

**THE USE OF AUGMENTED REALITY AND VIRTUAL TRY-ON
TECHNOLOGIES IN UK FASHION RETAIL: A CASE STUDY
OF PRIMARK**

By Hemanshi Desai (2315998)

Table of Contents

1. Introduction.....	4
1.1 Background of the study	4
1.2 Problem statement.....	5
1.3 Purpose of the study.....	5
1.4 Rationale of the Research	6
1.5 Research aims and objectives	6
1.6 Research Questions	7
1.7 Significance of the Research.....	7
1.8 Structure of the Dissertation	8
2. Literature Review.....	9
2.1 Introduction.....	9
2.2 Importance of augmented reality (AR) as well as virtual-try-on technologies in UK fashion retail	9
2.3 Evaluate how augmented reality (AR) as well as virtual-try-on technologies can significantly enhance the performance of the retail industry in terms of customer engagement	9
2.4 Assessing the complexities faced by the retail fashion industry while adopting Augmented Reality as well as Virtual try-on technologies	10
2.5 Theoretical Framework.....	10
2.6 Conceptual Framework.....	11
2.7 Literature Gap	11
3. Research Methodology	13

3.1 Research Philosophy, Approach and Design	13
3.2 Research Strategy.....	13
3.3 Data Collection	13
3.4 Data analysis	14
3.5 Ethical Consideration.....	14
4. Research Timeline	15
References.....	16

1. Introduction

1.1 Background of the study

It is reported that the market of augmented reality in the UK is primarily expected to reach projected revenue of around UD\$ 41,282.8 million by the end of 2030. Additionally, a compound growth rate of around 41.7% is expected in the UK augmented reality market from 2024 to 2030 (Grand View Research, 2024). This shows that the UK is a technologically advanced country where the adoption of innovative technology plays an important role towards enhancing the operational performance of multiple industries and this is not different for the fashion retail industry.

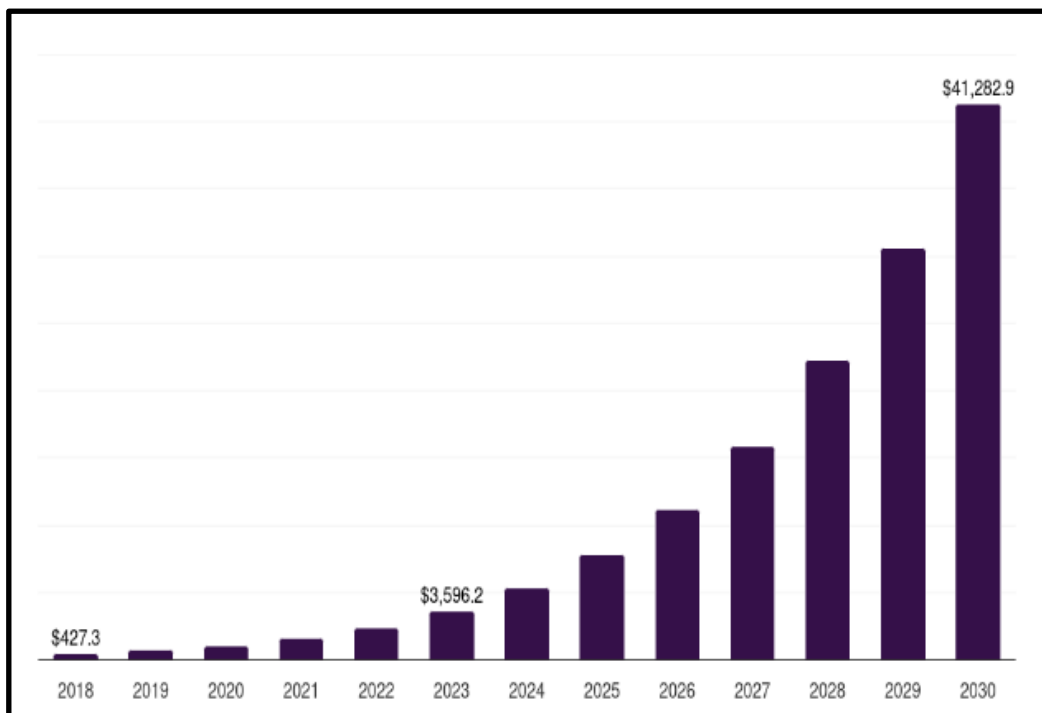


Figure 1: Augmented Reality market in the UK

(Source: Grand View Research, 2024)

