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Utilising Reuse and Recycling Strategies in Costume Design in Kuwait Theatres

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Glossary Terms

1. Sustainability in the garment industry	Garment sustainability means that the environment is taken into consideration when making a garment, along with the social impact it may have during its lifetime (Muthu, 2018).
2. Reuse	"The garment is used again, in its original form" (Gwilt, 2014).
3. Recycle	"The garment is taken apart and the materials are then reused to make new products" (Gwilt, 2014).
4. Upcycled	To upcycle a garment means to maintain/restore or improve the quality of a garment for reuse, thus offsetting the issues normally associated with recycling (reducing the quality of the materials employed) (Brown, 2013).
5. 3R's: Reduce, reuse, recycle	The 3R's are essentially the three main categories of sustainable waste management, classified according to their importance. "Reduce" consumption and usage comes first (relating to materials in this case), followed by reuse (of whole garment, not just textiles), and then recycle (of component textiles/fabrics) (McDonough and Braungart, 2009).
6. Second-hand garment	A garment, costume, accessory, etc. is considered "second-hand" if it has already been used and discarded by consumers (Palmer, 2011)
7. Textile waste	Textile waste includes textiles, fabrics and other materials that an owner decides are unusable for their intended purpose. This covers both waste from consumers and waste left over from fibre, textile, and clothing production processes in the garment and textile industry (Wang, 2006; Seher, 2018).
8. Re-design	When a second-hand garment undergoes a transformation and is reshaped for a new design (Gwilt and Rissanen, 2011)
9. Reconstruction	To reconstruct a garment means to make a new garment from others that have previously been worn. In the theatre costume industry, this means taking a costume used in one performance and reconstructing it in a new design (Muthu, 2018).
10. Restyle/Redecorate	Restyling a garment consists of taking a second-hand garment and changing its purpose or use without actually altering it physically (e.g., without cutting, sewing, etc.) (Gwilt and Rissanen, 2011)
11. Alteration	The alteration of a garment consists of making minimal modifications to the said garment, altering things such as fit (usually on specific sections or areas). For example, when shortening pant legs or modifying the hem (Garza, 2017).
12. Tailoring	To tailor a garment means to make whatever modifications are necessary to fit a specific wearer (Garza, 2017).
13. Costume designer/ costumier.	A person who designs costumes for a play or performance or supplies theatrical or fancy costumes for any play in a theatre production (Bjorklund, 2017; Pollatsek and Wilson 2017)

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Preface

In 2008, I graduated with a bachelor's degree from the Kuwait art academy. I then worked for a time in the Kuwait theatre industry as a freelance costumier for different productions. It was stimulating to work with other Kuwaiti costumiers and helped me gain significant experience, eventually enabling me to become a fully-fledged costumier and expand my work in costume design. However, over time, the costume design and making process became increasingly unclear, as did the design practices. There appeared to be no standard process laying out the steps of costume production from the initial stage of drawing to their final construction. It was confusing to witness different, unique, and inconsistent approaches being applied by each new person and institution I collaborated with.

Furthermore, in 3 out of the 5 play productions I worked on, entirely new costumes were made rather than old costumes being reused or recycled. Most striking was the fact that each play had at least 12 characters whose costumes were all made from scratch, yet these were only used for the duration of a play (3 months on average). Additionally, different costumes were made for different styles, such as traditional, western, or fantasy play styles. Despite their limited use these costumes were expensive to make. For instance, the cost incurred for a performance was approximately 3.000 in Kuwaiti dinar currency per costume, which, for 11 costumes, equated to between 7000- and 8000-pound sterling. I witnessed how, after each play, all the costumes were discarded. This led me to question why this practice was being employed and why these huge and expensive costumes were being wasted.

Fortunately, in 2011 I attended Kuwait British Cultural Week, which was a series of events held by the British Council in Kuwait in conjunction with the National Council for Culture, Arts and Letters. These events showcased a new era of performance art, British visual arts, and music. It was during these events that I met and held an informal conversation with a UK guest actor and one of the costumier supervisors. We talked in detail about their costumes, which was highly informative as I had never previously visited the UK and had little first-hand information about its culture or customs. The actor told me how costumes in the UK are made and showed me several photos of UK costume storage rooms on his smartphone. The costume supervisor also told me that most costumes are reused: it is therefore rare to make costumes from scratch. There are even different schools of costume design, where students are taught a variety of costume design and making processes and strategies.

He then encouraged me to visit the UK professionally when and if I considered undertaking a master's degree. He felt this would give me a new perspective and enable me to witness different plays and shows to expand my knowledge. This would include an insight into reusing and recycling costumes, which was a central tenet of costume design in the UK theatre sector. I subsequently decided to complete my master's degree in the UK so that I could find a solution to the lack of sustainable practices in Kuwaiti costume design and production. My dissertation focused specifically on how to build sustainable online stage costumes and accessories.

I concentrated on the provision of different kinds of reused theatre accessories for productions in the gulf area, including fans, hair and hat accessories, masks and costumes, and theatre make-up products.

However, perhaps more relevant was my discovery of the many different costume storage facilities and wardrobe departments available in each UK city. When I visited one of these departments in Birmingham, I found a slew of costumes dating back many decades, all saved so that they could be hired by any costume designer

or theatre production. This reinvigorated my original desire to learn how UK costumiers operate: do they use different processes when designing and making costumes, do they always reuse or recycle them, and what is the company or theatre policy towards these practices? To answer these questions, I attended a performance of the Lion King in London in 2014. The costume quality on-stage was pristine yet many costumes and accessories had been reused and recycled for the play. I wanted to understand these strategies so that I could help reduce textile waste in Kuwait. This led to my research into sustainable costume design strategies, specifically the reusing and recycling strategies currently lacking in Kuwait.

Two books started me down the path proper, the first of which was Hethron and Ulasewicz' (2008) "Sustainable Fashion: Why Now? A conversation exploring issues, practices, and possibilities". This book examines sustainability issues pertaining to clothing creation, wear, and recycling, to help inform designers and product developers about the best way to produce clothing and fashion. The authors usefully discussed new ideas regarding the nature of sustainable fashion and how such items could be made, including the use of organic or renewable resources and socially responsible manufacturing techniques. The key turned out to be a combination of people, processes, and the environment. The second book was Gwilt's (2011) "Shaping Sustainable Fashion: Changing the Way We Make and Use Clothes." This book explains the environmental damage caused by the production, use and disposal of clothing. Importantly, it provided important details on various fashion and textile designers who have already begun to employ sustainable approaches. Ultimately, this book became the foremost practical guide for my PhD, as it detailed all the ways in which designers can create durable fashion while minimising waste.

From here, the final step was relatively straightforward. I began to research the matter in greater depth, reading many journal articles, online resources, and books. My path, which began all the way back in 2008 and continued through to 2014, culminated in a desire to address the serious wastage problem Kuwaiti theatre suffers as a result of discarding costumes made from scratch after just one performance. Some aspects I could not find any information on, such as whether all Kuwaiti costumiers followed this practice and the reason(s) they had for doing so. It was to answer these questions and perhaps find a way to implement sustainable practices in Kuwaiti theatre that I dedicated my 2013-2014 PhD to collecting, collating, and analysing primary data of my own. Because this undertaking was initiated by exploring UK theatre, I decided to extend my research in the UK as I foresaw (rightly, as it turned out) that it was here I would find the sharpest contrast to Kuwaiti sustainability approaches (or the lack thereof). Although long and multi-faceted, the research ultimately proved to be fruitful, as will become clear throughout the course of this thesis. The following section will now present an outline of the thesis.

Abstract

Kuwait does not currently make use of any methods for recycling textiles (Alsuilaili et al., 2014). This fact, combined with high levels of textile waste, has resulted in significant ecological issues that demand immediate attention (Alsuilaili et al., 2014). Reusing and recycling materials within the realms of theatrical costume design and production is therefore extremely important (Jones et al., 2013). However, in nations such as Kuwait, where the practice was commonplace prior to the Iraqi invasion, this is no longer the case (Al-Ghareb, 1988). This qualitative study sought to investigate current practices among Kuwaiti costumiers and then compare these to UK costumiers who provide an example of existing sustainable (reusing and recycling) costume design practices. It aimed to investigate the attitudes and perceptions of Kuwaiti costumiers towards reusing and recycling as ways of reducing textile waste. In keeping with Beveridge's (1968) framework, this thesis utilised exploratory and participatory modes of primary research. Two different studies were conducted to gather primary data. First, a series of semi-structured interviews were conducted with 13 UK and 13 Kuwaiti costumiers to elicit information and opinions on the costume design process and on sustainability. Second, three workshops were conducted with three Kuwait costumiers. Each workshop comprised three different design tasks: Level 1- Redesigning; Level 2- Makeover of garments; and Level 3- Complete costume design from scratch. In these tasks, Kuwaiti costumiers were asked to apply the different practices they employ when re-using and re-cycling and to discuss their attitudes towards such methods. The three different tasks therefore consisted of "talking and making". A thematic analysis was then conducted to identify major themes related to the 3Rs of sustainability: reduce, reuse, recycle (Lyngaas, 2017; Rinkesh, 2018), and the extent to which Kuwaiti costumiers adhere to these practices. The findings from the interviews showed that there was considerable divergence between the two sets of costumiers in their attitudes towards sustainable practices. For instance, the key themes arising from the interviews from UK costumiers were a robust understanding of costume design, advanced technical skills and creativity, a focus on reuse and recycling and the skills and knowledge to implement these, and the use of long-term storage techniques. In contrast, the key themes arising from the interviews with Kuwaiti costumiers were an inadequate understanding of costume design, a preference for purchasing new costumes, a lack of skills and knowledge regarding reuse and recycling, and costume skills required for storage. The findings from the workshops confirmed that the Kuwait costumiers had very limited knowledge of sustainable practices and, consequently, even less idea how to successfully apply them. However, they were enthusiastic and keen to learn more. The findings have thus shed new light on the discrepancies between the UK and Kuwait in the adoption of such practices and the potential barriers that exist regarding the adoption of sustainable costume design practices in Kuwaiti theatre. This will help pave the way towards developing approaches to promote sustainable costume design thinking and the use of reusable and recyclable materials when making costumes in Kuwait theatre.

1 Chapter1: Introduction

1.1 Research Introduction

Reducing waste, reusing discarded items (in this case garments and costumes) and recycling materials (in this case textiles) is not only an environmentally friendly practice (Blackburn, 2009; Sherburne, 2009; Payne, 2011), it is also economically advantageous as it allows people to get more use out of a product as well as reducing the need to buy new materials when creating something new (Blackburn, 2009; Andersen and Earley, 2014). Because of this, many people in western countries, including fashion designers and costume makers for theatrical and other productions, engage in the practice of sustainable costume design such as reusing and recycling garment and materials (Green, 2011; Gwilt and Rissanen, 2011; Gwilt, 2014). However, Kuwait is particularly noteworthy for not adopting this practice, as there is not only a dearth of research on sustainable costume design in the country, the small amount of research that does exist indicates almost no designers practice it (Michalak-Pikulska, 2001; Naseem, 2013). This is evident to the point where asking a tailor or someone in the clothing market about reuse and recycling will elicit only confusion (Naseem, 2013). Although the reuse or at least the recycling of textiles is not entirely unknown in the country (Al-Arfaj Group, 2015), my research on the theatre sector in particular indicated that not only is sustainable costume design not practiced, it is completely unknown to both designers and tailors (Al-Ghareb, 2001; Al-Wgyan, 2010).

Given the fundamental role played by designers in shaping costume design culture, and the correlation between the level of thought given to reuse and recycling and the amount of reuse and recycling happening in theatre settings as a whole (Curedale, 2013; Andersen and Earley, 2014; Perez, Fornasier and Martins, 2016), this concerned me. When I looked at the situation through the prism of the garment lifecycle, which comprises the fibre stage, textile production, distribution, retail, use phase, reuse / recycling phase, and the so-called grave phase (Payne, 2011), the reuse/recycling stage appears to be completely absent, not just from the practices of Kuwaiti costume designers but also as a concept within Kuwaiti theatres. In contrast, UK costume design practices provide a strong example of the use of sustainable methods in making costumes. I therefore began to think about the potential effect of implementing such practices (reusing and recycling) in Kuwait to reduce textile waste in the theatre costume design industry. I learned much in the UK about costume design, the creation of garments of all kinds, as well as the sourcing and use of all kinds of textiles through a variety of methods. What stood out for me, however, was the strong emphasis placed on sustainable practices such as reduce, reuse and recycle, otherwise known as the 3Rs of sustainability (Lyngaas, 2017; Rouse, 2018).

I was struck by the disparity between the apparent reality in Kuwait and the reverse situation in the western costume design industry, where reuse and recycling are never overlooked and, moreover, are the first things western costume designers think about when they need to make a new costume (Stone, 2009; Simpson College Department of Theatre, 2012; Strand-Evans, 2015; Bowden, 2018). This prompted me to research the matter thoroughly in the hopes of at least finding out whether this has always been the case in Kuwait or whether sustainable practices used to exist in the past but had at some point disappeared. What I found prompted me to pursue the overall goal of this study, which is to introduce the concept of sustainability (reusing and recycling) into the Kuwaiti public consciousness and, more specifically, into the practice of Kuwaiti theatre costume designers.

Furthermore, because my research made it clear there is insufficient existing literature on this matter, it was clear I needed to gather my own, primary data in order to answer the research questions raised by my investigations Ultimately, my efforts consolidated into two distinct studies: a series of interviews with Kuwait and UK designers, and a set of practical workshops with three Kuwait-based designers. Through these, I explored the differences between Kuwaiti design and the Western world (represented by the UK) and offered opinions and suggestions on how sustainable design may be introduced in Kuwait.

1.2 Research questions

1. How can sustainability be implemented in theatre costume design in Kuwait?

2. What are the benefits of the correlation between sustainability and costume design?

3. How can Kuwaiti costume designers contribute to the development and implementation of a practice focused on reducing or avoiding textile waste?

The specific aims and objectives of this research were therefore as follows.

1.3   Research Aims

- To investigate current reuse and recycling strategies employed in Kuwait and the UK for sustainable theatrical costume design.

- To explore and understand the possible barriers to adopting sustainable practices (reuse and recycling) among UK and Kuwaiti costumiers.

To achieve these aims, the following key objectives were set.

1.4   Objectives

- To investigate current attitudes and practices towards reuse and recycling as ways of reducing textile waste.

- To work with Kuwaiti costumiers and investigate in more detail their experiences with and different practices in the reuse and recycling of costumes and materials.

- To investigate the design process currently used by costumiers in Kuwaiti and the UK.

The anticipated contribution to knowledge was to fill existing gaps in the research literature on the utilisation of reusing and recycling strategies in Kuwait, how such practices compare with those in Western countries, and the reasons for any disparities. More generally, it would also add to the body of research utilising qualitative methodologies as an effective investigatory tool. Finally, it would also contribute by pointing the way towards promotional strategies that may be useful in increasing the adoption of sustainable costume design practices in Kuwait.

