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**THE IMPACT OF SMARTPHONES ON WORK PRODUCTIVITY
AS PERCEIVED BY EMPLOYEES AT A GOVERNMENT
DEPARTMENT IN SALALAH, OMAN**

*Persepsi Kakitangan Jabatan Kerajaan di Salalah, Oman Mengenai
Kesan Telefon Pintar ke atas Produktiviti Kerja*

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Abstract

This paper elaborates the study on the impact of smartphones in a public department in Salalah, Oman. It highlights how the smartphone technology which came into existence nearly ten years ago has caused drastic changes in the field of communication. Smartphones have been developing rapidly and are increasingly integrated in people's lives. The impacts of smartphone usage in the workplace may be positive or negative which may influence work productivity in any organization. In this article, the impacts of smartphones on employees work performance were identified and the mechanism of dealing with these impacts are described in order to help, develop and increase their productivity or work performance.

Keywords: work productivity, impacts of smartphones, autonomy.

Abstrak

Artikel ini menerangkan mengenai impak telefon pintar dalam jabatan kerajaan di wilayah Salalah, Oman. Penekanan diberikan kepada bagaimana telefon pintar yang mula berada di pasaran hampir 10 tahun lalu telah mengakibatkan perubahan drastik dalam dunia komunikasi. Telefon pintar telah membangun secara pantas dan sangat berkait rapat dengan kehidupan seharian manusia. Terdapat kesan positif dan negatif penggunaan telefon pintar di tempat kerja antaranya pengaruh ke atas produktiviti kerja dalam sesebuah organisasi. Dalam artikel ini, kesan telefon pintar ke atas prestasi pekerja telah dikenal pasti dan mekanisma bagi menghadapi kesan-kesan yang dikenal pasti telah diterangkan bagi tujuan membantu, membangun dan menambah produktiviti atau prestasi kerja.

Kata kunci: produktiviti kerja, kesan-kesan telefon pintar, autonomi.

INTRODUCTION

Smartphones have very important roles in several sectors, which have seen major changes resulting from the use of smartphones by their staff that use them to complete their tasks, and communicate with a remote workplace while working from home. The boundary between one's professional and personal life has begun to gradually disappear day after day. It is now seen that employees perform their duties in the evening from their homes or during holidays and vacations. Thus, owning a smartphone gives employees the ability to communicate with their place of work and perform their duties any time and any place. Employees can communicate with each other and do their work all the time. If managers give their employees some flexibility in working hours, this is a positive thing.

Many researchers have reported positive impacts of using smartphones at workplace. Pitichat (2013) and Gagne and Deci (2005) stated that smartphones can benefit a workplace by promoting autonomy; instilling strong employee/organization relationships from bottom to top and encouraging knowledge sharing. According to Carayannis and Clark (2011), employees feel relax and comfortable while using their personal smartphones, and this personal and stress free factor leads towards work efficiency. Kakihara and Sorensen (2002) also confirmed that smartphone has gained its popularity as a communication platform in the workplace because it provides an improved function to help workers organize their assignments and allows people to work anywhere anytime.

However, there were also several negative impacts reported. For example, Bozeman (2011) elaborated the excessive use of smartphones at workplace can lead to addiction and obsession which can lower the work productivity. Smartphone usage also distracts employees from information and others in the meeting (Ebelhar, 2009). In Cavazotte (2014)'s study, the participants identified their smartphones use as crazy, compulsive and unhealthy. The use of smartphones has led to an increased workload, blurring of work/life boundaries, interfering with leisure time, and spousal resentment/family conflicts. The increasing expectancy for availability and quick responses to superiors make employees feel obliged to respond directly, even on their time off.

In this article, we explored the impact of using smartphones in the workplace at a government department in Salalah, Oman. Due to confidentiality obligations imposed by the government department, the organization will be referred as GDept in this article. The focuses were on the impact of smartphones on productivity of employees, the type of smartphone uses in the workplace and the type of smartphone applications, systems or regulations that would assist their work. GDept is a government organization affiliated with His Majesty Sultan Qaboos bin Said. The central office is based in Muscat city with a branch in Salalah. It includes several departments that serve the citizens. However, this article focused only on the main office and a health complex in Salalah.

Therefore, based on the scenario discussed as above, this article is based on the research that aimed to examine the factors that affect work performance in the workplace. Other objectives were to identify the levels of work performance, most frequently smartphone apps used and systems that help to increase work performance in the workplace.

METHODS & MATERIALS

Population of the Study

The community of this research was the staff of the GDept, where we found many employees of different nationalities and experiences. We chose employees who were efficient at their work so as to get clear and sincere answers which would contribute significantly to the success of this study. Questionnaires were distributed to a total of 120 people. From 120 questionnaires distributed, 110 responses were received. The total response rate obtained in this research was 91.7%, which is considered a very good response rate within the field of research. Following the questionnaires, interviews on six employees were also conducted in order to gain better knowledge and understanding of the impact of using smartphones in the workplace.