The above statistical image depicts that the market of augmented reality has increased at a significant pace since 2024 and is expected to touch its high in the year 2030. In response to this, AR significantly enables customers to virtually try on clothing prior towards a purchase. This shows that AR and Virtual Try-On provide a personalised experience to the customers and help

boost the revenue of the fashion retail industry. It is reported that virtual Try-On technology can significantly enhance the volume of sales by up to 30% for the fashion retail industry along with minimising the returns by around 20% (Forbes, 2024). This helps in improving the total margins of the retailers.

1.2 Problem statement

Despite increased usage of augmented reality and virtual Try-On within the UK fashion retail market, Primark faces ample complexities towards adapting to the rapidly evolving landscape. This is characterised by increased competition from online retailers along with the shifting of customer taste and preferences towards a digitalised shopping experience. Additionally, as the expectations of the customers are changing especially during the post-COVID-19 pandemic, the overall demand for innovative shopping solutions including augmented reality as well as virtual try-on technologies has intensified strongly. In correspondence to this, it can be entailed that Primark has failed towards formulating effective strategies to attract more customers. To support this, Primark has announced around a 30% drop in sale volume towards £2 billion (Business Reporter, 2024). In this context, it can be entailed that reliance on Primark in a traditional retail model gradually limits its ability towards reaching tech-savvy consumers who seek personalised as well as interactive shopping experiences. Moreover, the implementation of AR significantly presents financial constraints, including the requirement for effective fitting solutions. These main challenges are going to be addressed in the research paper to serve the purpose of this study.

1.3 Purpose of the study

The major purpose of this study is to evaluate the usage of augmented reality as well as virtual try-on technologies within the retail strategy of Primark. This is towards enhancing customer engagement as well as improving the overall shopping-related experiences. Moreover, this study also aims towards evaluating the customer experience, assessing the impact of sales as well as return sales, analysing the potential complexities being faced by Primark in adopting technologies and many more.

1.4 Rationale of the Research

Due to the COVID-19 pandemic, the tastes and preferences of the customer have changed drastically. The majority of customers prefer purchasing clothes from the online platform as it is found to be more convenient and easy to access for them. To support this, the fashion sector is primarily undergoing significant transformation. Behaviours of customers have significantly evolved across China, Europe and the US (Mollard, 2020). Additionally, the brands are required to adapt to these shifts using social media and artificial intelligence. Primark has significantly witnessed a gradual increase in customer footfall as well as sales densities. This is due to COVID-19 restrictions, where Primark has announced around a 30% drop in sale volume towards £2 billion (Business Reporter, 2024). To address the issue of adopting innovative technologies to cater the requirement of the customers, this research is generally undertaken. The research will also showcase effective strategies required to be adopted by Primark to streamline its business operations

1.5 Research aims and objectives

Aims

The primary aim of this research is to evaluate “The Use of Augmented Reality and Virtual Try-On Technologies in UK Fashion Retail: Case Study”

Objectives

- To assess the importance of augmented reality (AR) as well as virtual-try-on technologies in UK fashion retail
- To evaluate how augmented reality (AR), as well as virtual-try-on technologies, can significantly enhance the performance of Primark in terms of customer engagement
- To assess the challenges being faced by Primark while adopting Augmented Reality as well as Virtual try-on technologies
- To recommend the effective strategies required to be adopted by Primark to streamline its business operations

1.6 Research Questions

- What is the importance of augmented reality (AR) as well as virtual-try-on technologies in UK fashion retail?
- How augmented reality (AR) as well as virtual-try-on technologies can significantly enhance the performance of Primark in terms of customer engagement?
- What are the challenges being faced by Primark while adopting Augmented Reality as well as Virtual try-on technologies?
- What are the effective strategies required to be adopted by Primark to streamline its business operations?

