Big Data and Information Technology on Retail Industry

Formative Tasks

Formative Task 1 – Narrowing down your research topic

The chosen research topic for this assignment is "big data and information technology" which elaborates on the core aspects of modern digital usage in different industries.

Why are big data and information technology essential for the current business scenario?

What are the benefits of using big data for recording data accurately?

Who would benefit most while using information technology within the business?

Is the retail sector benefiting from using relevant data and information from digital concepts?

Why are the markets constantly revolving around technology and businesses getting benefits from big data instead of contemporary processes?

What issues and challenges might develop while using big data analytics and information technology in the business?

Formative Task 2 – Choosing academic sources

Reference-source	Currency	Authority	Accuracy	Relevance	Purpose
Al-Sai, Z.A. and Abdullah, R., 2019, April. Big data impacts and challenges: a review. In *2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology*	This source is up to date and was published in 2019 which is relatively recent. The links of this source are functional and accessible easily.	Z.A. Al-sai and R. Abdullah are the two authors of this research paper. The research source of this paper is commercia	The information was collected from reliable sources and primary data for better understanding. The information is supported by other	The information mentioned in this research paper is connected with the current research study, Big data and information	This research paper evaluates the core concept of big data impacts and its challenges which might affect

(JEEIT) (pp. 150-155). IEEE.		I and both authors are highly qualified.	peer-reviewed sources.	technology. The research outcomes are advanced and I have looked at other sources before choosing this paper.	businesses. This research paper provides clear insights into big data issues and solutions accurately.
De Mauro, A., Greco, M. and Grimaldi, M., 2019. Understanding big data through a systematic literature review: the ITMI model. *International Journal of Information Technology & Decision Making*, *18*(04), pp.1433-1461.	This source is also updated last in 2019 which refers to moderate new sources to focus on. However, this research paper is from a journal of national information technology which provides operative	There are three authors, A. De Mauro, M. Greco and M. Grimaldi who are PhD scholars and renowned researchers.	In this source, researchers have used reliable peer-reviewed and systematic data for drawing better conclusions regarding big data.	It is a literature review of big data analytics which includes various reliable data and sources that might help me to develop a productive research paper.	The core purpose of this paper is to evaluate the literature review about big data analytics in light of information technology and the current digital

	links for better understanding.				business context.
Smys, S. and Raj, J.S., 2019. Internet of things and big data analytics for healthcare with cloud computing. *Journal of Information Technology*, *1*(01), pp.9-18.	This research paper was published in 2019 and is updated with relevant data.	There are two authors of this research paper S. Sms and J.S. Raj who is a scholars and this source linked to a journal of technology.	This research study is based on real-time data collected from the healthcare sector to evaluate the importance of big data and IoT in the current scenario.	It is real-time research based on the healthcare system which evaluates understanding of big data analytics and information technology relevance in recent healthcare interventions.	The core purpose of this paper is to evaluate the importance of the internet of things and big data usage in healthcare decor.
Popchev, I.P. and Orozova, D.A., 2019. Towards big data analytics in the e-learning	This research study is also updated and published in 2019 and	I.P. Popchev and D.A Protiva are two authors of	This research is based on real-time data collected	This research reviewed current Learning trends that	The core purpose of this research is to evaluate

space. *Cybernetics and information technologies*, 19 (3), pp.16-24.	links are assembled for further review.	this research paper who are highly qualified in their field.	from e-learning platforms for evaluating the thoughts and expertise of current e-learners.	increase the reliability of online learning in the current scenario.	the different usage and importance of big data and information technology in e-learning platforms.

Formative Task 3 – Understanding Primary Research Methods

Primary research is defined as the raw collection of data or on-time data which is owned by the researcher because there are no other sources or prior examined measures chosen for conclusions. In the primary research process, everyone provides data, their experience alone draws attention not simple or minimal things productively which can change the overall concept of the topic. Generally, two types of data collection processes were used but researchers generally used primary research methods and secondary research methods both or significantly. The primary research method is a direct way of data collection where researchers include a selective or random population to increase data collection easily. On the other hand, secondary data was collected from different prior review courses, CRAAP tests, journals, articles, publications and others for collecting data without involving other people.