1.5   Overview of Methodology

The research I carried out was qualitative in nature, as this was the methodology that would enable me to address the various sustainable design methods designers might use when making different garments. It was even more appropriate given that I also wanted to assess the feasibility of these methods (Creswell, 2014; Patton, 2015). In contrast, quantitative research would only have been useful if I simply wanted to establish the statistical incidence (or lack thereof) of sustainable practices in the country, or any other goal rooted in objective data (Creswell, 2014). I also wanted to do more than establish statistical differences between sustainability (reusing and recycling) in UK or Kuwait costumes, or the rate at which each respective country recycles costumes. The two different studies carried out were:

- A semi-structured interview with 26 designers (13 from UK, 13 from Kuwait) on why and how they use (or do not not) reuse and recycling.

- Kuwait costume making workshops in which three designers were asked to use sustainable practices (reusing and recycling garments) – this was followed by a second interview with the three participants to elicit their opinions on the experiences and techniques used.

Through the interviews I was able to compare UK and Kuwaiti methods for reusing and recycling, while the workshops with three Kuwaiti costume designers enabled me to assess the possibility of introducing reuse and recycling to Kuwaiti theatres. Finally, to understand and present my findings and form appropriate conclusions and recommendations, I chose to carry out a thematic analysis. This was so that I not only gathered information, I also investigated and analysed experiences and events. Added to this was the focused and extremely methodical nature of the thematic analysis, which allowed me to gather and preserve detail in sufficient amounts to provide a thorough understanding of the findings and conceive the best recommendations based on these (Riessman, 2008). I therefore decided to research the matter further and perhaps help introduce sustainable costume design practices into Kuwait.

1.6   Thesis Outline

This doctoral thesis is structured as follows:

Chapter 1: Introduction

This chapter introduces the research area and outlines the background and rationale for the present study. The chapter subsequently describes the aims and objectives of the present study and provides an overview of the thesis methodology.

Chapter 2: LITERATURE REVIEW

Textile Waste and Sustainable Design Thinking in Kuwait

These chapters detail the existing academic literature on textile waste, sustainability, and policies in Kuwait and elsewhere, as well as the gaps in knowledge within Kuwait at this time. This literature originates almost entirely in the West, due to having never made it into the public consciousness of Kuwaiti theatre, at least in .recent times. There are several sub-sections to this chapter

In this chapter I discuss the current situation regarding textile waste in Kuwait and compare it to that of other countries; particularly European countries as this is where most written work on this topic has been carried out. In contrast, there is very little scholarly literature on textile waste and sustainability in Kuwait. Nevertheless, using what little data there is as a starting point, it is possible to derive a general understanding of how textile waste is managed. This enables comparisons to be made with western methods that are based on a mature sustainability culture. As part of this discussion, the 3Rs of sustainability (reduce, reuse, recycle) are explored. In this chapter I also explore how costume designers might facilitate the adoption and subsequent proliferation of sustainable design thinking. First, I define the central concept and explore the processes involved, following which I consider the differ stages involved in design thinking. This paves the way for a greater focus on sustainable textile and fashion design thinking options in the final part of the chapter, ultimately shoring up the gap in knowledge in Kuwait regarding costume sustainability. This provides a starting point on which to build a case for why and how sustainable costume design processes could and should be instituted in the country.

Chapter 3: Costume Design and Theatre in Kuwait

In this chapter I explore the role of the costume designer, both in general as well as in relation to specific aspects of Kuwait theatre. The gaps in knowledge regarding the role of the Kuwaiti costumiers are particularly obvious here, which means that I had to first define costume design before looking at the practicalities of stage costumes and how they feature in Kuwaiti history. By the end of the chapter I had managed to identify some of the more popular types of stage costume in Kuwait.

EMPIRICAL RESEARCH

Chapter 4: Methodology

In this chapter I provide a detailed description of the research philosophy and methods employed in carrying out this research.

Chapter 5: Findings from Study 1 – Interviews with both Kuwait and UK costumiers

In these chapters I provide a detailed breakdown of the responses obtained from the interviews with costumiers from both UK and Kuwait.

Chapter 6: Findings from Study 2 – Kuwait Making Workshops

As the title indicates, the activities carried out in the workshops by the three native Kuwaiti costumiers are covered in this chapter. This includes the post-workshop interviews.

PULLING ALL THE THREADS TOGETHER Chapter 7: Discussion and Conclusion

In this chapter I first summarise and collate the key findings from the analyses conducted in Chapters 5 and 6. I then discuss the findings from Chapters 5 and 6 in relation to the key research questions formulated at the start of this thesis and the existing literature on this topic. Finally, I draw a series of final conclusions regarding the findings of the research and formulate recommendations as to which sustainable practices (reusing and recycling) could and/or should be implemented in Kuwait theatre costume design.

2 Chapter 2: Literature Review

Textile Waste and Sustainable Design Thinking in Kuwait

2.1   Introduction

In this section, I explore the extent to which textiles in Kuwait are wasted. Unfortunately, there is very little documentation regarding textile waste and sustainability in Kuwait, and scholarly literature is scarce. Nevertheless, it is possible to use this information as a starting point, along with specific details on how textile waste is managed in Kuwait. This will facilitate comparisons with other European countries, especially western countries where there is a mature reuse and recycling culture.

2.1.1   The problem of textile waste in Kuwait

Over the past 30 years, Kuwait has developed a serious problem with solid and textile waste landfills, its industrial development having precipitated an increased amount of the latter in particular (Alhumoud and Al-Kandari, 2008; Al-Shatti, 2016). Back in 1976, large quantities of municipal waste such as furniture, bottles, food scraps, newspapers, clothing, and textiles were dumped in a landfill site in the middle of a residential area known as Al-Qurain (Al-Yaqout and Hamoda, 2002). No sanitation criteria had been considered, even though exemptions from sanitary landfill criteria were later approved by the Municipality (Al-Otaibi et al., 2012; Al-Shatti, 2016). Nevertheless, the accumulation of solid and textiles waste in Kuwait resulted in serious gas emissions which created offensive odours (Al-Yaqout and Hamoda, 2002). This, in turn, caused a public nuisance and created a potential hazard to public health, safety, welfare, thus highlighting textile waste in Kuwait as an issue of concern. Over the past two decades, this problem has only increased, as shown in the 1990s when textile waste in Kuwait per capita reached 1.37 kg/day, indicating that little to no attention has been given to waste reduction (Alhumoud and Al-Kandari, 2008). According to State of Kuwait Statistics, published by the Kuwait Central Statistical Bureau, quantities of solid waste such as paper, cardboard and textiles increase annually in Kuwait (Alhumoud and Al-Kandari, 2008; Al-Otaibi et al., 2012; Al-Shatti, 2016).

Over 5,000 textile industries produce 47,169 tonnes of waste a year in Kuwait, with research from **2016** indicating that the volume of waste has increased by more than 50%. Because countries with higher standards of living produce more waste (Al-Shatti, 2016), this can only be expected to grow in the future if mitigating measures are not taken. Furthermore, Figure 1 shows that textile waste in the Kuwait Municipal Solid Waste (MSW) stream makes up 5 percent of landfill waste, which when taken alongside other types of organic waste adds up to the largest proportion of overall waste (50%). This is much larger than paper (21%) and plastic (13%) (Al-Shatti, 2016). Thus, landfill sites are becoming dumping grounds rather than secure disposal sites (Al-Otaibi et al., 2012, Al-Shatti, 2016).
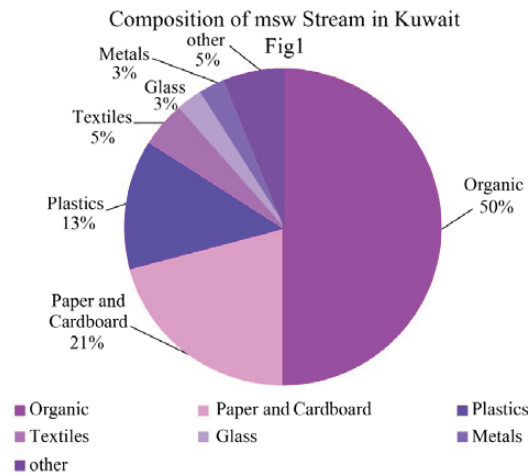
Figure 1: Composition of Municipal Solid Waste in Kuwait (Al-Shatti, 2016)

Additionally, research has shown that decomposing textile waste emits significant amounts of methane, which contributes to global warming (Claudio, 2007; Al-Shatti, 2016). Furthermore, the various dyes and chemicals in fabrics also pollute water sources (Kant, 2012). Unfortunately, Kuwait lags behind developed countries in terms of the number and efficiency of textile waste recycling companies (Alhumoud and Al-Kandari, 2008; Al-Fadhli, 2016). In the next section, I will discuss how textile waste is managed in Kuwait and the textiles policy adopted by the government in relation to such management.

2.1.2   Kuwait government's textile waste management policy

Unfortunately, recent research shows that waste management in Kuwait does not utilise a clear technical and systematic approach for dealing with textiles waste (Al-Fadhli, 2016; Al-Shatti, 2016), nor for waste in general, which is somewhat reflected in the number of landfills. In total, there are 18 landfills (Zafar, 2017) acting as dumpsites for all kinds of waste and both recycling and waste management in Kuwait are very poorly managed, hence landfills serve as dumping grounds rather than disposal sites (Al-Otaibi et al., 2012, Al-Fadhli, 2016). The standard approach seems to be to bury the waste without separating it by type, which results in many textile materials being discarded in landfills (Al-Fadhli, 2016; Al-Shatti, 2016; Zafar, 2017). The substances contained in these materials enter the soil and inevitably contaminate the environment (Morgan, 2009).

At the same time, because an effective recycling process has not been adopted, an increasing volume of raw materials is needed to produce new textiles, generating even more wasteful and toxic textile material in an unfortunate and perpetuals cycle (Morgan, 2009). Almost 95% of solid waste materials are deposited in old sand quarries, including disposed foods, dead animals, and chemical waste (Alsuilaili et al., 2014), and landfills also include all kinds of textile materials (Al-Fadhli, 2016; Al-Shatti, 2016). Whether this is discarded clothes, used textile materials, or any discarded leftover from tailors or consumers, all find their way to the landfill and are mixed with the rest (Al-Fadhli, 2016; Al-Shatti, 2016; Zafar, 2017).

At no point during this random disposal of textile waste is waste management considered (Al-Otaibi et al., 2012, Al-Fadhli, 2016), rendering waste management in Kuwait a persistent problem due to lack of recycling policies (Alsuilaili et al., 2014; Al-Fadhli, 2016; Zafar, 2017). Municipal solid waste disposal sites in Kuwait also receive very toxic and potentially dangerous waste materials, which demand the safest measures possible for their handling and management (Al-Otaibi et al., 2012).

All the while, a governmental scheme for textile waste, recycling, and segregation fails to materialise, apart from when it is carried out manually at landfill sites (Al-Fadhli, 2016; Al-Arfaj Group, 2015). Therefore, to implement a sustainable approach to textile waste management, it may be necessary to look outside Kuwait for relevant examples, such those from the European countries listed by Shinkuma and Managi (2011) and Tor-strick and Faier (2009), which show that textile recycling can be transformed into a successful business with many benefits. I will explore these examples in the next section.

2.1.3 European government policies on textile waste management

Approaches and technologies towards tackling the issue of textile waste in Kuwait may therefore be found in more developed countries, where recycling is better funded and the technological and educational means are more readily available (Wilson et al., 2015). However, as will be discussed, textile recycling remains a largely unaddressed area of waste management, even in these countries, despite the research and attention expended by experts on this issue (Messenger, 2017).

A study conducted by the Waste and Resources Action Programme – WRAP (2011) found that clothing contributes significantly to the carbon (5 percent) and water footprint (6 to 8 percent) produced by the UK's goods and services industry. Aiming to reduce the environmental impact of clothing, WRAP developed the Sustainable Clothing Action Plan (SCAP), which is a project aimed at both domestic and industrial consumers of textiles. The project complements the requirements of existing regulations (e.g., *Waste (England and Wales) Regulations 2011*) and demonstrates how textile waste can be reduced and/or managed better by all types of consumers. It concludes that the most effective approach for consumers would be to increase the active life of clothes and for suppliers to support this by creating clothes with increased durability (WRAP, 2011). In addition to reuse and recycling, textiles waste can also be reduced through door to door collection campaigns, textile banks, and charity shop collections, as some 80-89% of these materials can be easily recycled (Wrap,2016).

A comingled (mixed) collection has been found to be the least efficient method due to the damage incurred in the sorting process, which has resulted in significant levels of wastage (Wilson et al., 2015). In the UK, the provisions of regulatory documents and private sector projects denote the importance afforded to textile waste-reducing strategies (Wrap,2016).

All evidence points towards Kuwait's lack of textile waste management as not only environmentally unsound but also economically wasteful. As such, it would behove the country to develop governmental policies for reuse and recycling, especially regarding the differentiation of waste products before they reach landfills. However, while this lengthy process occurs, there is no reason why other sectors cannot implement such policies on their own. It is to provide a starting point for this in the theatre sector that this literature review was written, mainly through sustainable garment design which I shall now explore in greater detail.

2.2   Sustainability and Garment Lifecycle

In this section of the Literature Review I will explore the notions of sustainability, how garment lifecycle fits into that context, and the research gap that exists in Kuwait on this topic. It is for this reason that I consider a historical perspective to be the best starting point. I will therefore present a broad historical overview of sustainable fashion and its place in the industry; this will provide a foundational framework for discussing the garment lifecycle and its different stages and components.

2.2.1   History of sustainable fashion

The twentieth century dawned with a widespread improvement in production efficiency across virtually all industries, from agriculture to product manufacture and energy generation (Farley and Hill, 2015). This is not so different from the exponential growth of the human population itself, or the similarly exponential growth in fossil fuel usage over the past one hundred years (ibid.). Especially relevant to this study, the 1940s witnessed an explosion of non-biodegradable materials after designers began to experiment with synthetic fibres and other such materials (Brown, 2010). Additionally, the production of natural fibre materials was not necessarily as natural as their name implied, as a considerable number of chemicals were used for the development and manufacturing of fur, textiles, and cotton products (Hollins et al., 2007). These chemicals included fertilisers, colouring, and other substances such as bleach, which then proceeded to infiltrate both soil and water (Farley and Hill, 2015). In the 1960s, there was concern from environmentalists about the damaging effects of consumerism, and an interest in environment-friendly practices (Gwilt, 2014).

This voice grew in strength during the 1970s with the rise of Greenpeace and Friends of Earth (ibid.), as well as published works that tried to raise environmental awareness, such as "The Population Bomb" by Paul Ehlrich (1978), the Limits to Growth Report of 1972 by Meadows, Randers, and Meadows (2005), and the 1987 report of the Brundtland Commission (Brundtland and Khalid, 1987). All these reports hailed sustainability as the solution, leading to a subculture that promoted vintage style fashion, second-hand garments, and the reuse and recycling of garments and textiles for clothing, all to achieve "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland and Khalid, 1987).

Using green materials was another trend (Black, 2008) that gathered momentum during the 1990s in particular (McDonough and Braungart, 2009; Fletcher, 2008; Brown, 2010). By the late 1990s there was greater interest in the fashion sector towards environmentally and socially conscious practices, leading designers to experiment with all the aforesaid concepts (Gwilt, 2014).