1.7 Significance of the Research

This research generally holds a significant importance for the multiple stakeholders within the fashion retail industry. This is especially for Primark as well as for its customers. In correspondence to this, the major points of significance include informing strategic decisions, enhancing overall customer experience, addressing the complexities faced by the fashion retail industry and many more. It is reported that around 70% of the customers are primarily expected towards showing a greater level of interest in brands that greatly offer AT-enhanced shopping experiences (Ike, 2024). This research showcases the importance of the use of these technologies in the UK fashion industry.

1.8 Structure of the Dissertation

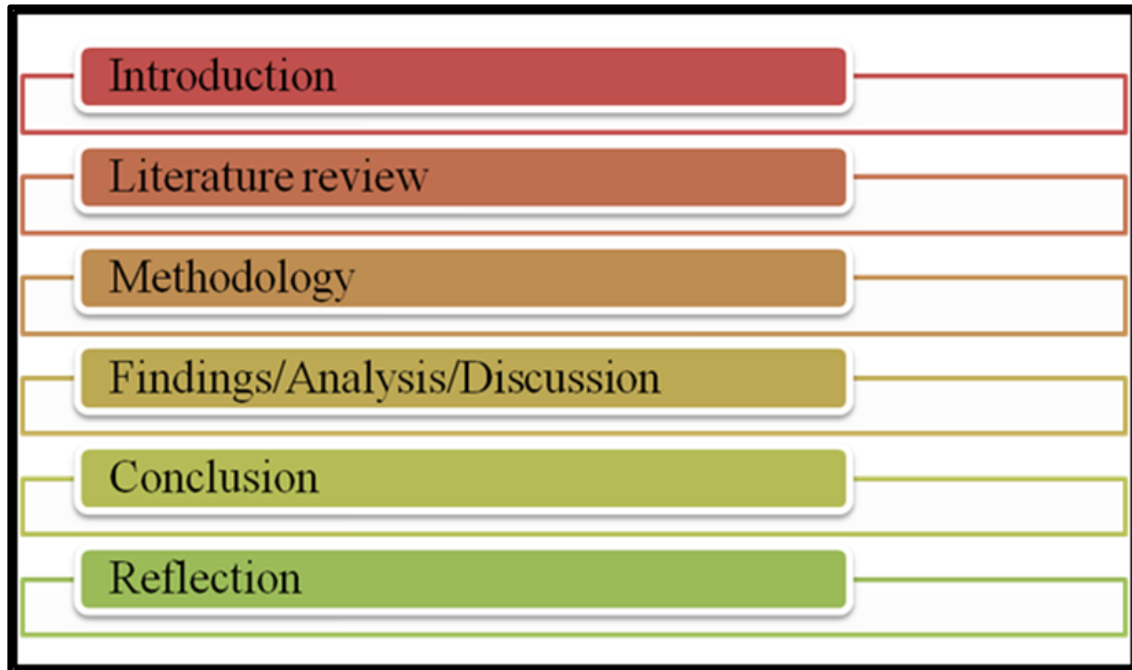


Figure 2: Dissertation structure

(Source: Created by the learner)

2. Literature Review

2.1 Introduction

This chapter will showcase the role of using Augmented Reality as well as virtual try-ons in the UK fashion retail industry. Additionally, the discussion will also be done on the challenges being faced by the UK-based fashion retail industry while adopting innovative technologies. Proper theories will be selected to serve the purpose of this research and this will be done by interlinking the aspects of these theories with framed objectives.

