# Analysis for Assessing Staff's Software Education in an E-commerce Company

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#### Abstract

Information technology has been playing a vital role in the way of doing business. Companies ranging from small start-ups to multinational big corporations have developed electronic commerce (e-commerce) platform to further push their sales transaction. In order to further capture sales, companies usually employ workers with superb software knowledge to accomplish digital business strategies. This report is to examine the completeness, necessity and transparency of different software used for e-commerce platform.

Through surveys and interviews, the main reasons for low literacy of software education are analyzed. The proposed plans are significant supported by the interviews with the management officials in the company.

Based on the analysis above, to increase the literacy of software proficiency at HKTVmall, the following methods are recommended:

- Implementing a flexible learning schedule for workers
- Purchasing full subscription of software
- Replacing old software for higher work efficiency

#### Introduction

#### **Definition of E-commerce**

Among the global intergovernmental organization, the definition of e-commerce is trade oriented. The Organization for Economic Cooperation and Development (2013) defines e-commerce transaction as "sale or purchase of goods and services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders". World Trade Organization (1998) reports that "electronic commerce is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means."

Authors of academic research papers have a more diverse definition. Zwass's (1996) definition of e-commerce is "the sharing of business information, maintaining business relationship, and conducting business transactions by means of telecommunications networks". Shahjee (2015) defines e-commerce as "the process of buying and selling or exchanging of product, services and information via computer networks including the internet".

In this study, since we are studying the concept e-commerce of a specific company, i.e. HKTVmall, the term would be defined as the online platform to distribute and deliver orders placed online via internet, thereby activating business-to-customers or customers-to-customers transaction through the online platform on HKTVmall.

#### **Background of HKTVmall**

Established in 1992, HKTVmall possesses successful businesses over telecom market liberalization, popularizing advanced technology and applications. HKTVmall is now the largest 24-hour online shopping mall in Hong Kong, providing a "one-stop shop" platform to Hong Kong citizens to take care of most of their necessities, including groceries, entertainment and insurance etc. The mall also provides delivery service either straight to home upon \$500 HKD purchase (around \$87 CAD) or to O2O shop (Online to Offline shop) upon \$150 HKD purchase (around \$26 CAD).

There are currently around 300 workers in HKTVmall. The roles include but are not limited to: Product Marketing, Social Media Marketing, Resource Management, Supply Chain Management, Design and Speculation Team, Information Technology Team, Delivery Team, Human Resources and Customer Service Team etc. All workers have to access certain portal and software in order to deliver services on the e-commerce website.

#### **Statement of Problems**

The company holds certain expectation to pick up skills using certain software in order to deliver services online. However, it was found that a majority of colleagues in the company do not understand the basic software application while repeating daily office work. Most of them rely on the coding system set up by technicians from the Information Technology Department, thus missing crucial knowledge on computer software.

It was also found that a lot of people do not hold any valid certificate upon knowledge of some profound software. While company has purchased subscriptions to access a variety of programs, it was found that a lot of programs have hardly been used for daily office work.

## **Scope of Inquiry**

Through the statistical analysis, this report will outline the reasons for underperforming software knowledge, discuss the data and graphics generated from surveys and suggest execution plans for the company.

#### **Data Section**

### **Demographics**

The data is supported by two main primary sources of information: surveys from normal staff members and interview feedback with management officials.

The survey collected 50 valid feedback in total, of which 37 were female and 13 were male. The survey was only conducted in HKTVmall's office building. Among the participants, a majority started new with 0-2 years of experience in the company. Around 22% were experienced professionals with 5 years or more of experience in the company. All surveys and interviews were answered on weekdays during breaks within office hours.

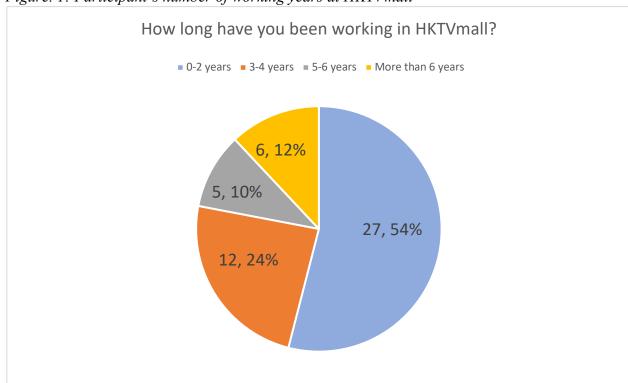


Figure. 1: Participant's number of working years at HKTVmall

## **Problem 1: Unfamiliarity of Software Language Despite Frequent Use**



Figure. 2: List of software that staff members are using

From Figure. 2, all of the participants were using Microsoft Office and G Suites for communication work. In daily office work, workers use Microsoft Excel to generate lists of products for sales organization and strategies planning, then use Google Slides and Doc for ease of communication between different departments and merchants.