Consequently, there has been a progressive trend towards sustainable design in the garment industry since the mid-2000s, one that emphasises ethics and recycling (Fletcher, 2008; Farley and Hill, 2015). Issues such as the environmental impact of pesticides used by cotton growers have begun to enter public awareness, as has the use of chemicals in textile manufacturing and the regularity with which chemically laden water from mills is dumped into local streams and rivers (Welters, 2008). The contemporary correlation of natural fibres with "good" garments reflects broader populist ideas about sustainability, now enhanced by an association between "natural" products and innovation, allowing producers to leverage the strength that innovation-based strategies

naturally possess, resulting in many companies now using "alternative' materials" in their collections (Hines and Bruce, 2012).

Overall, the fact that materials seem to dominate our ideas about environmental and social responsibility is perhaps not surprising as the garment and textile industry's main product is material "stuff," and reusing or recycling fibres, especially sustainable fibres, ticks all these positive boxes (Fisher et al., 2008). Having thus established why sustainable garment design is important, and why designers should be aware of garment life-cycle in their work, it is appropriate to explore the exact method by which sustainability can be implemented, starting with Life Cycle Assessment or LCA, the first step prior to knowing where and how to implement reuse and recycling techniques. This is a method that can and should be implemented in practice by garment designers if at all possible. This forms the core of the next section of this chapter.

2.2.2   Garment lifecycle stages

To understand the environmental implications of garment design means to examine each stage in a garment's production cycle (Blackburn, 2009; Joy et al., 2012). According to Gwilt (2014), the term Life Cycle defines the journey of a product from raw fibre extraction/production to the moment when a garment is disposed of. Another explanation and definition was proposed by Sule (2012), who described Life Cycle Assessment as a method for addressing the environmental aspects and potential environmental impacts a product may inflict during its life cycle, from its early existence as a raw material through production, use, end-of-life treatment, recycling (if it occurs at all), and final disposal (i.e. the Cradle-to-Grave period). Essentially, LCA means to evaluate the environmental impact of a product throughout its entire life based on its functionality at all stages (Muthu, 2018). This, of course, requires a specific understanding of those impacts at each stage.

The reason LCA looks at all stages of a garment's life rather than only those specific to the garment design process is because the goal is to assess the impact of the initial production of fibre and textiles (Payne, 2011), and how disposal is carried out in order to help develop socially responsible methods of garment manufacture (Payne, 2011). This includes consideration of the environmental impact of consumer use and garment disposals. Beyond disposal, systems can be put in place to allow for fibre recycling or the reuse of the garment (Payne, 2011). Overall, as part of LCA, eight stages are recognised (see Figure 2): **1)** Cradle/Fibre; **2)** Textiles Production; **3)** Design; **4)** Textile Production; **5)** Distribution; **6)** Retail; **7)** Garment Use Phase; **8)** Grave. A *Sustainable* garment lifecycle means adding two new stages: **9**) Reuse and Recycling (designer responsibility) and **10)** Cradle -to- Cradle technical and **biological** stage. Figure 2 and Table 1 explain the LCA phases in detail.
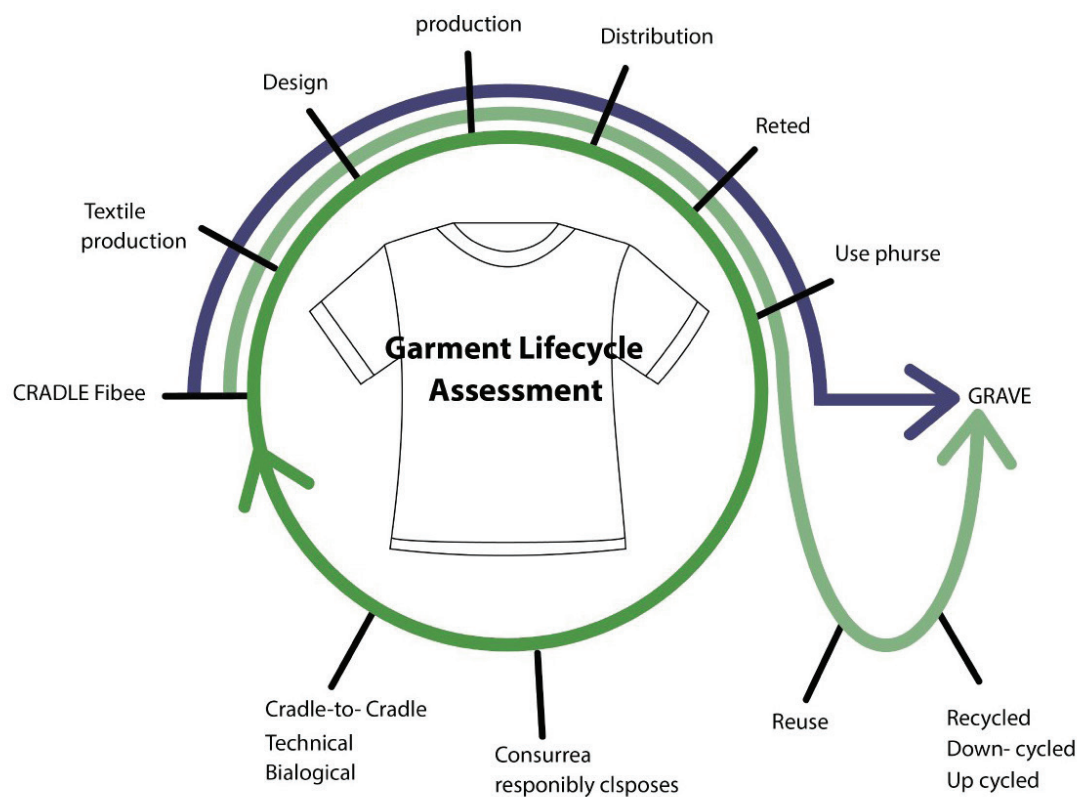
Figure 2: Garment lifecycle stages (Payne, 2011)

Table 1: Garment lifecycle stages

Stage 1: Fibre	For garments to be considered sustainable, the life of the item begins with the fibres used in the creation of the fabrics (Blackburn, 2009). Fibres are the building blocks of textiles whose performance is determined by their chemical and physical properties Fibres are classified as natural or manufactured depending on how they are produced. Natural fibres commonly used in apparel and textile products include fibre crops such as cotton and hemp and those based on cellulose from trees, such as lyocell (Fletcher and Grose , 2012) These have the potential to strike a critical balance between the speed of harvesting and speed of replenishment and are thus renewable. Manufactured fibres are those regenerated from natural materials. These are refined and separated before forming the input materials required for production (Leonas,2017).

Stage 2: Textile Production	Textile and garment production takes place in this stage, with the garment designer having an opportunity to select their design concept according to the techniques they know and whatever garments and textiles are available (Hethorn and Ulasewicz, 2008). In general, textile flow and use of virgin material have been used as indicators of environmental impact. Consequently, the on-going trend has been to use less virgin material and increase the amount of organic or recycled materials used in production to make the garment more sustainable (Grose, 2015). Weller (2013) stated that, especially within the natural garment movement, the use of natural fibres and their properties was the main concern, effectively leaving garments and aesthetics out of the design process. Therefore, when creating sustainable garments made from natural textiles, it is necessary to acknowledge trends and garments that have a deeper effect on aesthetics and use them as a point of reference.
Stage 3: Garment Design	This stage is where a person "designs" a garment on paper, on a stand, or even just in their minds. In so doing, they think through the "life" of the garment and try to determine what impacts this would have and where, and how these may be mitigated (Payne, 2011). They will also consider how textile and clothing products can be designed and manufactured to suit consumer preferences in a more sustainable ment lifecycle involves many decisions that shape the environmental impact of the eventual garment (Muthu, 2018). For example, a designer may decide on designing for zero-waste, which would mean collaborating with pattern makers to reduce or eliminate textile waste during cutting (Fletcher, 2008). In the field of sustainable garment design, several guidelines and a check list have been created for designers, such as those by Saas Brown (2010) .Her sustainable fashion handbook presents the following guidelines covering the entire lifecycle of a garment (including use and disposal):1) Reuse and recycle waste materials; 2) Repair and remodel garments; 3) Create longer lasting products; 4) Design multifunctional garments; and 5) Design for delight.
Stage 4: Garment Production /Manufacturing	It is during this stage that sustainable design questions start being asked seriously, such as: does the manufacturing of the product sustain or exploit workers? For local manufacturing, working conditions can be fairly closely monitored but increasing calls for transparency in the fashion supply chain indicate there has been a frequent abuse of human rights in this field (Payne, 2011). Manufacturers should also consider the environmental impacts of the product throughout its complete lifecycle, from material extraction, manufacturing, and distribution to repair, maintenance and, ultimately, safe disposal or recycling (Black,2012; Econyl, 2017). A radical new mindset among designers, manufacturers, and consumers is therefore required to identify sustainable ways to fulfil consumers' needs and improve the relationship between production and consumption (Niinimäk and Hassi, 2011).The garment production/manufacturing stage is therefore important in minimising environmental impacts and creating better products that will last longer. This will facilitate a move towards a more environmentally sustainable system, even if the problems of production are not fully resolved (Pui-Yan and Choi , 2012; Keoleian, 2017).

Stage 5: Distribution	The fifth stage is when garments are traded or transported to wherever they are used in design production (sample, making, toiling, and pattern making). This involves sending the finished garment or textile to a buyer (Gwilt, 2014). The buyer then repackages the garment in accordance with their desired look before sending it on to shops/store fronts. Decisions are then made regarding how to market and advertise the product and the price that should be set for the consumer (Bevilacqua, et al., 2012). Decisions also need to be taken regarding how to display items to customers in store, in catalogues, or online. This includes transportation of the final garments to users such as consumers and retailers (Chris et al., 2012). However, the extensive importing and exporting of garments around the world does not leave a friendly carbon foot-print. It is therefore important to support the use of locally made garments (Brreath, 2019).
Stage 6: Retail	In this stage, the reusing, re-assembling, up-cycling, and use of vintage garments reduces the burden of retailing (Runways, 2019). This means using a garment that is easily maintained and will last longer. After use, the garment should be recycled to reduce the amount of waste sent to landfill (Angel and Laura, 2017). For example, on H&M's website there are detailed maps and links to the various ways the company is trying to reduce their environmental impact. They go so far as to rank their influence in different areas such as climate impact, water impact, and social impact, and their different processes by design, raw materials, fabric production, garment production, transport, sales, and use (Morgan and Birtwistle, 2009; Back, 2017). To a lesser extent, this also covers the sale of fabrics and textiles. Producing better quality clothes that last longer brings real benefits to manufacturers via retail (Wrab, 2015).
Stage 7: Garment Use Phase	This stage is concerned with the disposal of the garment (Gwilt, 2014). The Garment Use phase is when a garment is expected to have the biggest environmental impact. Flexibility in this stage is perhaps even more important because of its overwhelming dependency on individuals and their practices – the unique, complex, habitual, idiosyncratic actions taken by people in relation to clothing throughout the course of their lives (Fletcher and Grose, 2012). This is when garments are used, laundered, or repaired (if needed) and involves the use of various chemicals that have their own environmental implications. Such environmental concerns are thus pertinent to any LCA (Payne, 2011). For example, studies have shown that home washing and drying a T-shirt can account for nearly 60% of the energy used throughout its lifetime. This is primarily through energy-intensive hot-washes and drying cycles (Allwood, 2006, Toxic, 2011). If the consumer were to wash the T-Shirt or indeed any other garment at a lower temperature it would reduce energy consumption by about 10 per cent for every 10°C reduction in washing temperature (Fletcher, 2013).

Stage 8 and 9: (Grave: Reuse and Recycling)	These stages (grave: reuse and recycling) encompass the actual end-of-life of a product and arguably need the greatest attention during an LCA, as it is here that the final decision is made regarding disposal, reuse, and recycling (Payne, 2011). Recycling, redesigning, and reuse are especially practiced in innovative design approaches, where the aim is to give used textiles both a new life and added value (Brown and Steele, 2010). The reuse and recycling process minimises the environmental impact of products through the employment of sustainable production, operation, and disposal practices. This means designers consider the disposal phase of the life-cycle by designing garments that can be later disassembled or recycled (Mitsutaka et al., 2017). Companies can collect garments at the end of their life to responsibly dispose of them, which helps incorporate social responsibility into product development (Rose, 2017). According to Morgan and Birtwistle (2009), raising awareness of the impact of an increasing amount of textile waste going to landfills and educating garment designers regarding various alternatives to the continual use of virgin materials for new products will help encourage recycling behavior. Such a process requires re-contextualisation of the by-product of production as a resource instead of surplus (Leblanc, 2019). Ironically, this means that the so-called end-of-life stage can actually extend the life of a garment to a greater extent than other stages (Fletcher, 2008).
Stage 10: Cradle -to- Cradle Stage (technical/ biological)	This final stage is when a manufacturing system is finally created an bypasses the grave stage as it allows for the reuse of valuable fibres. This is achieved by spinning the fibres either by hand or spinning wheel (Turner, 2017). Cradle-to-cradle builds on the cradle-to-grave metaphor with the intention of creating increasingly innovative and high-quality products to enhance the well-being of both nature and culture (Hethron and Ulasewicz,2008). It goes even further in cases where the entire lifecycle of a product and those that follow are considered at the design stage (Rudawska, 2018). This means that, in the design process, designers consider the disposal phase of the lifecycle by designing garments that can be later disassembled or recycled. Companies then collect garments at the end of their life to responsibly dispose of them (Porter, 2018).

Fletcher and Grose (2012) argued that, "Designing garments with the potential to biodegrade harmlessly at the end of their lives is a proactive and ecosystem-inspired response to the rising levels of textile and garment waste, overflowing landfill sites, and increasingly proscriptive legislation controlling the ways in which clothes can be discarded". As McDonough and Braungart (2009) found, two streams of material goods can be identified from a practical perspective: 1) The technical stream (during which synthetic textiles are shredded, re-polymerised, turned into new fibres, and then spun into new textiles) and 2) The biological stream (during which natural fibre garments are composted, bringing the loop to a close). This two-step approach means one can extend, reuse, or reduce waste insofar as consumers and/or garment designers are using responsible methods of garment disposal during the end-of-life stage (McDonough and Braungart, 2009). |

As Figure 2 and Table 1 indicate, garment designers should be well versed in the particularities of the Use stage and End of Life stages so that they can plan effectively during the design stage (apply LCA thinking). The participants (garment designers) indicated that if the environmental impact of clothing manufacturing and disposal was more widely publicised, clothing retailers would soon have to adapt their collections and sales strategies. In so doing, they can then apply their knowledge and associated skills during the production stage (Payne, 2011). This ten-stage model can be used to develop a sustainable design strategy for garment design, providing a structured path for garment designers to follow that will allow them to evaluate and assess the sustainability of their practices.