2.2 Importance of augmented reality (AR) as well as virtual-try-on technologies in UK fashion retail

As opined by Jayamini *et al.* (2021), the utilisation of new technologies can significantly address the actual limitations within the traditional fashion industry. On the contrary as per the views of Akram *et al.* (2022), the fashion industry plays an important role towards design manufacturing as well as selling garments and clothes. In this response, adopting innovative technologies plays an important role towards catering the requirements of the customers along with enhancing the operational performance. As per the views of Silvestri (2022), augmented reality as well as virtual reality seems to be an optimal solution towards creating an experiential form of marketing. It will be important for the UK fashion industry to adopt innovative technologies to gain competitive advantages. In correspondence to this, AR competently enables customers to virtually try on clothing prior towards a purchase.

2.3 Evaluate how augmented reality (AR) as well as virtual-try-on technologies can significantly enhance the performance of the retail industry in terms of customer engagement

It is reported that VR as well as AR technologies are significantly transforming the entire retail landscape. This by providing an immersive as well as interactive form of the shopping experience. As commented by Silvestri (2020), augmented reality and VR is having a high level of potential towards shaping the future of fashion media and reinforcing the digitalisation approaches of the industry as well. On the contrary, as per the views of Enyejo *et al.* (2024), augmented reality plays an important role in customer engagement along with influencing the purchasing behaviour in

retail stores as well. In response to this, AR significantly enables customers to virtually try on clothing prior towards a purchase.

2.4 Assessing the complexities faced by the retail fashion industry while adopting Augmented Reality as well as Virtual try-on technologies

The benefits of AR adoption within retail are highly significant and there are multiple complexities that the retailers are required to overcome to fully harness the actual potentiality of these technologies. Therefore, ensuring a higher quality AR-based experience as well as the implementation of AR with the present systems are some of the major challenges being faced by the UK fashion retail. Additionally, supply chain disruption is another challenge being faced by fashion retail. As commented by Casciani *et al.* (2022), sustainability complexities are highly attributable towards the digital transformation within the fashion-supply chain. In this context, digitalised-based approaches significantly optimise the material-resource consumption generally for physical sampling along with fostering design creativity. On the contrary, as stated by Jin and Shin (2021), innovative technologies are generally incorporated by fashion retailers to address the main challenges faced by the industry. Formulating competent strategies will be important for fashion retail to streamline its operational activities.

2.5 Theoretical Framework

Diffusion Innovation Theory

As per the views of Khan *et al.* (2022), the aspects of diffusion innovation theory help in bringing sustainability within the business. The main aspects of diffusion innovation theory include compatibility, relative advantage, trialability and many others. In this response, the fashion retail industry to gain competitive advantages is required to adhere to these aspects to ensure proper adoption of innovative technologies.

Technology Acceptance Model (TAM)

As per the views of Mustafa and Garcia (2021), the aspects of the Technology Acceptance Model are one of the most highly used theories. Additionally, this theory is considered to be the primary element of user acceptance of information technology. In correspondence with the aspect of this

theory, UK fashion retail is required towards understanding the main resistance generally among the customer. This also includes addressing the concerns concerning effectiveness and usability.