Survey

We prepared a questionnaire in two languages, English and Arabic. The Arabic version was required because most of the staff are weak in English. Then, we distributed the questionnaire to those who have received recognition for hard-work, to guarantee sincere and clear responses which can contribute significantly to the success of this study. The data was analyzed in the SPSS version 17. Appropriate percentages and frequencies were computed to assist in analyzing the data.

In-depth Interviews

In-depth interviews were adopted in this research. For the interviews, six employees were selected and were asked questions on the impact of using smartphones in the workplace, the applications mostly used, and their suggestions on using smartphones in the workplace to facilitate their work. In these interviews, we met employees from different departments which include the director, assistant director, head of section, doctor and non-technical staff.

Instruments of the Study

We composed a questionnaire consisting of five areas as follows:

- A. The general information of the respondents.
- B. Applications most used in smartphones, which consists of 8 items.
- C. Factors that affect work performance, which consists of 4 dimensions, and they are the following:
 1. Smartphone usage, which consists of 8 items.
 2. Restrictions on usage, which consists of 5 items.

3. Satisfaction, which consists of 6 items.
 4. Mobility, which consists of 4 Items.
- D. Work Performance, which consists of 12 items.
- E. Systems that will help facilitate and increase work performance if available on smartphones.

Questionnaire Validity

In order to check the content validity of the questionnaire, four experts were asked to verify the content validity of the questionnaire. All experts' suggestions and comments focused on the items being re-phrased, or correction of grammar and spelling errors in the questionnaire items. We followed the experts' suggestions and, after the modifications, the questionnaire was distributed to the study sample.

Questionnaire Reliability

The reliability analysis applied the level of Cronbach Alpha as the criteria of internal consistency which were at a minimum acceptable level (Alpha \geq 0.65) as suggested by (Sekaran, 2003). Cronbach's coefficient alpha values were estimated to examine the internal consistency. More specifically, alpha is a lower boundary for the true reliability of the survey. Mathematically, reliability is defined as the proportion of the variability to the responses to the survey and is the result of differences in the respondents. Also, the results of the survey will differ because respondents have different opinions, not because the survey is confusing or ambiguous with multiple interpretations. Cronbach's coefficient alpha values were chosen to examine the internal consistency of the measure. Hinton et al. (2004) have suggested four different points of reliability: excellent reliability ranges (0.90 and above), high reliability (0.70- 0.90), high moderate reliability (0.50-0.70) and low reliability (0.50 and below). The reliability for each construct is illustrated in Table 1. A high Cronbach's value for all constructs implies that they are internally consistent and measure the same content of the construct.

Table 1: Reliability of Measurements

Constructs	No. of Items	Cronbach's Alpha	Type
Smartphone usage	8	0.662	High Moderate Reliability
Restrictions	5	0.617	High Moderate Reliability
Satisfaction	6	0.623	High Moderate Reliability
Mobility	4	0.628	High Moderate Reliability
Work Performance	12	0.764	High Reliability
Total Questionnaire	35	0.717	High Reliability

The above table illustrates Cronbach's coefficient alpha values that were estimated to test the internal consistency of the measure. Cronbach's results varied between (0.617) for the Restrictions and (0.764) for Work Performance. Smartphone usage revealed a reliability of (0.662) and Satisfaction possessed a reliability of (0.623). and Mobilizing had a Cronbach's score of (0.628), while the total questionnaire revealed a reliability of (0.717).

Statistical Methods

To answer the research questions the following statistical methods have been used:

- a. Cronbach's Alpha to test reliability.
- b. Frequency distributions.
- c. Arithmetic Mean and Standard Deviation.
- d. Pearson Correlations.
- e. Multiple regression analysis.
- f. Relative importance, that is measured as follows:

$$\text{Level of importance} = \frac{\text{Upper limit of response} - \text{Lower limit of response}}{\text{Number of Levels}}$$

Number of levels are 3: High, Medium and Low

The following Table 2 shows how the range of level is derived.

Table 2. Range of Level of Importance Scale

Mean Range	Level
2.33 and less	Low
More than 2.33 to 3.66	Medium
More than 3.66	High

RESULTS & DISCUSSION

Employee productivity is an assessment criterion which measures the employee's work efficiency. Progress and productivity is an evaluation standard of employees workability in a specified time period (Rouse, 2014). There is a reason for this standard, that organizational success is typically based on the workforce, so an employee's productivity is the core consideration for a business to be grown. Employee productivity is of elemental importance to the "relationship between an organization's technology investments and its corresponding efficiency gains, or return on investment" (Rouse, 2014). Based on several literature reviews, we found four factors that may affect employee productivity. They are smartphone usage (Smith, 2012; Louis, 2008), restrictions (Harris, Patten

and Regan, 2013), satisfaction (Simmers, 2004; Gagne and Deci, 2005), and mobility (Barnes, 2003; Kakihara and Sorensen, 2002).

