

UNIVERSITY OF WALES TRINITY SAINT DAVID

DIGITAL SKILLS AND RESEARCH METHODS

HOW TECHNOLOGY IMPROVED PRODUCTIVITY AT WORKPLACE

BMSK4003

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Introduction

Technological progress and innovation at workplace allows many companies and people to work in a very distinct ways, essentially changing where, when, how and with whom people work. There is no sign of slowing the spread of the digital economy, which is a main driver for such modifications. Continuing to satisfy customers ' particular and personal demands, increasing economic components are linked and managed by a complicated digital network (Stiroh, 2002). It is agreed that effective and adequate technological solutions define the productivity of a company and support more efficient and contemporary working practices, which include better remote operations. Productivity is described in relation to the moment and/or resources used to generate products and services supplied in companies (i.e., outputs) (Jeremy, 2018). This sensor-driven network of large information and smarter computer processing, operation via manufacturing lines, logistics centres, retail outlets, transport networks and road systems prove to improve workplace productivity. The aim of innovation and technology is to create the conditions for maximum economic and social benefits in terms of new ideas, products, and processes. For this, a powerful knowledge base, creative capabilities and behaviour, and conditions for the dissemination and implementation of technology across the economy are needed. Therefore, this study aims to identify the impact of technological advancement on workplace productivity (Acemoglu & Zilibotti, 2001).

The purpose of this research is to investigate how technology improved productivity at workplaces.

Literature review

Since the dawn of the Industrial Revolution, technological progress has led to drastic rises in productivity. In the 19th century, steam-engine power plants, electrification resulted to mass production in the early 20th century and in the 1970's sector was automated (National Research Council, 2003). However, the following decades saw only incremental advances in technology, in particular in comparison to the breakthroughs in IT, mobile communications, and e-commerce. Technology produces a platform for real company achievement, which maximizes company productivity. The software for enterprise productivity guarantees companies have the instruments to overcome everyday challenges and flourish implementing strategy at present financial times. The automation of procedures allows quicker communication of the approach, higher time spent

on strategic priorities and higher project completion rates to track enhanced company productivity (Jin, Huang, Hu & Rozelle, 2002).

Manufacturers in many sectors use robots for a long time to tackle complicated tasks, but robots are revolving with time to become more useful. They are increasingly self-sufficient, flexible, and cooperative. They eventually communicate and work securely with people and learn from them. The price of these robots is lower and their capacities are higher than those in production today are. For instance, Kuka, a European robotic equipment manufacturer, provides independent robots interacting. These robots are linked so that they are able to work together and modify their behaviour automatically to suit the next product in line (Jin, Huang, Hu & Rozelle, 2002). In manufacturing firms, analytics based on large information sets have been developed, optimizing production quality, reducing power and improving equipment service. In order to support real time decision making, technology makes the collection and extensive assessment of information from a number of distinct sources— manufacturing equipment and system, and company and customer management systems. 3-D product, material, and manufacturing simulations have been used these days already (Brynjolfsson, 2003). These simulations use real time data in a virtual model that can include machines, products, and humans, to mirror the physical worlds. This enables operators to test and optimise the machine configuration of the next online item in the virtual model before the physical transition (Scherer, 2002). Siemens and a German machine tool vendor have created a virtual machine for simulating the machining of components by physical machine information, among other things to enhance productivity. This reduces the setup time by up to 80 percent for actual machining process (National Research Council, 2003).

Online software solutions for company productivity allow executives to monitor advances more readily at every stage of their objective and offer instant enhancement or coaching to maintain efficiency and deadlines. This method contributes to higher company productivity as people have employees with fresh abilities and are challenged to do the best of your organisation. Therefore, most IT systems of today are completely incorporated. Because of embedded IT systems businesses, vendors, and clients are strongly related and departments like engineering, manufacturing, and service are strongly connected. Functions are fully incorporated from the business to the shop floor level. Even engineering it, from goods to facilities to automation, is fully integrated (Basu, Fernald, Oulton, & Srinivasan, 2003).

In general, staff want their hard work to be valued. Software for business productivity and technological progress can fill the communication gaps and communicate that they are appreciated to every member of the team. Technology produces committed, productive, and loyal workers with individuals working at their greatest skills and businesses from top to bottom. Appreciation is the key to loyalty for employees, which results in increased company productivity (Brynjolfsson, 2003).

