that stand out to me are Information Systems Security and Privacy (ITM 820) and IS Project Management (ITM 750). Information Systems Security and Privacy teaches us “ the technical, operational, and managerial issues of computer and network security in an operational environment” (Ryerson University, 2017). It will teach us the ways security can be breached, and also ways to prevent violations. This course is very relevant to my co-op job as the IS department handled all the security issues of stores, home office, and in future projects and roll-outs. The store’s security approach was a little different than the security used at the head office as there were many external users, as well as the location being public. During my co-op terms at Staples Canada, we constantly had to maintain the standard of data security as the stores contained lots of personal data including payment information on our register computers, personal data when customers used our rental computers, and also the network in stores used for technology services. We deployed constant upgrades to antivirus software to prevent any new malware introduced, used port security to lock down any unused network ports, and introduced programs like “ deep freeze” that would wipe the information clean after a customer was done using a computer.

I had helped assist these deployment strategies by upgrading the software on computers and by working with network analysts when network issues arise. This course will allow me to understand how all these methods work

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together in a store environment. This course can also allow me to understand the different methods deployed within a head office environment. For head office users, laptops, computers, and Staples websites were always being used. Methods like hard-drive encryption, using anti-virus software, and adjusting Windows and Mac OS settings were used so Staples Canada was PCI compliant. This helped if Staples computers were lost or stolen as other people would not be able to steal any information off of it. Everything we did had to be PCI compliant, which meant that any organization that processed credit card information would maintain a secure environment. The course would definitely teach me multiple ways to avoid any security breaches that could be applied in my future career to any organization.

IS Project Management is another course that will make my work term more meaningful. IS project management will teach us the skills to correctly plan and execute various projects within an organization. During my work term, many projects were executed including store relocations, store openings, and head office hardware upgrades. This included shipping equipment to stores, working with vendors and also other departments to make a store functional and profitable. Although I was not directly in the project planning, I had helped and seen the required steps to make the project successful. After learning this course I would understand what had gone into the planning, the budgeting, and communication that went through. With these courses and my experience at Staples Canada, I would learn to understand and appreciate the work that has been done to successfully make projects work.

VII.

CULTURE, WORK-LIFE BALANCE, INTERESTING ASPECTS (OPTIONAL)

Staples Canada shocked me on the first day of my work term by their open and friendly culture they inherit. Every associate and manager was very outgoing and always had an easy, approachable manner. The IS department had also been very helpful as everyone was willing to take time to answer or clarify any questions I had so I was able to have a successful co-op work term. The success I found was because of the team player approach each associate had. With this open and friendly culture, Staples Canada has also done many fascinating things so associates have a better work/life balance including ice cream days in the summer where all associates had free ice cream, having co-op events like going rock-climbing and playing in escape rooms before we ended our work terms, and also having a Staples Whacky Olympics where we got to spend some time outdoors and participate in many activities. These extra events made my work term more enjoyable and very unique, and will always be a highlight of my career.

VIII. EVALUATING MY PROGRESS USING THE LEARNING OUTCOMES GRID

LEARNING OUTCOMES GRID Knowledge Area Types Refer to entire ITM degree program CO-OP Foundational Core

Integrative Knowledge Areas Personal and Interpersonal Business

Technology Technology in Business Processes, Projects & Change

Integrative Competency DOING Level 4: Able to perform ü Level 3:

Able to analyze and evaluate ü ü ü ü KNOWING Level 2: Able to

explain and apply ü Level 1: Able to recall and understand

After reflecting on my work term, I ranked my overall performance at being able to analyze and evaluate my foundational, core, and integrative knowledge areas.

Taking a closer look, I ranked my business knowledge as being able to explain and apply, while my technology in business knowledge as being able to perform. I have made the most progress with my technology in business knowledge as I was able to understand the IT methods and strategies used, the future trends, and the impact in office and in stores by the end of my work term. I was able to understand and also support the IT infrastructure, and saw a continuous positive change that enabled stores and office associates to become more productive by the decisions we made. This progression is credited to both my school learning as well as my work term experience. The school learning taught me the “ what” and “ why” of the IT knowledge I inherit, while the work term experience actually gave me the chance to perform and apply my skills in a real-life situation by assisting in the support of the IT infrastructure in stores, in office, and helping with the troubleshooting of hardware and software. I was fortunate to have my work terms at Staples Canada as they were not just giving me experience within the office environment, but they also gave me another aspect with their retail stores, the services they provide, and also the online e-commerce websites. An area of development would definitely be my business knowledge.

During my work terms, I received little to no experience with conducting business, and the support centre was not a big part of the decision making and budgeting. I was able to get some experience by helping with the asset inventory and the purchasing of any products we were running low on, but did not give me full hands-on experience of the business skills I learned in school. For the future, I may want to take courses that integrate business

concepts with organizations like Accounting for Small Businesses (ACC 607) or Small Business Finance (FIN 510) so that it would broaden my understanding of how this is important for decision making. For future work terms, I may also ask for a larger role in the business aspect of the organization so I can learn and grow my skills. Overall, I am satisfied with the Business Technology Management Program and my self-progress as it had really strengthened my knowledge and also tested my skills in a fast-paced business environment. I look forward to my future work terms I would continue to expand my skills and knowledge to test my true capabilities.

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