2.6 Conceptual Framework

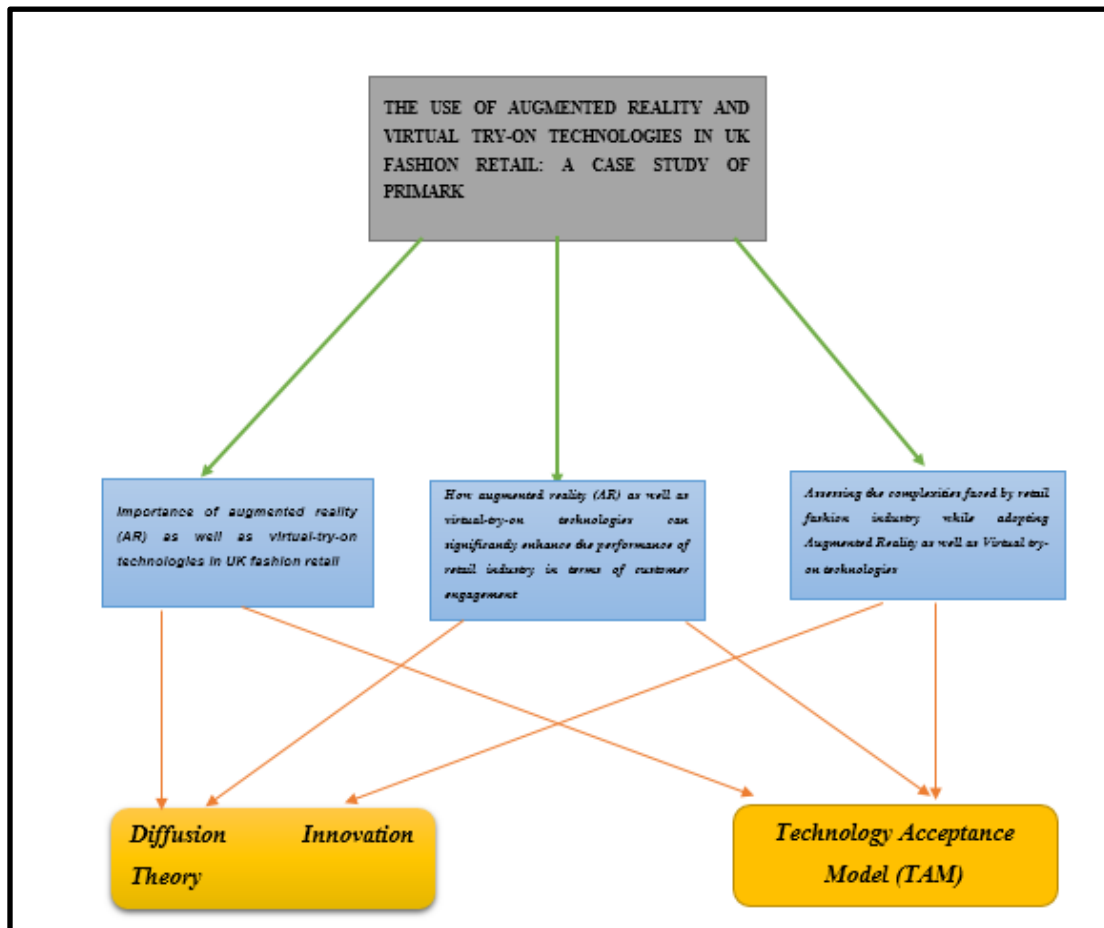


Figure 3: Conceptual Framework

(Source: Created by learner)

2.7 Literature Gap

In the previous study, discussion is done regarding the impact of Augmented Reality and Virtual try-on technologies towards enhancing the purchasing experience of the customers. However, discussion is not done on the impact of these technologies in UK fashion retail and how it enhances the operational performance of this sector. To bridge this gap, this research is generally undertaken. The research aims to showcase the use of AR and VR in improving the operational performance

of UK fashion retail and how it provides a personalised experience. In this study, effective strategies will also be discussed regarding the mitigation of challenges faced specifically by UK retail fashion.

3. Research Methodology

3.1 Research Philosophy, Approach and Design

In this research for pragmatism, the researcher will use pragmatism philosophy along with explanatory for research design and deductive for research approach. This will help in conducting this research more effectively. As opined by Tursunova (2023), the deductive approach is determined as one of the most prominent strategies used in research. According to Mukumbang (2023), the mixed research approach is all about explicating a multiple way interaction process mainly between the mixed method data. This includes quantitative and qualitative methods. By adopting a deductive approach the broader data regarding the use of augmented reality and VR will be deduced into a simpler form to gain a more in-depth understanding of the research topic.

3.2 Research Strategy

As per the views of Kittur (2023), a research strategy is primarily a plan that assists a researcher towards conducting research. This is in a systematic as well as the most organised way towards achieving the desired objectives of the research. By employing an effective research strategy including deductive, pragmatism and explanatory, this study will aim towards providing valuable insights that would support fashion retail to leverage AR as well as virtual try-on technologies. This will assist in enhancing the customer shopping experience along with improving the overall business outcomes. With the help of a chosen research strategy, a piece of more valuable information regarding the complexities faced by fashion retail will be discovered.