Methodology

Research philosophy

Objective ontology was the strategy and a position of positive epistemology was taken. The research's objective position required that the investigator be autonomous and interact little with results (Palad et al, 2016). These methods were introduced. The study was based on a deductive strategy.

Material

Self-administered survey questionnaires were used for the study. The fact that administering questionnaires is observed to generate much more reliable answers reduces the likelihood of social desirability is reasons behind the management of questionnaires. This is important due to the nature of this study, as previous literature has portrayed the presence of social desirability when studying technology and productivity (Dipboye, 2013).

Procedure

The questionnaires were fused online and accessed via a link. This link was sent to the organisation's Human Resources departments to email to staff who wished to complete the questionnaire. The answers were anticipated to construct through peer relations by the use of the 'snowball method.' (Marshall and Rossman, 2011).

Data analysis

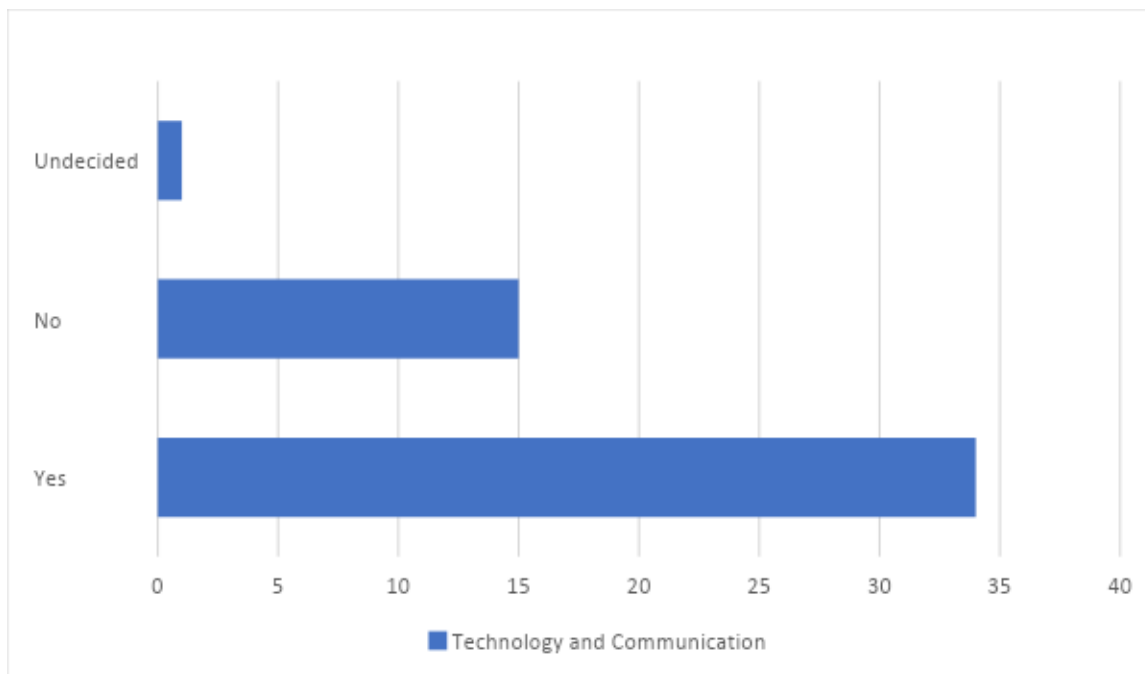
The information analysis provides the information gathered with structure and significance (Marshall and Rossman, 2011). Excel graphs were used to analyse the data. Excel is simple, easy to use, and takes less time.

Ethical consideration

Research ethics are the moral principles that guide study from beginning to end and to publish outcomes' (Ethics & Conduct Code, 2009). Since present study depends on the involvement of the human being, ethical factors are crucial. This acknowledges their active role and safeguards their privacy. There are four major ethical problems, informed consent, confidentiality, disappointment, and participant protection discussed.