Participants come from different departments. To name a few: Product Marketing, Brand Marketing, Customer Service, Design and Visual, Relationship Management, Business Analytics and Photography. Since workers from different departments use different software programs, it is common to see the variety in Fig. 2. It is significant to see that only 15 participants are using R Studio for sales data analysis and 29 using Algolia for keyword search adjustment. Since HKTVmall is a digital marketing agency, a majority of workers are using Salesforce for customer relationship management, and HKTV Merchant Portal for communications with merchants and website update.

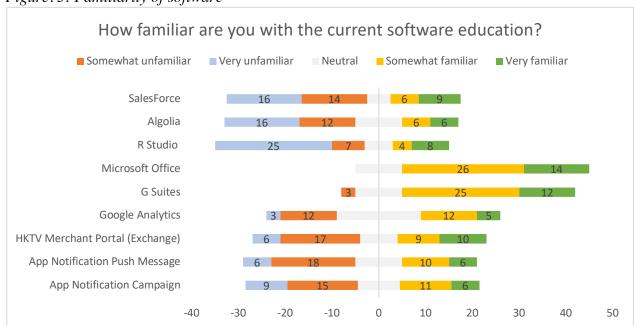


Figure. 3: Familiarity of software

According to Figure 3, a combination of 40 and 37 participants voted somewhat and very familiar with Microsoft Office and G Suites respectively, which aligns with Figure 2. With daily office operation, workers master a lot of formulae and graphical representation to foster work efficiency.

It is worth to note that the workers are the most unfamiliar with R Studio, Salesforce and Algolia. E-commerce companies require a lot of digital marketing strategies and data management. R Studio is a data analytics system for workers to interpret product scores and performance in a set period of time. The program does not require coding system, but knowledge that is specific to this application. Since only business analysts and management officials are required to use R Studio, the rating of this application has been low.

Salesforce is used most often for customer relationship management (CRM) through email marketing. There are a lot of coding and IT technical languages that only professional workers would know. Normally, colleagues would just replace certain code to output different products. Thu, not many people know the coding language on Salesforce.

Algolia is a back-end system to improve the digital platform of the e-commerce website, such as improving the sequence of the product listed, product search result and choices of product selection (e.g. origin, brand selection etc.) Similar to Salesforce, Algolia also requires coding language that only professional workers understand. Therefore, although workers use some applications frequently, they still do not master the programs proficiently.

#### **Problem 2: Inflexibility and difficulty of software**

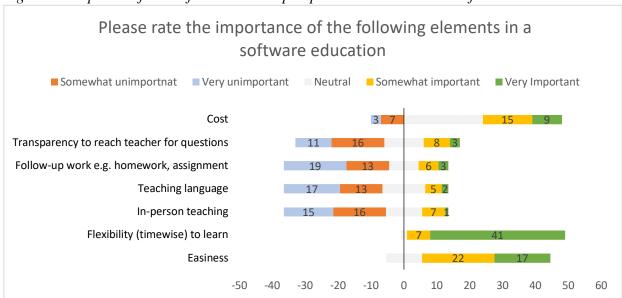


Figure. 4: Important factors from worker's perspective to learn a new software

From Figure. 4, a majority of workers believe that flexibility to learn the new software is the most important out of all elements. Workers have to manage a huge amount of work in the office, it is not ideal to learn a new software at a fixed time or else they will need to work extra hours to finish their work. The same reason applies to the relatively low importance of follow-up work and in-person teaching. Easiness and Cost are the next factors with moderate importance. For teaching language, since all the workers in the company are required to communicate in both English and Chinese, communication is not a major factor as workers' ability is compatible either language. Transparency to reach teacher has a moderate unimportance in the survey too.