Lifecycle assessment (LCA) is an evaluative tool that considers the environmental impacts of a product or process from 'cradle to grave'. It encompasses the production and acquisition of raw materials, fabrication and assembly, transportation, use and disposal of items (Black, 2012; Kozlowski et al., 2012). Life cycle assessment is a useful technique that can be employed by garment designers to estimate the environmental performance of products, materials, and services from the extraction of raw materials to final disposal (Song et al., 2009). Where necessary, LCA can also enable them to change their practices to include reuse and recycling methods, especially at the End of the Life in Stage 9 (reusing and recycling) (Gwilt, 2014). LCA thus provides a foundation for garment designers to prove their credentials while expanding their options for garment design (Blackburne, 2009). This is because a key area of consideration for garment designers concerns how to develop ways to apply their creative ability and prove they possess the skills and experience necessary to recognise the capabilities of garments / textiles. This includes the processes necessary to create their designs and enhance their ability to follow the production of a garment through to the end (McDonough and Braungart, 2009; Cross, 2011). All told, LCA constitutes an arguably straightforward practice of becoming familiar with all the productive stages of a garment's lifecycle and ensuring designers do not waste opportunities at the End of Life and Grave stage (Payne, 2011). For instance, Fletcher, (2012) stated that, "Cradle to Cradle is a useful idea though it doesn't acknowledge that we need to make sacrifices. We need to steer cradle to cradle projects, direct them with tough moral questions". Thus, at this point, designers can choose to reuse/recycle rather than simply dispose of garments, thus reducing textile waste. It then behoves us to talk in the next section about the impact LCA has on the creative process and on the garment life cycle as a whole (Morgan and Birtwistle, 2009).

2.1.2 Impacts of LCA on garment life cycle and the design process

As shown in Figure 2 and Table 1, Lifecycle Assessment (LCA) enables the garment designer to plan for the impacts a product will have in terms of both input (the extraction of raw materials in pre-production) and output (the emissions and waste generated by the product during production, use and disposal) (Vezzoli and Manzini, 2008). In his book entitled "Life Cycle and Environmental Impact" Blackburn (2009) covers many of the factors garment designers should consider while arguing that this can be done without harming their creativity. He argues that the goal of LCA is to resolve the many practical issues that arise during the design process. This includes providing insights on how the reuse and recycling of garment/textiles can compensate for the negative environmental and cost impacts arising from other stages of the garment lifecycle (from cradle to grave) (Muthu, 2018).

This does, however, require the garment designer to possess certain skills, which can be classified into two types: 1) creative ability and expertise; and 2) technical aptitude and knowledge. Creative ability and expertise denote an ability to create a design that is original (Fletcher, 2008.), often from a concept that is unique, or interpret trend-related information to produce novel and attractive design ideas (Cross, 2011). Often this is manifest as inspiration or an intuitive vision, even a reverie where a designer simply knows what is right (Blackburn, 2009). Technical aptitude, meanwhile, refers to understanding and selecting the right production systems and materials, especially anything that can reduce textile waste or otherwise innovate garment design methods and systems (ibid.). In their research, Niinimäki and Hassi (2011) contended that, "By focusing on both production and consumption, this approach actually decreases the environmental impact of the whole system, thus creating environmental value and, moreover, sustainable development value''. As part of this process, a garment designer should familiarise themselves with the practice of using life cycle assessments for garments (LCA) as this will give them intimate knowledge of the constituent parts of the textiles they are using and the garments they are designing (ibid.).

A multitude of writers have examined the garment design process and identified it as a critical point of intervention in making the garment lifecycle sustainable (Fletcher, 2008; Gwilt, 2014; Rissanen, 2008). Their work has been instrumental in transforming the concept of a lifecycle garment into a holistic approach to garment design. Shedroff (2009) suggests that, in addition to extending the use of garments to make them last longer, companies can design their operation and components to be easily exchanged so that the environmental impact is reduced. In terms of how sustainability will impact on the garment marker, Pui-Yan and Choi (2012) argued that garment companies should strongly consider the product development process and extend stewardship across the multiple lifecycles of products. Companies can achieve product stewardship through renewed target marketing, creating an eco-market space, and product differentiation through experimentation and innovation, such as exploring the sustainability of resources and new raw materials.

This research indicates that once an environmentally friendly system and set of criteria is settled upon, the designer can work on establishing their own desirable aesthetics (Farley and Hill, 2015). For instance, Gwilt (2014) argues that it is important for designers to understand how garments are used and discarded so they can begin to develop new garments that will help improve patterns of use. At the same time, the garment industry as a whole should understand that designers work and think differently, and support them accordingly (Collins and Aumonier, 2002). As indicated in Figure 2, garment designers should be well versed in the particularities of the use and end of life stages so that they can plan effectively during the design stage (apply design thinking) and then apply their knowledge and associated skills during the production stage. LCA is a tool for ensuring that resources expended on environmental initiatives, such as garment recycling, result in an overall reduction of the burden on the environment (Dieffenbacher, 2013). Referring back to the stages of a garment's lifecycle, Payne's (2011) ten-stage model (see Figure 2) can be used to ensure that the impact of a sustainable strategy for garment design is a positive one. It provides garment designers with a structured path for to follow that will enable them to evaluate and assess the sustainability of their practices and change them if necessary, including the adoption of reuse and recycling methods, most notably at the end of life stage (Payne, 2011; Fletcher, 2008).

This will provide a foundation for carrying out an LCA and serve as a way to prove their credentials while expanding their options for garment design (Blackburne, 2009). This is because a key issue for garment designers

is to develop innovative ways to apply their creative ability and prove they possess the skills and experience necessary to recognise the capabilities of garments / textiles, including the processes necessary to create their designs and retain their ability to follow the production of a garment through the entire process (McDonough and Braungart, 2009; Cross, 2011).

In addition, the LCA provides the data needed to inform environmental management. It can be used to assess interactions with the environment associated with a product, process, or activity. During the design and decision-making stages (see Figure 2) the LCA can be used to minimise any adverse environmental effects associated with new products, processes, and operational changes (O' Neill, 2003; Black, 2012).

Hence, garment designers are well-placed to plan for the impacts of their garments in the design stage. For a fashion garment, the lifecycle begins at fibre (cradle), before moving through to textile production, garment design process, manufacture, distribution, retail, use phase, and eventual disposal (grave) (Atherton et al., 2009; Payne, 2011). It considers the transportation of inputs to the organisation and the impacts of the transformation into a useful product or service that takes place in the organisation (Kramer, 2012). Cradle-to-cradle design and manufacturing aims to bypass the grave stage to reuse valuable fibres through closed loop manufacturing methods (McDonough and Braungart, 2009). Garment and product designers are responsible for specifying up to 70% of subsequent materials and processes in any given project. If the designers are motivated by sustainable design and have access to information materials prior to choosing them, they can bring about these changes (Patwary, 2016). Consequently, the overall goal of garment designers should be to familiarise themselves with all productive stages of the garment lifecycle and not waste any opportunity at the end of life to reuse/ recycle rather than dispose of a garment, thus reducing textile waste (Gwilt, 2014).

There are many different tools garment designers can use to conduct a life cycle assessment (LCA). One that is commonly employed is The Higg Index online tool (Scott, 2018), which has been designed to ensure excellence in practice. When applied, it yields comprehensive and integrated results that enable designers to choose materials that are commensurate with the needs of the environment. It also promotes transparency among garment designers, retailers, and manufacturers through the public communication of significant and comparable sustainability scores (Scott, 2018). Employing a common language to promote efforts towards sustainability will also help ensure accountability. Life-cycle assessment (LCA) is an evaluative tool that considers the environmental impacts of a product throughout the process from 'cradle to grave'. This encompasses the production and acquisition of raw materials, fabrication and assembly, transportation, use, and disposal (Kozlowski et al., 2012). It will enable the garment design industry to flourish in a responsible manner and can help fine-tune designers' understanding of eco-related risks and opportunities, pinpoint specific areas for improvement, and help garment designers evaluate complex options and trade-offs in product and design processes (Esty and Simmons, 2015). Through LCA, it is possible to assess the absolute and relative performance of alternative approaches to production and design processes, which will support decision-making and provide the basis for the 'greening' of sustainable garment design practice (Niinimäki and Hassi , 2011 ;Kozlowski et al., 2012; Harn-wei et al., 2015). For instance, by choosing better materials, processing, and manufacturing strategies, and by paying attention to product lifespan, including options for recycling. In a nutshell, the goal is to reduce the impact of items as much as possible per use (Brown and Steele,2010). An LCA is thus an excellent tool that enables informed decisions to be taken (Dafi, 2019). The following section focuses on this issue in more detail, specifically with regard to the guiding principles of sustainable garment design known as the 3Rs: reduce, reuse and recycle.

2.3 The 3Rs of Sustainable Garment Waste Management Strategies: Reduce, Reuse, Recycle

In this section, I will first briefly define what is meant by a waste management strategy and provide an overview of current waste management systems. This will provide a useful introduction to a more detailed consideration of the 3Rs of waste management: Reduce, Reuse, and Recycle, each of which will be addressed in turn. I will then present some examples of Reuse and Recycle strategies as applied to garments.

2.3.1 What constitutes a waste management strategy?

Although definitions vary, Blackburne (2009) and Fletcher (2008) describe sustainable waste management strategies as any system for reducing, reusing, recycling or otherwise preventing the waste of garments and fabrics. These strategies redirect waste to practical purposes, incorporate feedback loops, and are generally focused on adaptability, with the ultimate goal being to make the most out of textiles instead of dumping them in a landfill (Blackburne, 2009). Thus, a waste management strategy is one that contains or helps offset the negative environmental impact of waste generation (Daven and Klein, 2008). This refers not just to industrial processes but also the responsibilities of all others involved in textile lifecycles (Cross, 2011; Muthu, 2018). Some scholars even propose a multi-stage design thinking approach (ibid.) where the garment designer is responsible for collecting, treating, and disposing of the different forms of waste produced during any garment or textile use project (Fletcher, 2008; Petersen et al., 2016). In essence, besides reducing textile waste for the sake of a healthier environment, sustainable waste management strategies enable costumiers to gain the maximum benefit from a product, in this case garments and textiles, by extending their life either as whole products (garments) or as individual components (fabrics, fibres) before throwing them away (Fletcher, 2008; Petersen et al., 2016).

On a broader scale, waste management strategies encompass recycling and organic waste collection from landfills, including the implementation of waste segregation measures (Daven and Klein, 2008), and community-wide education and awareness initiatives, with the scope of responsibilities narrowing the more individualised the measures become (ibid.).

Garment designers have now power over consumer's actions as they can only influence the decisions made in design and production and empower consumers (Blackburn, 2009). Therefore, integrating an optimal waste management strategy into their practice, and enhancing design thinking to cover such concerns and measures, is arguably the most important step forward that can be taken at present (Roca and Curto, 2007; Alhumoud and Al-Kandari, 2008; Blackburn, 2009). The next section provides an overview of the options for achieving this.

2.3.2　Overview of waste management systems

Figure 3: A Veolia mixed recycling bin (Veolia UK, 2018)

When the time comes to discard any sort of garment, there are several options available: dispose, sell, or donate. Most waste management systems are beyond the scope and influence of garment designers (Muthu, 2018). Often, clothes accumulate in closets and are informally handed out or exchanged between family, friends and acquaintances; however, broad-scale waste management systems also exist (Veolia UK, 2018). Discarded textiles are either incinerated or dumped in a landfill alongside other municipal solid waste, although, unlike Kuwait, European countries go far beyond this (Palm et al., 2014), as established earlier. In Europe, garments and textiles are often donated to clothing reuse agencies, according to quality (wear & tear, fabric quality, etc.) and shipped to reuse or recycling plants, (Daven and Klein, 2008). Other discarded clothes and textiles are downcycled, which means they are either used as insulation in different industries, or simply turned into wipes and rags (ibid.). European countries, including the UK, also have total waste management outsourcing services, whereby organisations take discarded garments / textiles and independently explore all reuse, recycling, and recovering options available in the industry (see Figure 3) (Veolia UK, 2018).

As well as being good for the environment, approaches such as that taken by Veolia improve the quality of recycled material and generate more income for people through material rebates, effectively providing access to otherwise unavailable capital (ibid.). This capital can then be used to further innovate and improve the efficiency of processes such as garment lifecycle and LCA (Muthu, 2018). Beyond the domestic level, discarded clothes or fabrics of sufficiently high quality are sold to East European and African countries (Daven and Klein, 2008; Palm et al., 2014). In any event, multiple options are considered and enacted before clothing and fabrics/textiles actually end up in the landfill or incinerator (Muthu, 2018; Payne, 2011). This is why the focus of sustainable garment design must be on these processes, usually classified under one of the 3Rs, as elaborated on below.

3R'S MODEL
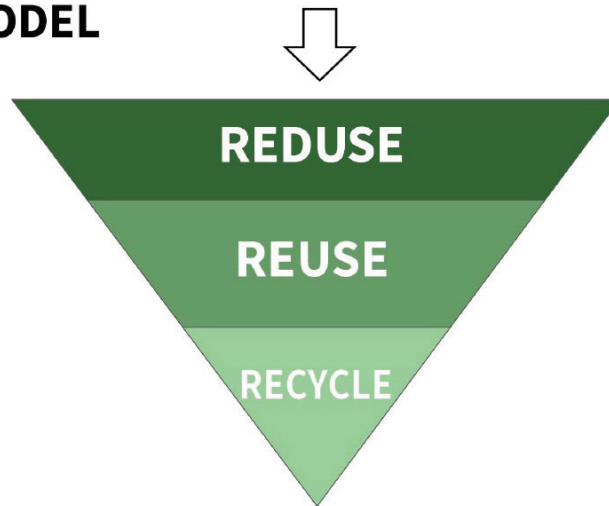
Figure 4: The 'Reduce, Reuse, Recycle' Waste Management Hierarchy (Steyaert, 2013)

2.4   The 3Rs

According to Seadon (2010), a sustainable waste management system is focused on processes, incorporates feedback loops, embodies adaptability, and diverts waste from landfills. The most widely known sustainable waste management strategy in the garment industry is referred to as the 3Rs (Dissanayake and Sinha, 2012). The term stands for reduce, reuse, and recycle. This waste management strategy works under the principle that each approach builds on the previous one in order to cut down on the amount of waste from products (Rinkesh, 2018). Thus, for a garment to be considered sustainable, not only is the environment sustained but so also is the strategy (Rinkesh, 2018). Reducing, reusing, and recycling textile waste is a hierarchical system (see Figure 4) for achieving the goals of sustainable garment design explored earlier in this chapter. Reduce ranks at the top to reflect the goal of not only conserving natural resources and landfill space, but also of offering economic benefits via the other two layers, reuse and recycling (Brito et al., 2008; Fletcher, 2008). Following the pyramid scheme, I will now examine reduce, reuse and recycling in that order.

2.4.1   The first R: Reduce

2.4.1.1 Why Reduce?

The first option in the waste hierarchy is the strict prevention of waste generation by implementing source reduction strategies in all production activities. This is the prevention principal known as the "avoidance of waste" (Goodship, 2010). The term "reduce" means ensuring that only what is needed for a product, in this case a garment, is consumed during manufacture (Rinkesh, 2018). As well as strategies for reducing materials, it addresses challenge inherent in our current consumption driven culture by encouraging us to be mindful of our consumption, buy less and, in turn, throw less away (Charles and Jones, 2012). Although some level of consumption is always necessary, if there is less waste, there is less to recycle or reuse (Rinkesh, 2018; Muthu,

2018; Fletcher, 2008). This means examining what the consumers (garment and textiles designers) use, what it is used for, and choosing the best techniques and most appropriate allocation of resources (Hendriksz, 2016; McDonough and Braungart, 2009; Black, 2006).