Findings and discussion

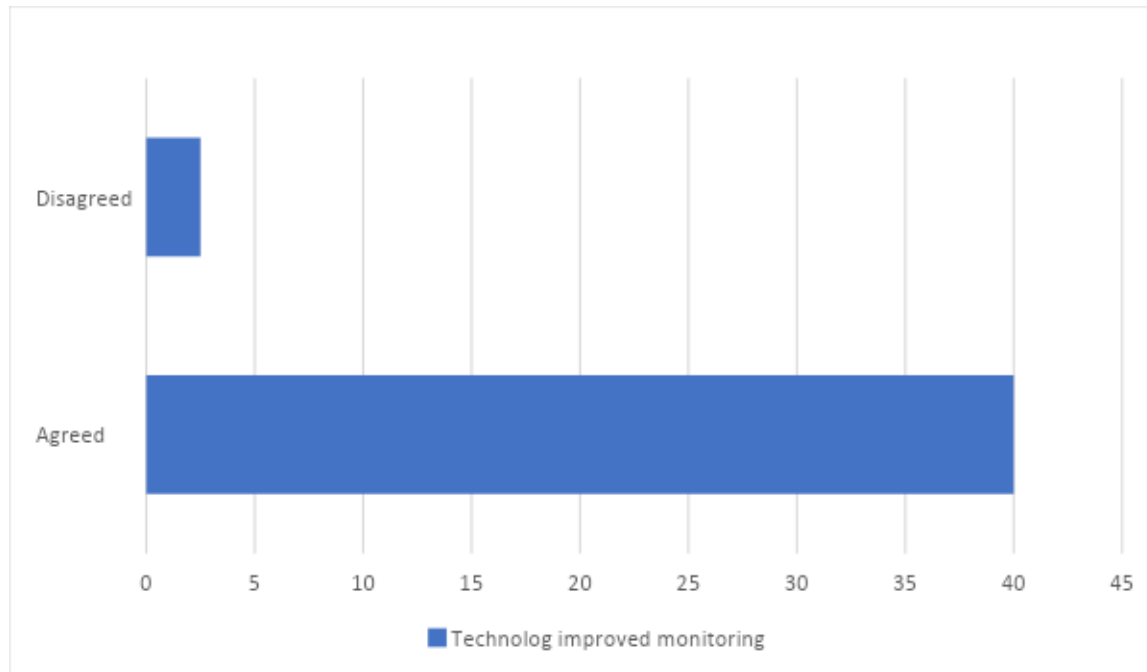
Quantitative data is presented in this section and discussion is presented on the findings.



The above given figure presents the findings of the research when the research participants were asked whether technological advancement has led to easier and convenient communication in the organisation. The research participants overwhelmingly said that technology does help in communication. 34 respondents said “Yes” and 15 respondents said “No” and one remained undecided.

The results of this study illustrate a positive relationship between productivity and technology in the workplace. Technologies have now become an integral part of the working procedures and being up-to-date with the most advanced technology now constitutes a prerequisite for working in

most organisations. The technology market for smart devices for private use has been proclaimed booming, and demand in the company sphere is increasing, with a research study seemingly consistent. Technology communication gradually displaces oral communication in the workplace with the order of products and services, apps, debates, presentations and even conferences, among others, held on the Internet. Documents were prepared by typewriters before the introduction of the sophisticated techniques and were held in chronologically ordered records (Morrison, 1997)