Primary research can be qualitative or quantitative research where qualitative refers to interviews and quantitative research refers to surveys. However, the current research is going to focus on a quantitative primary research survey with almost 25 employees of any leading retail company. A qualitative interview would be also presented in this study with almost 3 manager interviews for enhancing knowledge about the usage of big data and information

technology along with evaluating its impact on operations of a specific organization from the retail industry, UK. Moreover, there are other two process observations and ethnographic processes that are also used by the researchers for collecting on-time data along with helping to evaluate the real-life experiences of the workers.

Formative Task 4 – Understanding the differences between qualitative and quantitative approaches to research

The most critical difference between qualitative and quantitative research approaches is qualitative focus on meaning while quantitative focus on numbers. In terms of primary quantitative research statistics, numbers, and percentages get major priority because it evaluates employees' thoughts and expertise by using statistics and percentages. On the other hand, qualitative research helps to evaluate concepts, thoughts and opinions of the managers which can help to draw productive outcomes easily. Moreover, quantitative research is subjective where researchers are involved with the process and perform the most critical measures while the questionnaire process. While in term of Qualitative research method is more objective where the main focus relies on the purpose of the business or other critical measures which enhance the growth measures of a significant business.

Final portfolio tasks

Portfolio Task 1 - Summarise the academic background of your chosen research topic

In the current situation, every sector is digitally dependent which makes them more reliable and relevant at the same time. However, the chosen topic, big data and technology are emerging steadily which makes the overall process easy and quick (Oláh *et al.*, 2020, p.16). The current discussion is focused on big data and technology, indicating the high growth of big data analytics. The current industries are revolving around big data and different digital interventions which makes the overall process more quick and secure. Several sectors such as retail, automobile, agriculture, and tourism are gradually using big data and different digital technologies including digital money, digital transactions and others to strengthen their business attributes. The core purpose of this topic is to evaluate different digital interventions and implications that might affect the business attributes of several industries. Big data and

technology helps business harness their confidential data and utilize them to address new market opportunities. In return, it leads to higher productivity, profitability, smarter business moves, more efficient operations, higher profitability and happier consumers globally (Maitland *et al.*, 2020, 29980). Businesses that use big data with advanced analytic tools gain value in different ways such as reduced operational expenses. The background of this topic is vast and segmented into different sections which make the process more reliable and enhance the quality of operations. However, it provides better customer services, develops personalized marketing processes, and campaigns and considers other actions that can eventually increase cost revenue and overall profits (Popchev, and Orozova, 2019, p.20). This summative assignment is focused on the core aspects of big data to describe large, hard manageable, big data volumes, structured and unstructured. Moreover, the Qualitative research approach relies on verbal communication, written communication and interpersonal thought whereas the quantitative research approach focuses on statistical data such as logical observations, and the number of people responding to draw effective conclusions (Al-Sai, and Abdullah, 2019, p.150). In qualitative research, only a few or single cases of observation are considered to evaluate effective results whereas in the quantitative research approach a sufficient number of case References took place for consideration and provide more reliable source evaluation for the research study. The debate between the two approaches is never ending but both of them help to evaluate results more accurately (Smys, and Raj, 2019, p.20). However, Qualitative research focused on human behaviour, nature, and situation perspectives, to provide insights into the problem statement. While quantitative research study gradually works with numbers and statistics which can be misleading sometimes and impact the results as well. However, throughout the discussion and debate, it can be evident that mixed methods are always a better option for drawing better and integrated solutions (Khan, and Malviya, 2020, p.16).

