

# BYOD (Bring Your Own Device), Mobile Technology Providers, and Its Impacts on Business/Education and Workplace/Learning Applications

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## INTRODUCTION

### Concepts of BYOD

Until recently, was the norm for the employee could only do company work on a company device. Technological advances are now assisting individual's access to company information and applications on personally owned devices. BYOD (i.e., bring your own device), is making significant advances in the business world with about 44% of employees already using it at work. Companies are having a hard time controlling the employees from bringing their devices into the office and believe that implementing a BYOD policy will help employees be more productive.

The concept of BYOD was introduced in 2009 and has grown rapidly in the past few years. As of 2015, 74% managers/professional workers stated that their organization is using or planning to use BYOD" and "just over a quarter of have ruled it out entirely (Hammond). According to Apple, using BYOD can boost mobile workforce. "Users connect their mobile devices to the network without assistance from IT, and get first-tier technical support through online reference documents and instructional videos" (Apple). Being able to use these mobile devices in a group setting can substantially improve work efficiency. The devices are more mobile and are easily functioned.

Another process in information systems that BYOD could be implemented with is cloud computing. When the business has a cloud server, the employees will be able to access company data and information from their mobile devices and desktop computers in the firm. Some businesses that already have BYOD are using their devices to connect to cloud services in order to save space on the firm's computers. Although cloud computing could be beneficial for the firms in terms of storage, some employees and administrators feel uneasy about cloud computing. Some of the data that needs to be stored is often confidential information about customers about the business. Allowing that information to be uploaded to the Internet and open for everyone to see could be hazardous for the firm in the long run. When employees bring their own device, they have to make sure that their devices are not jail broken or altered in anyway. This could cause data leakages within the company, which could later lead to lasting consequences. Anyone could get ahold of their information and leak data to the world. Ensuring that the firm's cloud computing is secured and protected is one of the biggest challenges in implementing it.

According to Qrunfleh, Tarafdar, & Ragu-Nathan (2012), one main cost for any firm is a lack of knowledge of supply chain integration and how to manage a company's inventory. A company

does not want to order as many products as they can and expect to sell items immediately and successfully. BYOD would allow the flexibility of all members in the supply chain to access the level of communication technology needed to develop long-term supplier integration. It is very important to understand how supplier management practices and IS strategies can help a business improve their supply chain performance. To improve supply chain performance, a business needs to adopt specific information systems that support the processes and activities of their supply chain. In order to have an effective and enhanced supply chain performance, IS that a focal firm deploys in its supply chain should support and enhance the objectives and goals of supplier management practices. IS can assist a company with inventory control and provide its suppliers with production planning, so that, the right amount of inventory is made and that not too much is in production. The alignment of these aspects can provide a company with a low-cost supply chain and can reduce its labor cost as well as inventory costs. By using certain IS application aligned with supplier practices a company can have an improved supply chain performance.

Outside the traditional business institutions, a number of academic institutions are looking to add BYOD policies. For example, some K-12 schools are supplying teachers with devices that can be an aid in learning and universities are allowing students to bring their own devices to add to the enrichment of the programs. BYOD-based technology and its applications have numerous benefits, but they can be difficult to implement. Obviously, as with any technological innovation, there will always be adoption considerations and issues (Bruner & Kumar, 2005; Burton-Jones & Hubona, 2005; Chau, 1996; Chen, Gillenson, & Sherrell, 2002). Such technological innovations usually result in lower operating costs for the business, but they often require the organization to adapt (Belmans, Mobley, Page, Uy, & Lambrette, 2012). Since there are so many constraints and situations that could inhibit the security of

the business, some businesses are hesitant to use BYOD in their business.

## **Growth of Mobile Devices and BYOD**

Few companies have made as big of an impact on our society and more specifically world culture as Apple. It is many mobile device and applications offerings, which has significantly fueled the BYOD movement. Apple, once a company on the verge of fading into oblivion made an incredible comeback, using a combination of marketing techniques and devices unlike any of its competitors. Whether leaking information deliberately to generate a marketing campaign or creating commercials that emphasize its unique draw to the business professionals and millennials, Apple, like its competition in Microsoft and Samsung, can be considered an innovative marketing company. Many researchers believe that companies like Apple that have strategically leveraged electronic word-of-mouth (eWOM) and social media platforms to become a model of business practices over the last decade (Sinha & Thirumalai, 2011; Smith, 2012; Smith, Synowka, Clark, & Smith, 2012; Smock, Ellison, Lampe, & Wohn, 2011). Such companies as Apple have not only been turning out revolutionary products, but their marketing methods (e.g., specifically the product launches) have been brilliant. Because of this, they have had one of the fastest expanding market presences in recent memory over the last decade. Once a company that lagged far behind Microsoft in every important category, Apple has now carved out its own niche, cornering the market on hand-held electronic devices like iPods, iPhones, and iPads. The authors of this chapter firmly believe that they could be in a position to strategically leverage the BYOD movement to the next level with their product and accompanying security features to allow professionals to use sensitive corporate and customer data.

Apple excels at turning brand into market shares. When the iPod was first introduced, Apple made sure that it had its iTunes store in place. In

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