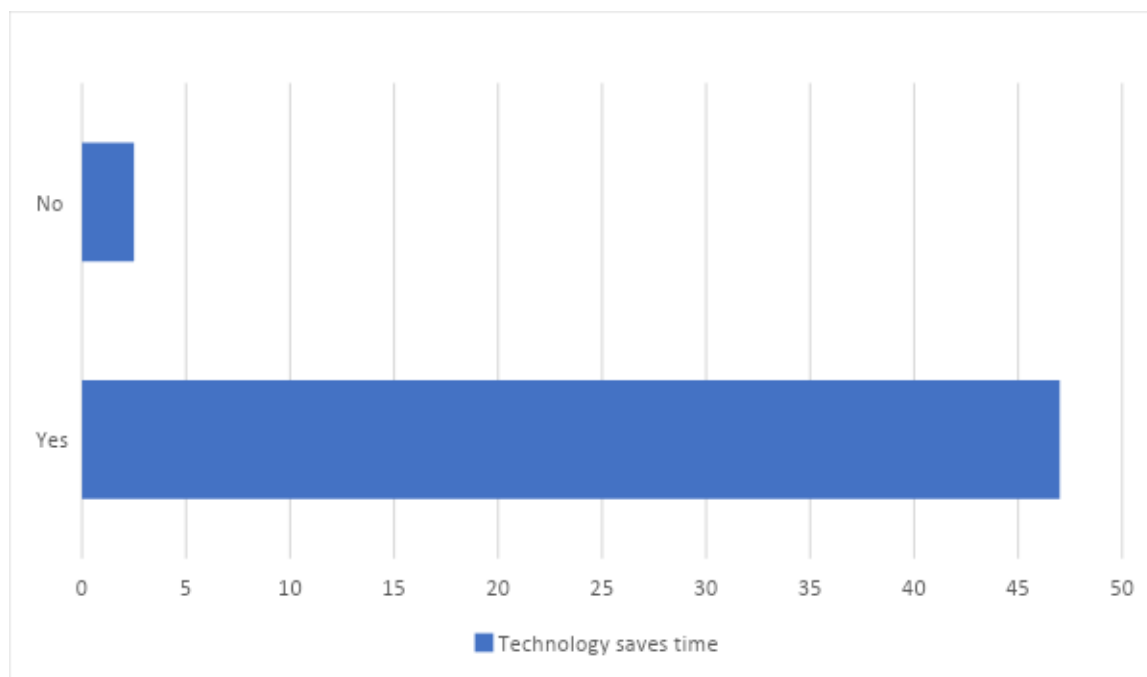


It can be seen in the figure given above that 40 percent of respondents agreed with the statement “Technology improve monitoring in the workplace”.10 respondents disagreed with the statement.

It has been observed that when the Personal Computer arrived, the paradigm shifted from paper to paperless paperwork as reflected by the office's evolving working habits. Henceforth, this study illustrates how technology aligns with productivity of organisations by expanding the platforms of digitised networks. Automated technology aims to improve productivity and to make task performance more efficient. There are office systems for facilitating, creating, processing, and distributing data. With the introduction of technology, the way business is performed in offices has changed (Kokko, 2004). This new system has brought new gadgets like laptops, smart phones, tablets and the like into the era of the typing machine and the old computers. The use of social

media through these new techniques also has enhanced the way clients are attended to and has made the company more productive.

The company's company environment has recently been secured by new technology tools such as hidden cameras (Johnson, Scholes, & Whittington, 2003). Organisations are now installing security devices in various workplaces. These easy instruments assist to verify how the staff work and how the organisation is threatened by safety. This improves people's productivity because they understand that they are tracked. The adverse effect is the fact that fewer officers / supervisors are required. Management of such digitalised devices enhanced productivity as demands of the workforce are met in digitised realms (Johnson, Scholes, & Whittington, 2003). Technological developments have completely transformed organisations by extremely integrated and streamlining their company procedures (Johnson, Scholes, & Whittington, 2003). The technological progress of those companies has facilitated the smooth and efficient performance of their duties. Project management software systems such as help in the creation, delegation, review, and evaluation of a job. Employers and executives can control jobs that assist keep everything on track. It sets the duties allocated to the individuals as responsibility, responsibilities, effectiveness, and timely execution.



The above figure depicts the response on the question “does technology saves time while performing daily routine tasks in the organisation.” 47 employees said “Yes” whereas only two employees said “No”. It means that the majority of employees believe that technology saves their time at workplace.

Today, the contemporary workplace has many innovative workflow goods and software. The ultimate objective of every business is to enhance profitability. With innovative technological software, businesses are now fiscally sound, with the cost-effectiveness of these developments. Each workplace has certain chore duties that specific individuals need to deal with. It inevitably maintains high expenses (Jeremy, 2018). Installing SaaS instruments at work can also reduce this expense. By using SaaS instruments, manual handling of a job can be eliminated by automating and concentrating on integrating distinct functions where possible (Massy, & Zemsky, 2005). To enhance productivity, new technology has made it possible for remote work, teleconference, and co-working areas to totally change the workplace. Instant and remote access to Internet-based services models has been permitted through mobile and cloud technology (Kokko, 2004). This led, not in one place, but in many interconnected workplaces. Virtual conferencing, full connectivity, and portability interconnect them. Cloud technologies and enhanced IM systems have helped staff job with the mouse click from anywhere. Video conferencing enabled coordinating with the finest staff wherever they are (Keller, 2000).

Conclusion

Businesses currently depend on business software that offers a wide range of instruments to face everyday difficulties in implementing their strategy. It allows executives to monitor progress more readily during every stage of achievement of the objective, and it offers instant strengthening or guidance to maintain efficiency and deadlines. This is another instance of technology's role in enhancing organisations ' efficiency and efficiency. Access to new technology made it possible for staff to do stuff quicker and helped to prevent distractions in the workplace, thereby increasing productivity.

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