Portfolio Task 2 - Formulate a research question

The final question of this research study is,
"Evaluating impact of big data and information technology on retail industry- A case study of TESCO supermarket, UK".
In the pandemic situation, every industry including retail, tourism, marketing, finance and others has faced a variety of hazards and issues but the Retail industry has faced mixed

implications during this period. The grocery sector of the retail industry was active throughout the pandemic and several businesses observe steady growth as well, TESCO is one of them. However, in the meantime, retail businesses gradually use big data analytics and information technology massively to spread their business in eCommerce platforms and enjoy the benefits of online business. However, TESCO has implemented an integrated and user-friendly online business segment which helps the workforce to operate smoothly without catering to the downfall of the economic structure. The current research study aims to evaluate the impact of big data and information technology on the retail business by utilizing TESCO's case study for underlying positive and beneficial approaches of current digital advancement in the global business (Zhang *et al.*, 218, p.400). Businesses are currently working in an unstable condition where everyone is at risk in the contemporary condition but eCommerce or online business platforms are opening new ways for the business to overcome market dynamics and grow productively. This piece of research helps individuals and other small businesses to understand the importance of several big data analytics skills for taking care of documents and focusing on the business attributes for attracting customers more productively. People would get interested in further research and analysis to effectively understand the current market dynamics. However, this research study is reliable for the current business context of retail businesses because big data analytics and information technology have become the most crucial tool for tackling global business quickly and fulfilling a diverse range of demands.

Portfolio Task 3 - Describe your research methodology

This research is based on current topics which glorify the necessity of big data analytics and information technology in different businesses. This research is evaluating real-life examples and accurate data statistics for answering growing questions from the researchers. Nowadays people are focussing on real-life data and evidence-based data for evaluating core aspects of the topics, this research study would receive grants effectively because it provides interesting topics and science-based knowledge to the readers. Moreover, in the retail business, many new entrants are growing who can collect reliable data from the case study of one of the biggest supermarket chains in the UK.

This research study would focus on primary research methods and use qualitative and quantitative research approaches for better results. This research study is focused on logical and critical evaluation of the topic which requires real-life solutions and examples that can be

achieved through using primary research processes. This research process collects real-time data by analyzing behaviour, attitude and relevant experience of the topic to understand the impact of big data and information technology productively. However, a researcher needs to focus on reliable sources and data for increased quality of research. Primary research approaches provide a reliable and real-time experience for employees and managers about the topic purpose within the business.

For completing this research study qualitative and quantitative approaches would be reliable and appropriate because quantitative research would provide accurate logic to the topic while qualitative evaluates human thoughts about the topic. The topic of big data and information technology is a highly emerging and changing topic which requires statistical and emotional interpretation for drawing effective conclusions. In addition, this research would be based on the descriptive method for elaborating thoughts and logical concerns accurately. Moreover, the descriptive design would help to focus on subjective and objective measures while working with the study sources and accurately elaborate the above sources for better understanding.

Throughout the discussion, I evaluate that the most reliable threat of this research study is it is limited to what might impact the overall research efforts. However, in terms of the survey and interview both required sufficient time to collect data, gather information and integrity to draw discussion. Lack of time would increase uncertainty for the research study, however, researchers must focus on online surveys and portal interviews to reduce the time for physical interaction and transportation. Moreover, online surveys and interviews would help to reduce operational costs as well which can be beneficial for the researcher to complete the overall research on time.

Portfolio Task 4 - Using feedback to improve your work

However, the formative assignment provides feedback to focus on the reliability and relevance of the topic in the current business world. Nowadays information technology and big data analytics have become the most critical and quick change perspective. It helps to reduce excess pressure on the manual force and assists to reduce time-consuming concepts. Traditional process was more time-consuming and irrelevant which impacted efficiency and performance. On the other side, digital approaches in the business significantly in the retail industry are changing more easily and quickly.

Portfolio Task 5 - Reference list (no word count) (LO1)

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