This article presented that smartphone Usage, Restrictions, Satisfaction and Mobility had Medium level of importance at GDept, Salalah. For smartphone usage, the majority of employees use smartphones during working hours silently in the workplace. The staff do not use smartphones during meetings, and used the phone at the medium level due to the lack of availability of applications related to work. For restrictions, the majority of employees prefer to use their smartphones during breaks, so as not to incur penalties or have their salaries reduced due to excessive use of their smartphones during working hours and monitoring by officials is not activated. All this led to the medium level for restrictions. As for satisfaction, the majority of employees feel happy and satisfied if their smartphones are with them during working hours. That is because they want to be connected to their relatives and their families in case of an emergency, at the same as using some of the general applications that may help them in their work. There are a few employees who consider that smartphones are not useful for their work because of the nature of their work, which prevents the use of a smartphone for private work reasons.

For mobility, many of the staff were in favor of the establishment of smartphone applications in order to be in touch with all colleagues. If applications were fully implemented, they feel, they would be given opportunities to exchange views and information, as well as many work related activities at any time or any place. They also said they intended to use their smartphones more in the workplace in the future. However, there were a few who did not support replacement of computers by smartphones because the former has a more practical side such that the storage and screen size is bigger and the speed is faster. That arrived at the medium level.

Level of Work Performance in the Workplace

The research concluded that the level of the employee's productivity in the workplace had a medium level of importance at GDept, Salalah. Many of the staff agreed that smartphones help exchange knowledge and information between them, and that they can create working groups with better social networking sites. Also, many of the support staff said that some general applications help facilitate and develop work such as reducing workload, finishing work quickly and with greater efficiency. Few employees use a smartphone while they speak with other employees because they do not want to distract their work performance or bother others who might be distracted by their voices. Therefore, employee's productivity in the workplace had a medium level of importance.

Most Frequently used Applications/Function in the Workplace

Most of the respondents use smartphones for the internet (except social network) and use smartphones for the purpose of personal phone calls and social networking, while the least is the games applications because

during down time in working hours, staff use the internet to browse or visit sites for news, as well as make phone calls which are, mostly, related to private work.

Systems will Help Facilitate and Increase Work Performance if they are Available

Most systems that facilitate and increase employee's productivity in smartphones are from the official website of the GDept portal and the IT systems. Because these are the GDept portal, staff can access through the internal network only. That is why it is necessary for a staff member to access his computer in the workplace. Also, the GDept portal contains a lot of information pertaining to the employee. Moreover, an employee can also request vacation time through this portal and other things. Therefore, employee support is an expansion of this portal and, if it were available on smartphones, employees would have access to it at any time or place.

As per the above discussion, we can conclude that the widely usage of smartphones at GDept is not an exceptional case. However, we also noticed that the impact of smartphone usage in and employee productivity is not that high. As far as employees' productivity is concerned, it can be seen that this might be due to the lack of applications which would enable workers to perform their work after working hours. This article will help the decision makers to consider the smartphone as one of the best tools in increasing work performance and employee productivity and to introduce new applications that can assist employees in performing their work via smartphones.

CONCLUSION

Through this study, our goal was to find the impact of smartphones in the workplace at the GDept of Salalah, and its benefit in the development and facilitating of work, which could lead to increased work performance in the organization. As expected, we found that there are benefits or positive impacts attached to the use of the smartphone in the workplace.

Among the most prominent pros found by us is the mobility of the employee who, with the aid of a smartphone, can communicate with colleagues at work or any applications may also use it now or in the future, the employee can communicate or use applications at anytime and anywhere.

The following are some recommendations proposed that may improve the productivity of employees at GDept of Salalah.

1. Allow the use of smartphones during working hours, and ensure the phones are used appropriately.
2. Since most of the participants in the questionnaire take their smartphones with them to the workplace (96.4%), we suggest the creation of specialized smartphone applications. These applications

should help to facilitate, develop and increase work performance such as the official website of GDept portal and IT Support Systems.

3. Create a specialised application for the employees, that allows staff to communicate with each other, with the possibility of the separation of women and men, and also applicable to the exchange of information and knowledge at work.
4. Allow the use of internet wireless LAN (Wi-Fi) in the workplace but develop an ethical code to guide their use. This is crucial to avoid internet misuse.
5. In the future make in-depth study on the benefits of smartphones and how it contributes to the development and increases employee productivity or work performance.

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