Regarding the adoption of the 3Rs, especially the first option (reuse), the First Nations of Quebec and Labrador Sustainable Development Institute (2018) stated that, "We are living in an era of over-consumption. Everything can be bought. Everything is monetised. Durable products are rare. And this consumption of goods such as garments and textiles, including their transportation, packaging and waste management, is all too often at the expense of the environment. At the expense of life''. Furthermore, waste reduction is closely linked to improving manufacturing methods used to produce garments. The use of sophisticated lay planning and software can help map out the ideal layout for pattern pieces which would result in less fabric wastage during the fabric cutting process (Pui-Yan-Ho and Choi, 2012). The Missouri Department of Natural Resources (2018) also stated that it is important to "reduce option strategies, focus on changing consumption habits to prevent the creation of waste and, in the context of textile waste, aim to move consumers away from the purchase of fast garment products". From the point of view of both the retailer and consumer, the fast garments retail model is premised on introducing new products to stores as quickly as possible (Cresswell, 1998; Wang, 2006; Blackburn, 2009). This means that the garment quickly becomes outdated or falls apart, resulting in its disposal. The aim is to therefore cut down on the number of items the consumer does not need or to purchase multi-purpose items: a primary step towards lowering wastage is to therefore conduct a thorough examination of what one needs and its purpose (Coast, 2019). Thus, reducing the amount consumers buy is the most significant of all the options in managing waste (Rahman, 2014; Ferni and Sparks, 2014). This will help to reduce the volume of waste products that go into the bin. It also means adopting a holistic approach to garment production, acknowledging all the resources, individuals, and ecologies that may be affected (Shedroff and Lovins, 2009). In short, the key is to only purchase goods the consumer needs and in the right amount. If the products are never generated in the first place there is no need to extract raw resources, manufacture goods from scratch, develop shipping materials, utilise additional resources for shipping, and then devise ways to dispose of products (Rahman, 2014; Ekstrom, 2015). The embodies the concept of eco effectiveness, which strives not just to reduce waste but to eliminate the concept of waste altogether (Sherdoff, 2009). This can be effectively achieved through the Reduce option in the hierarchy (see Figure 4) which will facilitate the management of garment and textiles waste. In the next section, I will discuss the various tools used to avoid and reduce waste materials.

2.4.1.2 Avoiding and reducing waste

Avoiding and reducing waste materials can only be achieved through effective waste prevention at source. This necessitates the adoption of suitable practices and changes in the usage of raw materials, as well as in technology and production processes (Jones, 2014; production, distribution, purchasing, usage, and elimination at a domestic level (Brown, 2010; Bhatia, 2018). Source reduction does not necessarily require the adoption of advanced technology, it can be achieved by making appropriate decisions in the management of the design thinking production process (Petersen et al., 2016). It also means drawing the attention of communities in every country to ways in which waste can be minimised using the first option from the 3Rs hierarchy (reduce) (Dissanayake and Sinha, 2012). The highest priority is to encourage communities and industry to avoid and reduce the generation of waste, which can be achieved in the following ways:

1. By encouraging garment designers and manufactures to reduce the amount of virgin materials extracted and used when designing their projects (Charles and Jones, 2012; Seher, 2018). The goal is thus to maximise efficiency and avoid unnecessary consumption by changing their behaviour (Epa, 2019)

2. Changing consumption patterns and lifestyles by raising awareness: for example, through campaigns to educate the public, garment designers, and textiles and garment companies Consumers should be encouraged to demand goods that produce less waste materials, which will drive the efficient creation of more sustainable materials for the garment design industry (Tojo et al., 2102; Ahmadi, 2017).

3. Adopting the approach of production reduction ecology, which means production should not cause any harm to the environment at all stages of manufacture, from the initial sourcing of textile fibres through to the finished article (Mucella and Yucel, 2005). Reducing harm to the environment means not only avoiding polluting the soil, air, and water, it also means consciously reducing noise and the use of raw materials (Nrcd, 2016), auxiliary products, water, and energy (Guner and Yucel, 2005). In the next section, I will discuss in detail the application of the second of the 3Rs, that of reuse.

2.4.2 The second R: Reuse

2.4.2.1 Why Reuse?

Reuse is the second of the 3Rs in the hierarchy. It simply means using materials and products for a second or third time (or more if possible), rather than purchasing new amounts, and will also result in financial gains (Chamberlain, 2018). Reuse is preferable to recycling as the item does not need to be reprocessed (Goodship, 2010). As a philosophy, it means reusing all products, if possible, for purposes that may be similar or different to those of their initial design (Gwilt, 2014; Fletcher, 2008). The reusability of a product is defined as its ability to be used repeatedly, unlike a disposable product which can only be used once. A similar definition can easily be adopted for textile products (Bartels, 2011; Muth, 2018). It also implies using materials more than once in their original form instead of throwing them away each time they are used (Morgan, 2009). This mean new resources will be used for a while longer, and old resources will be prevented from entering the waste stream (Goodship, 2010; Beaty, 2013).

According to Muth (2018)," Reuse is the most effective and promising way to stop waste at the source". Utilising a sustainable, reusable option will help to reduce waste such as bottles, plastics, clothing, and textile materials. A creative option to facilitate the reduction and management of waste materials (see Figure 4) (Porter, 2018) is to reuse items for a second or third time rather than buying new textile materials for the same purposes (Wang, 2006). Reuse strategies are thus a particularly important waste management strategy for the garment and textiles industry, as the most effective practice for reusing materials is to allow end waste and splicing waste to be used as components or materials for various sampling or new production processes (Dahlbo et al., 2017). Thus, when reusing a second-hand garment or other item (Goodship, 2010) the aim is to reduce waste by i) not disposing of the item, ii) not paying someone else to create a replacement item, and iii) not needing to dispose of any replacement after it is used (Watson, 2009).

For example, a garment rejected by a manufacturer can be sold at a discounted price or as part of a second-hand garment from the apparel market, rather than being discarded or incinerated (Fontell and Heikkilä, 2017). Alternatively, it can mean using one product to make another with little or no processing (Blackburn, 2009). This reduces resource needs by as much as 10 to 20 times (Fletcher, 2008) and helps save the environment as there is no need to make these textiles from raw materials (such as cotton, wool, and synthetic fibres). This also saves on the energy used and the pollution caused during manufacturing processes such as dying, washing, and scouring (Brown, 2010; McDonough and Braungart, 2009; Fletcher, 2008). In addition to environmental considerations, sensitive reuse schemes can have important social and cultural benefits for the use of garment and textile materials (Niinimäki, 2017), including the following:

1) It postpones or avoids a textile material being entered into the landfill/disposal stage; (environmental impacts corresponding to dumping at landfills are avoided) (Muth, 2018)**.**

2) Prevents pollution and saves energy by reducing the need to harvest new raw materials (EPA, 2018).

3) Decreases the amount of new textiles obtained from virgin materials and the use of water, energy, and chemicals in their production (Dahlbo et al., 2017). This prevents/delays the manufacture of a new/virgin material and thus voids its associated environmental impacts. Even if the reuse of garments has already increased, consumers are now discarding higher volumes of textile waste as a result of the trend for fast garments (Morgan and Birtwistle, 2009). It is more important to conserve precious, natural resources, and reduce environmental load/pollution (Farrant, 2010). In the next section, I will discuss different ways textile and garment designers and manufacturers can employ waste management strategies as a sustainable option to reduce the general level of waste materials.

2.4.2.2 Sustainable ways to reuse textile and garment materials

According to Blackburn (2009), "Reuse is particularly important and needs to be the first problem that is solved within the whole design puzzle". This is especially pertinent to the garment and textiles design industry. A variety of studies and scholars have explored different ways in which textiles and garment designers and manufacturers can employ effective and sustainable waste management strategies to reduce the general level of waste materials (e.g., Wang, 2006; Morgan, 2009; Fletcher, 2012; Ekstrom, 2015). These include the following:

1. Reusing general waste materials can be achieved by repairing these items (metals, solid waste, fibres) and selling or donating them to charity and community groups, (Morgan, 2009; Ahmadi, 2017). In the academic literature, various forms of reuse have been conceptualised such as collaborative consumption, product-service systems, commercial sharing systems, and access-based consumption (Belk, 2014; Coach, 2019).

2. Garment swapping is a great way to reduce waste and items can be exchanged in most second-hand stores. If the garment or the textile is too stained or torn to be reused or repurposed, it can still be cut into strips and reused as accessories for other garments. This will help save the textiles and reduce the waste sent to landfills (Fontell and Heikkila, 2017; Ann, 2018). For instance, waste management can be achieved

through renting, trading, swapping, borrowing, and inheriting. These activities can be facilitated by second-hand garments and textiles stores, online marketplaces, charities, clothes and textiles libraries, and door to door collection (Fletcher, 20018: Sandina and Peters, 2018).

3. Patching and Mending is another waste management strategy that can be employed to reuse garments and textile materials. For example, the "visible mend" (Prokopanko, 2018) is a creative technique that involves reusing and fixing textiles and garments with embroidery and colourful patches. The use of patches and tailoring is still going strong and paying for a fix is typically cheaper than buying a new item (Neumuller, 2019). For example, buttons, zippers, embroideries, and large pieces of fabric are resources that can be reused to make new garments or patch old ones (Palmskold, 2015; Rodabaugh, 2018). Therefore, before disposing of discarded textiles, it is useful to check with designers, retailers, and manufacturers to see whether any parts can be saved and reused for a second or even third time (Brandt, 2015). In the next section I will discuss in greater detail the benefits and impact of reusing as a sustainability strategy for reducing waste.

2.4.2.3 *Environmental impact of reusing garments and textiles*

Many garments and textiles are made of organic material, which means they are derived from natural sources and are biodegradable (Cirino,2018). However, landfills lack the oxygen needed to break organic materials down which means that, when clothing and textiles end up in a landfill, they decompose through anaerobic digestion (Aid, 2019). The global demand for textile products is steadily increasing (Oerlikon, 2010), a trend likely to continue due to population growth. At the same time, the textile and garment design industry is facing tremendous environmental and resource challenges (Lenzing, 2017). Moreover, landfills are filling up at a rapid rate, necessitating the creation of yet more landfill sites. Each time textiles and garments are reused, this is the same as not sending them to a landfill (Rose, 2017). Furthermore, the area surrounding the landfill poses a risk to the groundwater. Every time it rains, the water absorbs all the chemicals and toxic materials from whatever is dumped in the landfill, such as the chemicals, dyes, and bleaches used in textiles. To avoid these negative and environmental risks and reduce the volume of textiles and garments sent to landfill, reusing (see Figure 4) is a creative waste management tool that should be employed by textile and garment designers and design industries (Blackburn, 2009; Morgan, 2009). This will reduce the number of garments and textiles used by the consumer and the damage done to the environment by decreasing the amount of waste sent to landfill (Morgan, 2008; Straut, 2013).

Furthermore, reusing garments and textiles materials also has many other positive impacts on the environmental, including the following: **1)** It decreases the need for landfill space, keeping in mind the greenhouse gases released from the textiles dumped (Gogerly, 2013). **2)** It avoids the need for the polluting and energy intensive processes used to make textiles from fresh materials (Niinimaki, 2013). This means the demand for textile chemicals such as dyes and fixing agents will be reduced (Hethorn and Ulasewicz, 2009; Kiron, 2019). **3)** Reusing allows people to hold onto their clothes for longer, generating less waste and reducing the environmental impact. This sends a signal to companies that they need to develop more sustainable models (Slater, 2003; Mccarthy, 2016). If all consumers (garments and textiles designers, clothing and textiles companies) adopted this approach, the garment design industry would change rapidly which would have a positive impact on the

reduction and management of waste (Miraftab and Horrocks, 2007; Blackburn, 2015) In the next section, I will discuss the final(3Rs) waste management strategy, that of recycling.

2.4.3   The third R: Recycling

2.4.3.1 Why Recycle?

Recycling is the final stage of the waste hierarchy (see Figure 4) and refers to a product that has been transformed once more into a raw material that can be shaped into a new item (Rinkesh, 2018; Black, 2006; Gwilt, 2014). Thus, paper goes back to pulp, and plastics are melted and moulded into new products. What was once considered waste thus becomes a resource, breaking the logic of linear extraction-production-consumption-destruction. Recycling is a dynamic process (Dickey, 2008). With this new mindset, an environmentally friendly cycle and sustainable development becomes established and, as markets become saturated with specific products, this reduces the need for new products to be produced and introduced (Muth, 2018). For instance, textile recycling is the process of reusing or reprocessing used garments, fibrous material, and scraps of clothing from the manufacturing process (Wang, 2006). For products such as textile materials and garments, there are many compelling reasons for utilising recycling as a strategy for managing waste. First, the resources on this planet are ultimately finite. The two key fibres in the textile industry are cotton and polyester, which represent over 85% of global fibre production. Cotton relies on a finite land mass for agriculture and competes with food production (Parthibanet al., 2017).

Second, landfills are a major part of the problem. If garments and textiles are not recycled, more has to be produced and that means more pollution (Mac, 2009). Globally, the natural resources (e.g. water and petroleum) needed to make products such as garments are diminishing. The three strategies of repair, reuse, and recycling thus reduce the amount sent to landfill and make use of resources already available rather than making them from scratch (Biddlecombe, 2019; Wang, 2006; Miraftab and Horrocks, 2007).

These effective waste management strategies are now becoming a high priority in the textiles and garments industry. Environmental issues are also associated with the sector – including high energy and water usage and the use of toxic chemicals. Products made from synthetic fibres will not decompose in landfills (Norris, 2010; Blackburn, 2015). The centuries needed to decompose such waste means it has no resale value and pollutes the atmosphere. If products cannot degrade, they accumulate, spread infectious diseases, and emit foul smells. Woollen garments do decompose but they also produce methane gas which contributes to global warming (Parthiban et al., 2017). In the next section I will illustrate and provide examples of different way of recycling garment and textile materials as part of the overall strategy to manage and reduce waste.

2.4.3.2 Recycling as a sustainable waste management strategy

In general, recycled textiles are sorted into grades of quality, from which the best are reused and damaged textiles are shaded and used to make new products (Brown, 2008; Niinimaki, 2013) . However, even though recycling is an important action that reduces the amount of waste, it is still insufficient for dealing with the detrimental effects of

increased consumption on the environment (Alomonson, 2018). After collecting all the waste, recuperated materials are taken to a recycling centre where plastic, cardboard, metal, textiles, and garment materials (Inskipp, 2005) are then sorted. Each material is then compressed into a cubic tonne and sold to companies that carry out the actual recycling of these resources (Inskipp, 2005; Ghosh, 2019). This reduces the amount of general waste materials associated with the garment and textile design industry (Farley and Hill, 2015; Alig, 2018). Special equipment is sometimes needed to shred fabrics and separate waste and extract fibres (Wang, 2006). Currently, there is an abundance of textiles and garments available for creative recycling (DEFRA, 2006; Miraftab and Horrocks, 2007; Blackburn, 200). In his book "Sustainable Apparel, Production, Processing and Recycling," Blackburn (2015) states that, "recycling companies have strategically installed pickup bins so that it is now easier for consumers to drop off used clothing for recycling".

