

Digital Skills and Research Methods Term 2 BMSK4003

Tutor Paul Wallin

Ashakur Rahman 1706495

Abstract

The Aim of the report is to analyse Modern technology within the work place how it has benefited us at the London Stock Exchange. And how we use different research methodologies and an explanation of effective and ethical data collection and interpretation. This paper reviews existing and different types of research methodologies and how companies gather information.

Morden Technology within the work Place

Most businesses today are using many business communication technologies to change the way their staff and managers interact and communicate while at work. There are various communication tools for staff to interact and to exchange information at work. For example, in my work place at the London stock exchange many employees from different departments use text messaging services or video conferencing tools to share and exchange very valuable information between each other. Virtual communication tools like Skype are used to share screens and this helps us to share projects ideas while we work in different departments, we use this also to support group decision making.

Technologies are currently being used In the London stock exchange for online lecture notes, collaborative discussions newsgroups and projects announcements, communication between employs and business partners by email. With the world in the midst of a social media revolution, social Networks such as Facebook, twitter, MySpace, Skype are all used

for communicating the sharing of knowledge and information among the different groups and department ,this keeps everyone within the company informed which makes them aware of upcoming projects and promotes communication skills among staff and departments .

Morden Technologies has the potential to fundamentally change the character of our social lives, both on an interpersonal and work level. Technology at its most basic level allows you and our staff to be more efficient and productive and makes life easier. With technology we at the stock exchange track employee time, and perform many tedious tasks which once took hours now it only takes minutes. With Excel spreadsheets with its hundreds of computational formulas help ensure accuracy we compile financial information our books are now regularly maintained with a software program when we want a financial statement we can now generate it in minutes. At the London Stock Exchange we use the internet for digital marketing and online training for staff, and to promote our company across the globe. And to connect and improves our relationship with our clients

"Any sufficiently advanced technology is indistinguishable from magic." Arthur C. Clarke, 1984

Information Gathering and Social Networks

websites can serve as first impressions for information for employers, investors. The use of social media for information gathering such as Twitter to Facebook to YouTube, the use of social networking sites for information has become very popular Social networks which gather a range of information from users provided directly to the site, and information which was revealed when user interacted with the site Managing information involves gathering and distributing necessary information and assimilating them on the projects. The information gathering techniques are repeated processes that can be used to create and organize your with different kinds of sources.

Primary Data

Primary sources are not just documents and written records. There are many different kinds of primary sources, including: first-person accounts, documents, physical artefacts scientific data that has been collected but not interpreted. Primary research is the gathering of 'first-hand' data it is collected by observation questionnaires, experimentation and surveys this can be often expensive, but also relevant, up-to-date. And accurate

Secondary Data

Secondary research, is the collation and analysis of existing or 'second-hand' marketing data. This process will be cheaper than primary research, However this data may be less relevant because this was not collected for the specific needs and could be out of date.

“Data is a precious thing and will last longer than the systems themselves.”

Tim Berners-Lee

Types of information gathering techniques

Brainstorming All the ideas are generated which requires the help of a facilitator with an open discussion and mass interviewing techniques. This can be done during a scheduled meeting with your colleagues and peers. When all the ideas are generated, they prioritize the best ones they think are right for this solution.

Delphi technique In this technique the project management requires a facilitator that will give out questionnaires to bring in all different ideas. Then the responses are recirculated and summarized to the participants.

Root cause analysis One of the techniques is the root cause analysis. It is used to identify problems and its underlying causes which will help in developing a preventive action.

Interviewing The most common technique for gathering requirements is to sit down with the clients participants, Stakeholders, and experts are interviewed to identify risks. The discussion should be well planned ahead of the interview based on the type of information and requirements you're looking for. Generally you want to ask open-ended questions to the interviewee to get them to start talking and then ask probing questions so you can uncover requirements.

Qualitative And Quantitative Research Methodologies

Quantitative Research

Quantitative research is more simpler to identify and define .The data are always numerical, and they are analysed using mathematical and statistical methods. If there are no numbers involved then it is not quantitative research.

Quantitative Research is useful in an environment where numbers are highly valued and numerical data is considered the best standard. However it is important to note that quantitative methods are not necessarily for investigation. They are unlikely to be very helpful when you want to understand the detailed behaviour in depth. It is also possible that assigning numbers to fairly abstract constructs such as personal opinions risks making them spuriously precise.

"You can have data without information, but you cannot have information without data."

Daniel Keys Moran

Sources of Quantitative Data

Quantitative data is Surveys, whether conducted online, by phone or in person same questions being asked in the same way to a large number of people. Observations which may either involve counting the number of times that a particular phenomenon occurs or coding observational data to translate it into numbers and Secondary data such as company accounts.