3.3 Data Collection

Data collection within research is determined as a process towards gathering relevant information regarding research questions, test hypotheses as well as evaluated outcomes. As per the views of Jones (2023), the researcher most of the time structures a case study by implementing qualitative methodologies along with relevant data collection techniques as well. In this research data will be collected both from primary as well as secondary sources towards gaining relevant information regarding the use of augmented reality as well as virtual try-on technologies in UK-based fashion retail. As stated by Dawadi et al. (2021), a mixed-method approach is determined as research methodology, which has its one philosophical assumption as well as approach of inquiry. For the

primary sources, the survey will be conducted where relevant questions will be framed for the respondent regarding this research topic. Additionally, the thematic analysis will also be done where relevant information will be collected from the secondary sources regarding framed research questions for this study. This includes collecting data from peer-reviewed journals, articles, newspaper magazines and many others. With the help of this data collection approach a piece of more valuable information regarding the complexities faced by fashion retail will be discovered.

3.4 Data analysis

In the form of qualitative data analysis, the researcher will employ thematic analysis for this research paper. This includes identifying, analysing along with reporting the patterns generally with qualitative data. For theme development, codes will be grouped into broader themes that will effectively capture valuable insights regarding AR technology adoption. In correspondence to quantitative data analytics, surveys will be conducted by framing relevant quotations regarding the research topic. As per the views of Rampin and Rampin (2021), qualitative approaches are generally utilised in multiple fields and significantly support the research study. In this context, more detailed information would be obtained regarding the research topic and serve the major purpose of the research as well. Based on this analysis, the researcher can effectively draw conclusions regarding the attitudes of customers with respect to virtual-try-on and AR technologies.

3.5 Ethical Consideration

To maintain the confidentiality of this research the data will be collected from authentic sources and adhere to the Data Protection Act 2018. As commented by Zaeem and Barber (2020), GDPR maintains privacy policies between tasks and research. Additionally, the information that will be collected for this research will be erased after 30 days and prior consent will be taken from the participants as well. Moreover, to maintain confidentiality the information that will be obtained will be used exclusively for academic purposes along with adhering to University principles as well. Based on this it can be entailed that ethical considerations are crucial in research as it will ensure the right as well as the well-being of participants and maintain the integrity of the research as well.

4. Research Timeline

Activities	Nov-24	Dec-24	Jan-25
Approval of the topic			
Construct Aim and objectives			
Reviewing existing literature			
Research method selection			
Conducting Survey			
Conducting Secondary Analysis			
Analysing the primary and secondary data			
Completing the final draft			
Submission of the final draft			

Figure 4: Research Timeline

(Source: Excel)

References

Akram, S.V., Malik, P.K., Singh, R., Gehlot, A., Juyal, A., Ghafoor, K.Z. and Shrestha, S., 2022. Implementation of digitalized technologies for fashion industry 4.0: Opportunities and challenges. *Scientific Programming*, 2022(1), p.7523246.

Business Reporter, (2024). *Fashion retailer Primark is refusing to sell online – here's why it is right to do so*. [online] Business Reporter. Available at: <https://www.business-reporter.co.uk/technology/fashion-retailer-primark-is-refusing-to-sell-online--heres-why-it-is-right-to-do-so> [Accessed 25 Oct. 2024].

Casciani, D., Chkanikova, O. and Pal, R., 2022. Exploring the nature of digital transformation in the fashion industry: opportunities for supply chains, business models, and sustainability-oriented innovations. *Sustainability: Science, Practice and Policy*, 18(1), pp.773-795.

Dawadi, S., Shrestha, S. and Giri, R.A., 2021. Mixed-methods research: A discussion on its types, challenges, and criticisms. *Journal of Practical Studies in Education*, 2(2), pp.25-36.