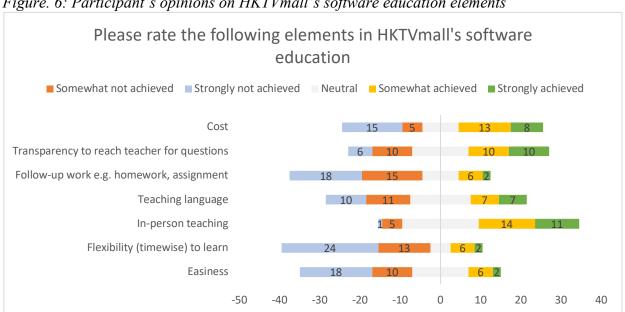


Figure. 6: Participant's opinions on HKTVmall's software education elements

According to Figure 6, HKTVmall's software education is best done in in-person teaching where 11 people think it is strongly achieved, followed by transparency to reach teacher with 10 votes in strong achievement and cost with 8 votes in strong achievement.

However, the achievement of flexibility and easiness have been subordinating. HKTVmall's current software education is through seminar in the auditorium at a fixed time slot. The seminars have been having a moderate attendance only due to schedule clash and sudden work disruption, causing immediate unattendance of software classes offered by the company.

#### **Problem 3: Necessary replacement of some current software programs**

Fig 7: Opinions to the new software



Some workers have suggested using another software to replace Zmail. Zmail is a major communication system for workers to foster conversations like email. It is reported that Zmail has been having malfunctional features, hindering workers' work efficiency and performance. Some examples include failure to receive email from Talent Acquisition Department and very limited attachment capability to send files with slightly bigger attachment.

#### **Proposed Plan**

After the thorough interview process and summarization of the result, there are three proposed plans for the software proficiency for HKTVmall:

1. Purchasing full subscription of software to maximize utility of the software

Since most of the workers in the company are not fully proficient in the applications they use in daily office work, organizing irregular classes for workers to learn more about coding languages. This strengthens workers' technical skills as well as digital application knowledge which is a valuable skillset in the current century.

One of the interviewees has reflected that HKTVmall encourage all the employees to take the examination of Google Analytics Certificate. The company has purchased the premium version called Google Analytics 360, which is a paid version of Google Analytics with a tier-based pricing. Having the certificate not only helps the company to identify the talents of its workers, it also strengthens workers' competitiveness compared to other professionals in the job market. Usually the certificate expires after one year, so taking the exam once a year also helps workers refresh their memories about the technical language in this software.

#### 2. Implementing flexible learning schedule

Implementing flexible learning schedule helps workers maintain their work efficiency while ensuring work performance and quality. Pre-recording lessons and setting difficulty levels differentiates learners with differentiated abilities which allows staff members to learn at their own speed and level. The flexibility also fits in to the working schedule with the least disruption.

#### 3. Replacing underperforming software

In order to increase work efficiency, replacing underperforming software reduces work hassle and strengthens the communication between different professionals in the company. Replacing Zmail with Gmail or Microsoft Outlook ensures decent mailing system to support internal and external communication.

#### Conclusion

#### **Summary of Statistics**

From the data analysis, the number of working years in HKTVmall are 54% for 0-2 years and 24% for 3-4 years. Most of the participants are familiar with Microsoft Office (80%) and G Suites (74%) since these applications are of frequent use to support worker's daily office work.

82% and 34% of participants believe that it is very important for the software education to be flexible and easy to fit in to their busy work schedule. However, only 4% believe HKTVmall has strongly achieved such importance.

#### **Summary of Proposed Solutions**

Purchasing full subscription of software application delivers fullest business strategies and supports staff's advancement opportunities in the technical field. Implementing flexible learning schedule reduces staff member's pressure to meet the company's expectation as well as tight deadline. Replacing underperforming software increases work efficiency and strengthens communication with necessary stakeholders.

Investing in human capital not only increases work efficiency, it also increases worker's cohesion and sense of belonging to the company, thus bringing long-term profit and success to the company. With the above suggested plans and the latest IT technology, HKTVmall is going to strengthen their position to be a leading digital shopping platform in Hong Kong.

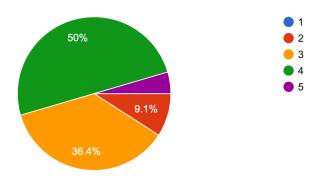
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## **Appendix**

## APPENDIX A.1: Worker's satisfaction to the current software education

How satisfied are you to the current software education? (1 = least satisfied, 5 = most satisfied) 22 responses



## APPENDIX A.2: Workers' response to the implementation of new software in HKTVmall

Do you agree that the company should implement more software in order to advance the company's potential revenue?

22 responses