Analysing Quantitative Data

There are a wide range of statistical techniques available to analyse your quantitative data, simple graphs to show the data through tests of correlations between two or more items, to statistical significance. Other techniques include cluster analysis, useful for identifying relationships between groups of subjects where there is no obvious hypothesis, and hypothesis testing, to identify whether there are genuine differences between groups.

“Data is a precious thing and will last longer than the systems themselves.”

Tim Berners-Lee

Qualitative Research

Qualitative Research is carried out when we wish to understand meanings, and understand experience, beliefs, ideas and values, qualitative research is all about putting yourself in someone's shoes and seeing the world through their perspective. Qualitative Research seeks to convey why people have feelings and thoughts that might affect the way a person behave.

Qualitative research is any which does not involve numbers or numerical data. It involves words or language, but may also use pictures or photographs and observations. Almost any phenomenon can be examined in a qualitative way, most of the time it is the preferred method for some of but this distinction is by no means absolute. Qualitative analysis will results in rich data that will give you an in-depth picture and it is very useful for finding out

how and why certain things have happened. The downside to qualitative research, If respondents do not see any value for them in the that research, they are most likely to provide you with false or inaccurate information. They may also say what they think the you wishes to hear. For Qualitative researchers you need to take the time and build relationships with your research subjects that way you will receive correct information.

Ethics are always issue for any type of research, there could be difficulties with qualitative research the researcher may be party to confidential information. It is important that you bear in mind that you must never do any harm to your research subjects.

As a qualitative researchers it is harder to remain apart from your work. By the nature of your study, you are involved with people, therefore it is important to develop your habits of reflecting on your part in the work and how this may affect your research.

Sources of Qualitative Data

Qualitative data is much more general than quantitative, there are still a number of ways for gathering it. This include Interviews, which may be unstructured structured, or semi-structured you can have Focus groups, which will involve many people discussing the same issue you can have written questionnaires that ask three or four focused questions for the participants but you allow them some space for Secondary data which they write in their own words .This includes Observations, diaries, company reports; written accounts of past events,

Analysing Qualitative Data

Qualitative data is drawn from a wide range of sources, they can be radically different in scope. There are many ways and methods for analysing them, some involve coding and structuring the data into themes groups . There are many computer packages to support

qualitative data analysis. At the London stock exchange they will always discuss it with supervisors and managers to work out which one is right for the company.

Ethical issues in data collection and processing

The ethical interpretation of research and communicating it, is essential to ensure the accessibility, timeliness, and validity, of new knowledge. Failure to adhere to ethical principles may have some adverse outcomes. The highest ethical standards must be upheld when collecting data and your research plan must describe the measures that will be taken to protect the participants involved. Be aware of data protection legislation how the data will be Protected. Only collect what is necessary and the way in which data are going to be used , managed and stored. And Who will have access to the data.

When the data has been collected, it needs to be interpreted analysed and compiled. Surveys are said be as being more resource intensive. Sometimes, the people from where the data are collected, may incur some expenses , and it may cause a certain amount of potential harm and discomfort in the process of data collection. All these can be considered as ethical issues in collecting data. The major principles associated with ethical conducts are: Do not harm, Privacy and anonymity, confidentiality, informed consent, Rapport and friendship.

“We’re entering a new world in which data may be more important than software.”

Tim O’Reilly, Founder, O’Reilly Media

Conclusion

Morden technology has a profound impact on all of humanity . The evolution of the Internet , Once a government project, which was created for military purposes, But now has spread

around the globe the worldwide web. The Internet today is used by institutions, individuals and businesses. There is global market for Internet service this has helped productivity in today's global business specially in the communication field. Global advancement and development will undoubtedly depend on technological advances, Without Technology the world would simply have to struggle

Selecting and maintaining appropriate data sources is always a challenging aspect. Data sources are not valuable unless they are complete. The purpose of data collection is so that you can understand and explain and analyse a problem and the causes behind it. There are many agencies which collect and process data and publish it. This will be used as secondary data. However the choice of source of data you collect depends on the objective of your study. Finally it is important to say that there is no wrong or right answer to which research methods you choose. Some people only use one single method, whether quantitative or qualitative, and some use several methods sometimes all one type or it can be a mixture of methods. Only you can decide which methods will suit you best for your research.

Reference

O'Reilly, T. (2018). *Data Analysis Quotes (17 quotes)*. [online] Goodreads.com. Available at: <https://www.goodreads.com/quotes/tag/data-analysis> [Accessed 1 May 2018].

Clarke, A. (1984). *Profiles of the future*. New York: Holt, Rinehart, and Winston.

springboard.com. 2016. *DATA SCIENCE* at: <https://www.springboard.com>. [Accessed 30 April 2018]