When textiles are recycled, there are fundamental differences in the processes applied to natural and synthetic fibres. For natural textiles, the incoming unwearable material is sorted by type of material and colour. Colour sorting results in a fabric that does not need to be re-dyed (Leblanc, 2019). This saves energy and avoids generating pollutants. Textiles are then pulled into fibres or shredded where, depending on the end use of the yarn, other fibres may be incorporated (Fletcher, 2008; Leblanc, 2019). The yarn is then cleaned and mixed through a carding process. However, some fibres are not spun into yarns (Leblanc, 2019). For instance, according to Fletcher (2008), "Textiles made from synthetic fibres can be recycled chemically by breaking down the fibres at the molecular level and re-polymerising the feedstock. However, this is a more energy-intensive process than mechanical recycling". In addition, there are two main methods of recycling textiles, mechanically (in which fibres are pulled apart and reworked into yarn) and chemically, in which fibres are re-polymerised into a chemical and then spun (Blackburn, 2009). However, both of these are energy-intensive processes, even when the expenses are partially offset by the associated gains; a consideration of costs versus benefits therefore means that reducing, reusing and recycling are infinitely preferable (Rinkesh, 2018).

Recycling garments as a sustainable 3Rs waste management strategy is thus beneficial to the environment in that it reduces waste. However, most countries who recycle garments and textiles materials, such as the UK (Popovetal., 2012), employ a variety of methods for doing so (Wrab, 2004) once they have gathered the garments at the collection point. From there, they are taken to a sorting facility and sorted into garments to be shipped overseas for a re-sale market as second-hand clothes (Prokopanko, 2018) to different second-hand retailers and recycling textiles companies (Norris, 2010). Additionally, due to increased awareness among designers and garment manufacturers of the importance of recycling garments, companies such as Patagonia accept their own items of clothing back for recycling while fashion retailers such as H&M and American Eagle Outfitters provide in-store clothing recycling bins to collect textiles and accessories of any brand(Storry,2018). This means that, for consumers, recycling their clothing is now as easy as making a trip to the shopping centre (Spector,2015).

In contrast, plastics have to be recycled differently as there are many different kinds of plastic. Plastic drinks bottles are usually made from a type of clear plastic called PET (polyethylene terephthalate) and can be turned into textile insulation for thermal jackets and sleeping bags (Miraftab and Horrocks, 2007; Karla, 2016). Estimates by the Ellen MacArthur Foundation 2014 claim that, "Around 80% of recycled PET bottles are turned into polyester fibres for carpet, clothing, and other non-packaging applications". For example, the Levi's clothing company made jeans from recycled plastic bottles to create two clothing lines, jeans and trucker jackets, that incorporate at least 20% post-consumer recycled plastic content (Karla, 2016). That equates to about eight 12-20oz bottles per pair of jeans (Guardian,

2013; Karla, 2016).The company explains that, "At least 20 percent of the material that goes into making this denim comes from recycled plastic bottles and food trays, that means about eight 12- to 20-ounce bottles are reborn in each pair" (Weisbaum, 2019).

For some materials, the amount of recycling that can take place is unlimited. For example, aluminium is infinitely recyclable as it remains essentially unchanged no matter how many times it is processed and used. (Schlesinger, 2014). For example, drinks cans are generally thinner, lighter, and made from aluminium and can therefore be recycled very easily. Another example relevant to the garment design industry is that of Paco Rabanne, who designed a sculptural micromini dress constructed of recycled square and rectangular aluminium plates joined with metal rings (Magris,2012). However, mining aluminium is a very energy-intensive and environmentally harmful process (Woodford, 2019). Therefore, it can be considered a material with permanent characteristics, one that is not consumed but used over and over again without the loss of its essential properties. This is why waste aluminium materials have a relatively high value and why recycling them is such a positive and important thing to do (Williams, 2005; Schlesinger, 2014). In the next section, I will illustrate the positive impacts and benefits of using recycling as a sustainable waste management strategy to reduce the overall level of waste.

2.4.3.3 The value of recycling

Recent studies have shown that recycling waste management strategies have a positive impact on reducing energy consumption as extracting and processing natural resources to create new products requires a significant amount of energy (Bell, 2019). This is a practice that should therefore be encouraged for the following reasons.

1. Using recycled materials (textiles) (Brown, 2010) for products, instead of new resources, results in the same end product while significantly decreasing energy consumption. It therefore reduces the habitat damage, pollution, and waste associated with the extraction of raw materials (Magram, 2011)

2. Recycling helps protect the environment by reducing the need for mining to extract raw materials for the garment and textiles design industry (Flitchere, 2008). This is important as such practices lead to substantial air and water pollution (Jersy, 2010). Hillstrom (2015), for example, argued that, "Recycling is a sustainable waste prevention method that helps to protect the environment by reducing the consumption of natural resources' as well as eliminating a source of landfill''.

3. Almost 100% of household textiles and clothing items can be recycled, regardless of their condition (McDonough and Braungart, 2009; Macarthur et al., 2017). The benefits of recycling clothing and textiles are numerous because, in addition to reducing landfill waste (Farley and Hill, 2015), they also benefit charities and those in need. Recycling garments and textiles also: 1) shows a commitment to sustainability and environmentalism and reduces the carbon footprint; 2) reduces the amount of solid waste in landfills; and 3) converts waste products into value-added products (Blackburn, 2009; Barker, 2014; Jorge and Mitchell, 2017). That being said, a combination of the 3Rs is always ideal and the best waste management strategies utilise them all, including the two examples I will now present in detail.

2.5 Examples of garment reuse and recycling strategies

2.5.1 Example 1: Extreme model of reusing, recycling, upcycling, and (re-)constructing costumes for Marat /Sade

Marat /Sade is a play set in France in 1808, specifically in a place known as the Charenton Asylum. It is a gruesome depiction of human suffering chiefly arising from the struggle between classes, with the ultimate purpose of raising the question: where does true revolution originate? Is it from changes to society, or from the change to one's own self? (Sherd, 2017). The costume designer for the play Marat /Sade goes simply by the name of Liza and is based in the UK. She has an abundance of experience in various costume and garment creation and construction techniques, such as sewing, stitching and pattern cutting, and in the sustainable practices of reusing, recycling, and upcycling (ibid.) Her design philosophy revolves around designing and making costumes from reused garments, with particular emphasis on ease of use and comfort for whatever actor/actress ends up wearing the costume on stage (ibid.).

Figure 5: One of the main characters wearing a reused coat with recycled old curtain fabrics and reused brown belts on top (Sherd, 2017).

Figure 6: An example of a costume made from previous costumes and textiles recycled from another play, using a variety of recycling techniques such as dying the textiles to produce the dirty textures on the fabrics (Sherd, 2017).

Figure 7: Paint was used to draw texture on the costume the evoke the character's personality (Sherd,2017)

She also adheres to the belief of Kidd (1996) that "the costumier must try to produce costumes which appear authentic on the stage, but which are also adaptable, practical to wear, quick to change and ease of movement must be accommodated alongside with design aspects." Liza's sustainable costume design strategies emphasise not only the design stage but the construction of the costumes themselves. The designer combines style with practicality by going to all possible measures to use sustainable methods when making costumes and then reusing them and/or their materials (Sherd, 2017).

she does this for, but the show happens to be one for which Liza made costumes using a tremendous proportion of reused textiles (**see Figure 5**) (Sherd, 2017). The main character's costume is made from a reused

coat as well as recycled fabrics from an old curtain, plus two old, brown belts acquired from a second-hand vintage shop (Sherd, 2017). In so doing, Liza managed to not only save money and support the environment, she conferred a more authentic look to her 'poor man's garb', thus showing the reality of sustainable practices being environmental, economic, and creative boons, as various scholars on sustainable design have repeatedly pointed out (Fletcher, 2008; Norris, 2010; Jones et al., 2013; White, 2015).

The costume in **Figure 6** also has components from previously used, older costumes that were utilised in other plays. To achieve this for Murat /Sade, the costume designers applied a variety of recycling methods such as breaking down older costumes/garments, using various dyes for colour, and fabric contraction techniques to give the costume that dirty, worn look so essential to the character's image (Sherd, 2017). It also served to provide a visual allusion of the character's mental disorder (ibid.). Furthermore, **Figure 7** shows a close-up of the textures applied to the garment fabrics to evoke the sensory and visual image of the main character's personality on the stage (Sherd, 2017).

2.5.2 Example 2: Sabotage Theatre; An Exemplar Model of Recycling and Reuse Strategies

Figure 8: Reused pyjamas. The sabotage costume designer swaps the tops and the bottoms around to fit the two main characters in the play (Hinks, 2015)

Figure 9: Scraps and remnants of more luxurious materials worked into a multi-layered mask for Bianca the cat in Ravens (Hinks, 2015)

There is a strong culture of reusing and recycling in Western countries. Such practices have accordingly become embedded in the corporate strategy of many companies. One such company is the Sabotage Theatre in Brighton, UK, which only uses materials that are reused or recycled. For example, **Figure 8** shows reused pyjamas from a past production of OWLERS, designed so the outfit fits two of the characters during the performance (Hinks, 2015). The Sabotage Theatre often reuses costumes for different shows and has even founded a collection of used costumes which they reuse and recycle as needed (Hinks, 2015). An incidental side benefit is that reusing/recycling costumes provides the sort of used, worn look that fits how the clothing was made and looked in the periods when the plays are set (Jones et al., 2013). This approach is part of the theatre's stated

manifesto to "challenge elitist attitudes to theatre, using materials from skips and unlikely rural settings to create magical new spaces for plays" (Gercans, 2015). One man's skip is therefore another's scenery (ibid.).

Other sets and costumes are made out of recycled materials, which is very economical due to the sheer range of clothes acquired from skips, costumes from previous productions, and old beddings donated by people, as well as clothes from the recently deceased which, among many other approaches, are often re-cut to make new costumes, (Hinks, 2015). According to the Sabotage Theatre, all the waste produced today means there is no need to produce more, especially when second-hand cloth often inspires less obvious uses and designs (Gercans, 2015). Various leftovers and scraps of more luxurious materials have also been used, for example in making the multi-layered and panelled areas on the costumes for Bianca the cat and Satan in the play "Ravens" (Gercans, 2015) (**see Figure 9**). All these are fruits of the principle of sustainable approaches to design thinking (reusing and recycling), which is the focus of the next section.

This will explore how garment designers might engage in the adoption and proliferation of sustainable design thinking. I first define the concept and explore the processes involved in bringing it to fruition. Therefore, the first part of this section deals with the theoretical definition of design thinking, following which the stages of design thinking are explored. This enables me to focus on sustainable textile and fashion design thinking options in the next section of the chapter. These processes are particularly important in light of the gap in knowledge regarding costumes and sustainability.

2.6   What is sustainable design thinking?

The term "design thinking" refers to utilising elements from the designer's toolkit as an approach towards practical and creative problem-solving (Brown, 2018). Design thinking is extremely user-centric in that designers' work processes involve systematically extracting, teaching, learning and applying human-centred techniques to solve problems in a creative and innovative way (Dam and Siang, 2018). This approach thus brings together what is desirable from a human point of view (Brown, 2018). It focuses on humans first and foremost, seeking to understand people's needs and derive effective solutions to meet those needs (Dam and Siang, 2018). It is what some call a solution-based approach to problem-solving, which is why "Design Thinking" is now identified as an exciting new paradigm for dealing with problems in many professions (Dorst, 2011). What this means for design methods is that they can be transferred and transformed from drawing to creating physical products and solving complex issues (Vianna, et al., 2011; Fletcher, 2008). Organising processes and services for producing sustainable solutions like reusing and recycling forms part of this process (Fletcher, 200; Vianna, et al., 2011). All told, design thinking thrives on generating new meanings and activating diverse cognitive elements (Lawson, 2006) as well as emotional and sensory elements that combine to deliver a positive impact on designer fashion (Cross, 2011).

Sustainable design thinking can therefore be understood as a means to foster creativity and sustainable innovation for design practices (Fletcher, 2008; Dieffenbacher, 2013; Andersen and Earley, 2014), as it does not necessarily aim to solve a problem with an ultimate answer but create a positive addition to the existing state of affairs (Nelson and Stolterman, 2003; Black , 2006; Moggridge, 2007; Brown, 2009). Before a process can be improved for the better, however, it must be understood, and therefore the next section focuses on the different stages of design thinking.

2.7   The Stages of Design Thinking

The design thinking process is best thought of as a system of planning and problem-solving. It is a creative approach that starts with designers and ends with innovative and investigative solutions that are tailor made to suit people's needs (Dam and Siang, 2018). According to Stanford's Hasso-Plattner Institute of Design (2018), the Design Thinking process generally consists of 5 stages which echoes prior writing on the topic (Dam and Siang, 2018). As indicated in Figure 19, these are: **1)** Empathise; **2)** Define; **3)** Ideate; **4)** Prototype; and **5)** Test (Dam and Siang, 2018). Designers will find that the stages often occur in parallel and are used repeatedly on an iterative basis which can help the designers investigate, develop, and solve problems in their design project (Cross, 2011; Dam and Siang, 2018). I will now describe in detail the design thinking stages proposed by the Interaction Design Foundation (IDF, 2018) and Miller (2017) (see Figures 9 and Table 2).
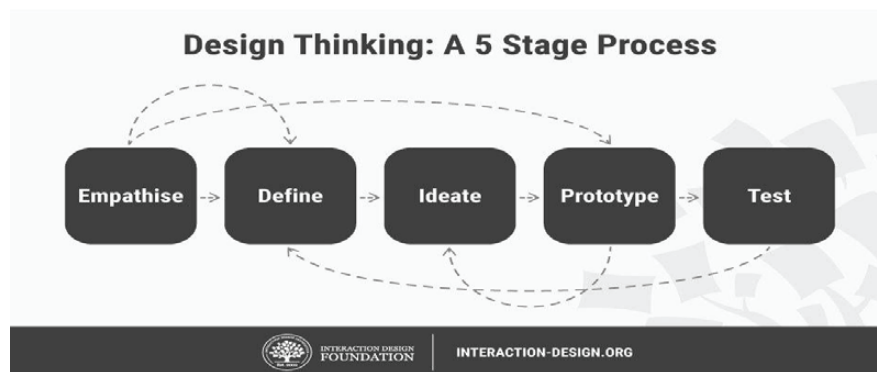
Figure 9: The five stages of the design thinking process (IDF, 2018)

Table 2: The design thinking process proposed by Miller (2017)

1.	Empathise	Study the audience that will be viewing the production.
2.	Define	Develop a point of view that will appeal to the predicted needs and insights of the user/viewer
3.	Ideate	Brainstorm or otherwise develop creative solutions
4.	Prototype	Create a proof-of-concept to show to others, such as sketches or 3D figures.
5.	Test	Test your ideas with your original user group in order to receive feedback

In Table 2, I show that each stage has a specific purpose, which carries obvious implications regarding the different activities that are to be taken. Conversely, however, Figure 9 clearly shows that the stages are not necessarily successive, with the Define stage often occurring alongside the Ideate and Prototype stages, reflecting the way the concept is redefined by the garment based on the results of the Test stage (Miller, 2017). The Empathise stage might seem less important than the others as it is never revisited in the scheme (Dam and Siang, 2018) but the cyclic nature of the Ideate and Prototype stages shows that prototyping can sometimes take place ahead of all other stages *except* empathise, reinforcing the latter's importance in the process (IDF, 2018).