Enyejo, J.O., Obani, O.Q., Afolabi, O., Igba, E. and Ibokette, A.I., 2024. Effect of Augmented Reality (AR) and Virtual Reality (VR) experiences on customer engagement and purchase behavior in retail stores. *Magna Scientia Advanced Research and Reviews*, 11(2), pp.132-150.

Forbes, (2024). *Virtual Try-Ons Will Change Fashion Jobs Forever*. [online] Forbes. Available at: <https://www.forbes.com/sites/zengernews/2024/07/11/virtual-try-ons-will-change-fashion-jobs-forever/> [Accessed 26 Oct. 2024].

Grand View Research, (2024). *UK Augmented Reality Market Size & Outlook, 2030*. [online] Available at: <https://www.grandviewresearch.com/horizon/outlook/augmented-reality-market/uk> [Accessed 30 Oct. 2024].

Ike, C. (2024). *The Impact of Virtual Reality and Augmented Reality in the Fashion Industry*. [online] Uphance. Available at: <https://www.uphance.com/virtual-augmented-reality-in-fashion/> [Accessed 24 Oct. 2024].

Jayamini, C., Sandamini, A., Pannala, T., Kumarasinghe, P., Perera, D. and Karunanayaka, K., 2021. The use of augmented reality to deliver enhanced user experiences in fashion industry. *Lecture Notes in Computer Science*, 12936.

Jin, B.E. and Shin, D.C., 2021. The power of 4th industrial revolution in the fashion industry: what, why, and how has the industry changed?. *Fashion and Textiles*, 8(1), p.31.

Jones, D.A., 2023. A review and critical analysis of qualitative methodologies and data-collection techniques used for code-switching research. *American Journal of Qualitative Research*, 7(2), pp.53-72.

Khan, A.J., Ul Hameed, W., Iqbal, J., Shah, A.A., Tariq, M.A.U.R. and Ahmed, S., 2022. Adoption of sustainability innovations and environmental opinion leadership: A way to foster environmental sustainability through diffusion of innovation theory. *Sustainability*, 14(21), p.14547.

Kittur, J., 2023. Conducting Quantitative Research Study: A Step-by-Step Process. *Journal of Engineering Education Transformations*, 36(4), pp.100-112.

Mollard, M. (2020). *Consumer behaviours in fashion during and post-pandemic*. [Online] Heuritech. Available at: <https://heuritech.com/articles/consumer-behaviours-during-post-covid/> [Accessed 30 Oct. 2024].

Mukumbang, F.C., 2023. Retroductive theorizing: a contribution of critical realism to mixed methods research. *Journal of Mixed Methods Research*, 17(1), pp.93-114.

Mustafa, A.S. and Garcia, M.B., 2021, November. Theories integrated with technology acceptance model (TAM) in online learning acceptance and continuance intention: A systematic review. In *2021 1st Conference on online teaching for mobile education (OT4ME)* (pp. 68-72). IEEE.

Rampin, R. and Rampin, V., 2021. Taguette: open-source qualitative data analysis. *Journal of Open Source Software*, 6(68), p.3522.

Silvestri, B., 2020. The future of fashion: How the quest for digitization and the use of artificial intelligence and extended reality will reshape the fashion industry after COVID-19. *ZoneModa Journal*, 10(2), pp.61-73.

Silvestri, B., 2022. How virtual and augmented reality are reshaping the fashion industry during the covid-19 pandemic. In *Extended reality usage during COVID 19 pandemic* (pp. 39-54). Cham: Springer International Publishing.

Tursunova, M., 2023. USING INDUCTIVE AND DEDUCTIVE APPROACH IN TEACHING GRAMMAR. *Modern Science and Research*, 2(10), pp.11-17.

Zaeem, R.N. and Barber, K.S., 2020. The effect of the GDPR on privacy policies: Recent progress and future promise. *ACM Transactions on Management Information Systems (TMIS)*, 12(1), pp.1-20.