Essentially, it is not always possible to define a concept from the get-go (IDF, 2018) or the design thinking model in Figure 9; instead, several concepts and/or techniques may need to be tested before a theme and design can be decided upon (IDF, 2018). Given this, it is little wonder that a more complex system was needed for textiles and fashion design thinking, as I will now explain in the next section.

2.8 Textiles and fashion design thinking cycle

To understand the difference between the spheres of making and creating fashion, I have focused on design thinking as a method of envisioning a reality that does not yet exist, and as a means for achieving innovation (Dieffenbacher, 2013). Fashion thinking involves harnessing the vast array of skills at the designer's disposal, while embracing the chaos of the process itself (Chick and Micklethwaite, 2011, Brown, 2009). This might include upending traditional approaches or appropriating them to unearth new ways of creating and making garments (Dieffenbacher, 2013). According to Dieffenbacher's book "Fashion Thinking: Creative Approaches to the Design Process" (2013), the relationship between the design thinking process and the method of manufacturing sustainable fashion relies on designers being open to all ways of working (Dieffenbacher, 2013), including thinking of ways to reuse and recycle textile waste (Fletcher, 2008). According to Nikolaidis et al. (2011), when making design thinking decisions a new attitude is needed for contexts which lack sustainable notions, even though this requires a radical change of perception (Chick and Micklethwaite, 2011). In Figure 10 and Table 3, I explain these stages **(idea, concept, and design)** based on the model provided by Dieffenbacher (2013).
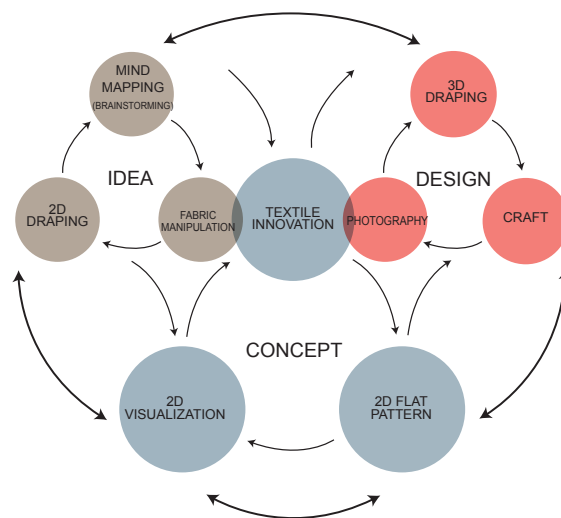
Figure 10: Textile and garment innovation design thinking cycle (Dieffenbacher, 2013)

Table 3: The three stages of design thinking for fashion designers

Idea Stage	The fashion designer explores and interprets garment ideas and turns them into concepts by considering the context (Dieffenbacher, 2013)
Concept Stage	This is the design thinking stage when ideas are developed, such as creating or adapting garments based on ideas from original research or investigating specific methods for making order out of chaos. By considering a wide variety of sizes, textile types, preliminary garment appearances, and combinations thereof, the fashion designer should constantly leverage these elements to refine their design thinking, even if this means reusing and recycling garments and textiles (Dieffenbacher, 2013).
Design Stage	In this stage, the fashion designer hones their ideas until the very last second of their final step to produce the garments. The fashion designers start by making a proof of concept and (if necessary) reinventing a garment or just its silhouette. (Dieffenbacher, 2013). The fashion designer recognises what themes are emerging within their design and ponders how best to mesh them to finalise their fashion ideas. The designer thus decides on the garment's "voice", i.e., the identity of the garment albeit still falling under the designer's signature style. (Dieffenbacher, 2013).

What Figure 10 and Table 3 show is that design thinking is about more than drawing sketches and selecting textile materials (Dieffenbacher, 2013). Perhaps the most important observation to make is that textile innovation lies at the very centre, while fabric manipulation is closely intertwined with such innovation. This basically places fabric manipulation (which inherently covers reduction, reuse, and recycling) in a central position in Design Thinking, making it an essential part of problem-solving using creative solutions (Vezzoli and Manzini 2008; Cross, 2011; Dieffenbacher, 2013).

2.9   Chapter Summary

In this chapter, I first considered the problem of textile waste in Kuwait and the inadequacy of existing waste management strategies. These were compared with the more efficient and sustainable approaches currently being applied in Europe. I then went on to review the global shift towards sustainable fashion and considered how this could be achieved through a more specific focus on the ten different stages in the lifecycle of a garment. The LCA was then introduced as a tool with which to assess the environmental impact of approaches towards designing a garment at each stage of the lifecycle. I then moved on to consider in more depth the nature of such approaches through a focus on the 3Rs of sustainability- reduce, reuse, recycling. These reflect broader principles of sustainable production, whereby waste is actively reduced through all stages of production, and any item about to be discarded is instead reused or recycled as its component parts may still be useful. I considered the relative value and advantages of each approach along with the different means by which they could be achieved. To illustrate their utility, several real-life examples were presented to show how each of these processes could be applied in practice. Finally, I focused more broadly on the process of design and the different stages involved in the creative and practical process of sustainable design thinking. I established how design thinking is the lens through which a garment designer can initiate the use of reduce, reuse and recycling techniques in costume design. Research on sustainable design thinking has shown that any gap in this process will lead to lost opportunities and options regarding sustainable practices. The role of costume design in Kuwaiti theatre will therefore be the prime focus of the next chapter.

3 Chapter 3: Costume Design and Theatre in Kuwait

3.1 Introduction

In this chapter, I will present a historical overview of the development of costume design in the Kuwaiti theatre from its initial origins to the present day, as in the earlier chapter scholarly literature, in particular regarding costume design in the Kuwaiti theatre, is scarce. Having situated it within this broader context, I will then define the term of costume and the role of the costumier job in general in the theatre costume design industry. This will be followed by a detailed exploration of the three types of costumes that have become dominant over the years: historical, postmodernist, and contemporary costumes. The chapter will then end with a summary of the key points that were addressed.

3.2 History of costume design in Kuwaiti theatre

Figure 11: The first official Kuwait play (Omar) in 1938. The actors wore traditional, Arabic costumes on the stage (Basel, 2015).

Theatre has been performed for over 2,500 years since the time of Ancient Greece and Rome and has spread across all the main cultures of the world (African, Western, Asian and Islamic cultures), with each region developing their own distinct type of theatrical performance, traditions, and costumes (Laver, 1964). Theatre costumes have continued to evolve over time and reflect not only the content of the performance but also the cultural setting in which the performance is being held (Brockett and Hildy, 2008).

As a maritime nation, the roots of Kuwaiti culture lie with the sea. Pearl diving in the summer and traveling to India and East Africa in the winter provide two pertinent examples of this. It is also common for sailors to perform plays on a ship as cruises can last up to six months (Basel, 2015), and this has been the case since 1921 when the Ahmadiyya Kuwaiti government school held its first, unofficial play to celebrate its opening (Houti, 1999; Pikulska, 2001; Torstrick and Faier, 2009). Nineteen years later, in 1938, the first official Kuwaiti play, "Omar," was held at Al- Mubarakiya school in Kuwait (see Figure 11) and was the first to contain all the elements considered standard today (casting, acting, costumes, background stage set, and so on) (Al- Ghareb, 2001; Basel, 2015). It was a traditional historical Arabic play set in the twentieth century and the first Kuwaiti performance to feature traditional Kuwaiti Arabic period costumes (Pikulska, 2001; Torstrick and Faier, 2009). Although improvised, the costumes were elaborate hand-made pieces of high quality (Houti, 1999), largely because they were genuine items of period clothing. In fact, for a time, such period clothing was collected and used in place of purpose-built costumes, such as in the "Omar" play, as limited technical expertise and a lack of funding largely prevented new costumes from being created for the occasion (Al-Ghareb, 1988).

Figure 12: An actress wearing a costume from (the Kuwait little theatre wardrobe (Backs, 2014

استوديو الدسمة – بعد الهدم

Figure 13: The Kuwaiti Theatre /Studio was destroyed during the war in 1991 (Zahra, 2009)

Kuwait's limited experience of theatrical productions eventually expanded into plays performed in non-Arabic languages, particularly English (Pikulska, 2001; Alabdaljalil, 2004). The Kuwait Players and Kuwait Little Theatre were the first to perform plays from non-Arabic traditions and have been performing comedies and dramas in their venues in Al Ahmadi city since 1948 (Pikulska, 2001). Moreover, following the discovery of oil in the 1960s, increased wealth in Kuwait led to a flourishing theatrical movement (Alabdaljalil, 2004) and the expansion of existing wardrobe collections (Al-Salal, 1996). Complex costumes naturally evolved into an intrinsic part of this tradition, with the Kuwait Little Theatre company even accumulating an impressive wardrobe funded by the Kuwait Oil Company (see Figure 12) (Alabdaljalil, 2004). Then, in 1973, the only education academy in Kuwait to teach stage design was established (Ismail, 1999). This was The Kuwait Institute of Dramatic Arts, a Kuwaiti educational institution devoted to theatrical arts which taught costume design as a subject area within the department of stage design rather than as a full degree (Ismail, 1999).

This involved teaching students for 4 years about the history and drawing of costumes (Najam et al., 1997). Students who graduated therefore had this knowledge as part of their bachelor's degree in stage design (Najam et al., 1997). Regrettably, during the 1991 post-liberation war, important theatres, studios, and their resources were all destroyed (see Figure 13), including the largest costume wardrobe in Kuwait (Al-Ghareb, 1988). With access to established costume wardrobes now gone, Kuwaiti theatres lost their ability to reuse existing garments and switched entirely to the development of new pieces (ibid.). The wider definition of costume design will be the focus of the next section.

3.3   Defining costume design

Before I can properly explore the role of costumiers in theatre, I will explain firstly what the term "costume" means. The definition of the term "costume" is any garment that forms part of a style of clothes belonging to a particular cultural or historical context (singers, actors, or dancers) (Clancy, 2014; Pollatsek and Wilson, 2017) that is used by performers (actors/actresses) on stage for any play (Monks, 2009). More specifically, the term "stage costume" is sometimes used for those clothes which are specially made for the performance by a costumier to portray a particular character's look (Brown and Benedetto, 2016). This means stage costumes can help

actors portray a character's age, gender role, profession, social class, personality, as well as convey information about the historical or period/era, geographic location, time of day, the season, or the weather (Brewster and Shafer, 2011). Other scholars have explored how such costumes are often simply reused or recycled from actual period costumes (Jones et al., 2013) or how "modern" costumes are basically clothes inspired from current times, themselves often second-hand. However, all scholars agree that a costume is a visual tool worn during any staged event that successfully conveys the soul of a character (Brewster and Shafer, 2011). The costume design process is therefore a creative role, one that warrants greater depth which I will provide in the next section.

3.4   The role of costumiers

Figure 14: Two costumiers bringing a character to life on stage (Shawfest,2012)

Figure 15: Example of apparel (garments) ready to be reused to fit any actors or actress on any production (Argentina, 2015)

Extensive literature is available on how the role of a costume designer, also known as a costumier, should be defined in the context of the theatre industry. At their core, costumiers are artists similar to fashion designers (Clancy, 2014). However, they are also "veiled in the production process" and serve "the script" as opposed to "their personas," which is to say they seek to "highlight the uniqueness of his or her work" and "bring attention to the label" in much the same way as fashion designers (Mayer et al., 2014, Monks, 2009). Essentially, the main role of the costumier is to help bring the play (script) and the director's vision (Bowden, 2018) to life, which is why they are often on hand to be consulted regarding any related problems during the pre-production process, i.e. when designing the costume from the beginning up until the final stage (Ingham, 2003). In a sense, the costumier in a theatre production provides a physical and emotional outlet to every actor and actress through the clothing he or she will wear, thus enhancing characterisation by evoking character personalities and providing the final look that brings characters to life on stage (see figure14) (Pollatsek and Wilson, 2017; Bowden, 2018).

According to Jones et al. (2013) and Lambeth (2017), any garment worn in a production technically classifies as a costume, whether it is from a specific time period or any type of wardrobe including second-hand garments (see Figure 15). Anderson and Anderson (1984) also state that any layers of discarded garment or pieces of textiles can provide the outline of the character's personality as scripted. However, in their view, a costume needs a certain level of endurance to be called a stage costume. This means that a costume must be capable of enduring extensive wearing and multiple cleanings whether it is meant for long- or short-run performances (Jones et al., 2013; Hunnisett, 1986). Costumiers must therefore not only create an outfit that can bring a

character to life, they have to make certain it can withstand wear and is also renewable if needed (Ingham, 2003). Consequently, all costumiers are expected to possess a thorough understanding of the theatre production system (Clancy, 2014; Pollatsek and Wilson, 2017) as well as the ability and desire to research and constantly learn about scenarios, cultures, and periods of history (Brewster and Shafer, 2011). In fact, period costumes are very often required due to the popularity of historical plays (Jones et al., 2013), which is why they are one of the core types of costume that costumiers must be familiar with, an issue I will now explore further.

3.5   Popular types of stage costume

The literature on costume design has revealed that there are three basic types of stage costume in theatre that any self-respecting costumier should know about, and whose construction should therefore be part of standard instruction regardless of the scripts on which costumiers are expected to work. These are the diverse yet thematically consistent historical, postmodernist, and contemporary styles, each of which I will now define.

Figure 16: A variety of actors and actress wearing costumes corresponding to particular historical contexts (Proudfoot,2019).

First, historical costumes (see Figure 16) are also known as national garments and express the identity of a particular geographic area, although they can also indicate social, marital, and/or religious status (Monks, 2009). Generally speaking, any costume set at the time of the 18th or 19th centuries can be considered a historical costume (Clancy, 2014).

Second, the Postmodernist costume (see Figure 17) is effectively the result of the evolution of historical styles into a provocative fashion / garment movement in the early 1970s, leading to an aesthetic juggernaut that spread its influence over all areas of popular culture - including art, fashion, and stage costumes for postmodern plays (Syson, 2011). Postmodernist costumes do not express a specific civilization, geography, or history, nor convey any information (Adamson and Pavitt, 2011). However, they do express an artistic style, in that the way in which a costumier creates its appearance is dictated by an intellectual concept which represents the philosophy of the character from the play (Adamson and Pavitt, 2011; Syson, 2011).

Figure 17: An example of a postmodernist costume (Barbedouce,2017)

Figure 18: The look of a Contemporary Costume on the stage (Beast,2018)

Third, the Contemporary Costume (see Figure 18**)** is where the actors / actresses appear on stage in a costume intended to look like it fits into a contemporary period, as shown in Figure 18 (Clancy, 2014). This type of costume is thus meant to reflect modern fashions, such as a gala dress or a garment worn by the choruses of musical plays and reviews (Clancy, 2014). In short, they are simply costuming for productions set in the present (Monk, 2009). While lacking the historicity or stylistic value of the other types of costume, contemporary costumes nevertheless have the unique ability to connect the audience, emotionally and intellectually, with whatever themes are being portrayed on stage, possibly leading them to contemplate their daily lives after watching the performance on the stage (Clancy, 2014).

3.6   Chapter Summary

In this chapter, I have defined costume design as a concept, summarised the history of Kuwait costume design, and then addressed the knowledge gap in Kuwait by looking at popular types of stage costume and then comparing them to European ones. Having thus explored the general role of the costumier, the topic of this study has been situated in the proper context; that of the costumier's role, the different types of stage costume, and the way these concepts and practices relate to the history of theatre, both in Kuwait and elsewhere. However, although the three different categories of costumes (historic, postmodern, contemporary) certainly have much to offer costumiers in terms of opportunity and room for creativity, costumiers in Kuwait lack sufficient knowledge of sustainable methods of design, unlike those in the UK and other nations.

The overall conclusions of the literature review can be summarised as follows:

Summary of Literature Review

Through this literature review I have explored the different elements of textile waste and methods of eliminating it that yield economic, artistic, and environmental benefits. In **Chapter 1,** I considered textile waste in both Kuwait and European countries to highlight the gap in knowledge that currently exists in Kuwait. I emphasised the importance of implementing Life Cycle Assessment methodology, specifically the 3Rs of sustainability (reduce, reuse, recycle). I then built on this information to explain what sustainable design thinking is and why it is important, thus addressing a gap in knowledge that has existed in Kuwait since the Iraq invasion of 1990, which destroyed the costume design culture (including the notion of wardrobe departments (Al-Arfaj Group, 2015). I also established that a lack of sustainable costume design practices is most likely to be associated with a gap in design thinking, such as a complete lack of any notion of sustainability. Given that such techniques are environmentally and ethically sound and will provide economic and creative benefits, this gap needs to be urgently addressed. In **Chapter 2,** I presented an in-depth analysis of the history of the Kuwaiti theatre and costume design, followed by a thorough explanation of the term "costumes" and the role of the costumiers and the techniques they use in making costumes.

Having reviewed the literature and highlighted the key issues that have emerged, it is clear there are substantial gaps in knowledge in relation to sustainable costume design practices in Kuwait and in relation to design thinking. In the next chapter I will therefore set out the primary methodological approaches I adopted to explore sustainable costume design practices in Kuwait. These comprised interviews with both UK and Kuwaiti costume designers and practical costume making workshops conducted with three Kuwaiti costume designers.

4   Chapter 4: Methodology

4.1   Introduction

In this chapter, I consider the factors involved in the reuse and recycling of materials in Kuwait and, more specifically, the barriers that exist and the implications these have for Kuwait costume design. The purpose of this project is to address the fact that, while the reuse and recycling of materials within costume design and production is widespread in places such as the UK, this has not been the case in countries like Kuwait where the practice was popular only up until the Iraqi invasion (Al Ghareb, 2001). To achieve this, I chose to employ a methodological approach that was qualitative in nature and adopted a phenomenological perspective. The purpose of phenomenological research is to describe the lived experience of a given person or persons (Watters and Biernacki, 1989). In so doing, it illuminates phenomena as they are perceived by actors within a given situation. I selected this approach because it provided a method that was best able to comply with the objectives of the research. It also facilitated an understanding of the specific and historically grounded experiences that have shaped differential outcomes regarding the way materials used in costume design are, or are not, recycled. In short, I chose phenomenological qualitative research because it is an approach that has allowed me to gain greater insight into factors preventing the reuse and recycling of such materials in Kuwait (Yin, 2013; Gagnon, 2010).

4.2   Research Philosophy

I chose qualitative research because this was the approach that would be most effective in enabling me to explore the various sustainable design methods used in the creation of different garments and to evaluate their feasibility. Qualitative research explores the opinions, values and experiences of individuals, and can address why or indeed how a theory or phenomenon manifests itself (Saunders et al., 2009; Patton, 2005). According to Gagnon (2010), it is an "approach that enables researchers to examine people's experiences in detail, using a specific set of research methods that include in-depth interviews or focus groups". In comparison, quantitative research uses empirical data to test the existence of, or to provide support for, a theory and is thus defined as an "approach for testing objective theories by examining the relationship among variables which can be measured so that numbered data can be analysed" (Creswell, 2013). This indicates that its main strength lies in the realm of statistics, and it is based on numerical, factual, and precise data and results. I therefore set aside quantitative methodology in favour of qualitative techniques as these would enable me to understand the differences between costume design in Kuwait and the UK from the point of view of the designer. A quantitative study, on the other hand, would only have enabled me to establish statistical differences between the two contexts, such as the rate at which each respective country recycles.

Furthermore, Denzin and Lincoln (2005) argue that a quantitative perspective would say nothing about why or how this data is implicated in the social practices taking place in the daily lives of those involved in the costume design industry. Thus, I collected qualitative data to meet the phenomenological objectives of this research. Consequently, I was able to explore experiential differences in each respective context, along with my broader aim of understanding how historical social practices differ at the level of the individual. This paradigm was appropriate because it offered insights into personal experiences associated

with the use of material in theatre design (Carson et al., 2001).

The interpretivist paradigm stipulates that truth is not "natural" and that reality, and thus the nature of truth, is multiple and relativistic (Hudson and Ozanne, 1988). This provides me with a privileged vantage point from which to investigate the opinions and attitudes of Kuwaiti costume designers towards sustainable reuse and recycling strategies, primarily by using practical examples of design in specific theatrical contexts. It is a paradigm that conceptualises ontology as an entity that is not static but continually changing over time, and is produced by social relations, history, and individual differences; thus, it implicitly rejects the positivist view that knowledge can be objective (Carson et al., 2001). Such an approach is self-reflexive regarding the production of knowledge, and thus make its own limitations clear. The qualitative paradigm embraces the use of many methods, all of which adopt an interpretivist approach to the study of humanity and are grounded in the phenomena experienced (Denzin and Lincoln, 2005).

In short, I selected a qualitative methodology to explore how the reuse and recycling of textile costume materials could become part of the Kuwait costume design industry. This means that the corresponding knowledge produced by the research provides one way of interpreting a larger, more complex whole. Accordingly, the design of the research was therefore as follows.

4.3   Research Design

4.3.1   Introduction

Creswell (2013) defines research design as a mapping strategy, comprising a statement of the object of the inquiry and encompassing data collection strategies, methods of data analysis, and reporting the findings. Two different studies were conducted to achieve the objectives of this research: interviews with UK and Kuwaiti costume designers and Kuwait costume making workshops. In this section, I will describe the systematic methods that were employed to achieve results that qualify as reliable and valid within the specified time frame. This includes the processes of sampling, data collection, and data analysis. The reason I chose a comparative approach involving both the UK and Kuwait was because, as mentioned previously, Kuwait currently has no recycling or reuse policies in place for textiles (Alhumoud and Al-Kandari, 2008).

The semi-structured interviews utilised in **Study 1,** therefore, were conducted for the purposes of generating useful data. These provided the foundations for designing and conducting the Kuwait costume making workshop, which comprised the **second study**. This gave the research a strong empirical grounding. The studies were conducted as follows.

4.3.2 Study Design

4.3.2.1 Study 1: Semi-Structured Interviews

Interviews are, in theory, straightforward, with scholars such as Gillham (2000) describing them as a conversation between two people, where one person (the interviewer) seeks responses from the other (the interviewee) for a particular purpose. Despite this simplistic definition, **Study 1** was rather involved, which was indicative of the complexity of the task I undertook to achieve the set goals for this thesis. The interviews were designed to compare UK and Kuwaiti methods for reusing and recycling costumes and consisted of a series of semi-structured questions. Both UK and Kuwaiti costume designers were therefore contacted and recruited by way of invitation to participate in the **Study 1** interview. This was followed by the construction of a semi-structured interview guide that comprised the questions asked of both the UK and Kuwaiti costume designers. The interview process was then followed by analysis of the data, which will be discussed in more detail in the data analysis sub-section later in this chapter.

4.3.2.2 Study 2: Kuwait Costume Making Workshops

For a period of six weeks beginning in February 2016, I led a workshop which compared the work and styles of different Kuwaiti designers in a practical setting. This required me to develop a more complex strategy, as I needed to be present in the places where each set of costume designers worked. I also made full use of the information and insights into the making of costumes provided by my UK-based research into the use of recycled materials. Three native Kuwaiti costume designers were introduced to several recycling techniques, enabling those involved to explore current reuse practices in Kuwait costume design and, more specifically, experiment with recycling strategies as a means of reducing textile waste in Kuwaiti theatres. An additional benefit this provided was that it also enabled me to gain first-hand insight into the design and production processes currently employed by costume designers in Kuwait.

4.4   Validity and Reliability

In this section I will describe the criteria for validity and reliability employed in this research. The research literature provides several definitions of validity and reliability (Golafshani, 2018). These usually define reliability as consistency in results and applicability to large populations. Validity, on the other hand, is often defined as the appropriateness of the tools used, the data collection process, and the data itself (Patton, 2002). In the current research, I employed a twofold method of data collection that was able to meet these aims. For instance, Denzin and Lincoln (2005) note that methods based on a constructivist paradigm are of an inductive nature. I therefore used semi-structured interviews in **Study 1,** and this served to provide a context for **the second study**, the Kuwait costume making workshops focusing on reuse and recycling methods within the costume design industry. In so doing, I was able to minimise subjectivity and therefore increase data reliability.

This also fulfils the expectations expressed by Seale (2012) that research findings are transferable if they can be applied to contexts beyond those of the immediate research. This can be achieved by providing a detailed, rich description of the phenomena under investigation, demonstrating to the reader that the conclusions of the study are applicable within a wider context. To achieve this, I used triangulation (Brannen,

2004), which involved incorporating multiple data sources and collating the findings.

The qualitative nature of my research reflected a focus on social phenomena regarding the reuse and re-cycling of costumes in theatres. Using two distinct forms of study, however, also served to counter threats to validity (Golafshani, 2018). Rumination on the similarity of the results and conclusions drawn further increased the validity and reliability of the study. Having thus presented the measures taken to ensure validity and reliability, I will now discuss the main ethical questions arising from this research.

4.5   Ethical considerations

I submitted the Research Ethics proposal to the Research Ethics committee for **Study 1** (Interviews) in May 2016 and for **Study 2** (Kuwait costume making workshop) in December 2016. I subsequently received full ethical approval for both.

Both methods of data collection involved direct interaction with the participants, therefore several ethical principles needed to be considered (Marshall and Rossman, 2015). The two main points to be addressed in this type of research are confidentiality and anonymity, as both stages of the research required primary data to be gathered directly from participants (Miller et al., 2012). Anonymity, according to Miller and colleagues, involves handling sensitive information relating to the participants with care (e.g. their name, address and other personal information). I took several steps to ensure this, including using pseudonyms, as indicated in the findings chapter. Regarding confidentiality, the participants received assurances that their personal information would not be used without authorisation during this research.

I ensured this by providing both UK and Kuwaiti costume designers with a Participant Information Sheet prior to any studies taking place. The Participant Information Sheet included a detailed description of the aims of the study, the study design, and the Ethics Review that was conducted to protect the participants' confidentiality and ensure their anonymity. One of the stipulations made to ensure ethical guidelines adhered to in this research stated that, "I assure you that your name will not be used, and I will refer to each participant by a case number" (for example, participant number 1, and initials such as 1.M (Participant Information Sheet, Appendices 1 and 2). The Consent Form (Appendices 3 and 4) was therefore only signed once the participants had read and confirmed they understood the Participant Information Sheet.

I also informed participants that neither their name nor any other information that might personally identify them would appear in any publication based on this research, nor would any statements be made that linked participants to their workplace. This conforms with the guidelines laid out by Gregory (2003) to ensure interviewees are not embarrassed by research.

Finally, I was also concerned about cultural issues, as the study was conducted in a cross-cultural setting. Understanding how culture influences different behaviours and attitudes is significant in qualitative research (Marshall and Batten, 2004). For example, during the Kuwait costume making workshop in Study 2, one cultural aspect I observed was that one of the female costume designers only gave her permission to use the materials in the workshop (photographs, work, etc.) on the condition her face was not visible. Her choice, motivated by cultural considerations, was respected. Having now addressed the ethical concerns of this research project, I will proceed with a description of the studies themselves.

4.6   Study 1: Semi-Structured Interviews

4.6.1   Introduction

The interviews undertaken in this study were conducted face-to face and semi-structured, which is a popular and effective tool for gathering qualitative information (Wengraf, 2011). As noted previously, I conducted interviews with both UK and Kuwait costume designers. This enabled me to compare in depth the differences and similarities between UK and Kuwait designers regarding the reuse and recycling of costumes.

I chose semi-structured interviews because, unlike structured interviews, these enable auxiliary questions to be asked if needed. This produces a higher volume of data, however I considered this an acceptable pitfall in order to obtain UK and participants' in depth opinions on what they believe to be the issue at the centre of this project. Semi-structured interviews enable all kinds of detail to be uncovered (King and Horrocks, 2009), which is essential for a thematic analysis and provides insight into the common ground between UK and Kuwait designers that will enable costume reuse and recycling to be introduced to Kuwait. Culturally, UK and Kuwait differ markedly in terms of their practical approach to reuse and recycling strategies that help avoid and reduce textiles waste (Alhumoud and Al-Kandari, 2008). Specifically, a lack of practical methods in Kuwaiti theatres means that the only way to implement costume reuse and recycling is to import and adapt foreign methods that have already proven to be effective. The UK's mature approach to this issue, arising from its long-standing environmental and efficiency policies (Claudio, 2007; Fisher et al., 2008), makes it an ideal candidate for sourcing such techniques, and the one I am best informed about having studied in this country. Moreover, because the strategy used in the development of an interview will always be reflected in the findings, this must first be fully justified and documented if the findings are to be fully understood.

4.6.2   Aims and Objectives

My **aim** in carrying out the interviews was therefore to gather information on the similarities and differences (especially differences) between UK and Kuwait theatre costume designers and, more specifically, determine which UK reuse and recycling methods could be adopted for use by Kuwait designers. This involves taking into consideration the economic and cultural factors that may have prevented Kuwait from doing so thus far (Alsulaili et al., 2014)

This translated into several interview **objectives** that were ultimately achieved following the step-by-step process described in Figure 19, with the participants recruited using a snowball sampling technique, as shown in Figure 20. These objectives were as follows:

- Elicit professional opinions, attitudes towards, and perceptions of reusing and recycling as ways of reducing textile waste from costumes and fabrics (textile materials) in both UK and Kuwait theatre settings.
- To explore how current practices and techniques in Kuwait and the UK may be adopted and adapted for reuse and recycling in their respective costume design theatre production industry.
- To gather data that provides evidence of how UK and Kuwaiti costume designers construe the application of sustainability methods (reuse and recycling) in the context of Kuwait theatre.
- These objectives were designed to provide appropriate answers to my research questions.

Figure 19: Steps Involved in Conducting a Semi-Structured Interview

1. **Recruit a sample group of interviewees (snowballing sample)**

Develop an initial outline, include participants' attitudes and experiences, and begin to explore how to find participants (costume designer and theatre specialists in the UK and Kuwait)

2. **Semi-Structured Interview Questions-Guide**

Construct a semi-structured interview guide containing the questions that will be asked during the interview to both Kuwaiti and UK costume designers, who adopt the role of specialists during the interview.

3. **Testing and evaluating the semi-structured interview questions**

Evaluate and test the questions with two of the participants in Kuwait and the UK to ensure that the semi-structured questions are valid prior to starting the interviews.

4. **Interview process**

Contact potential respondents who are experienced, agree a time and place, and conduct the interviews.

5. **Invitations to participants**

Use telephone calls and emails were used to invite potential candidates to participate in this research

6. **Analysis of interview data**

Analysing the data collected from the interviews using both electronic and manual procedures. Several transcription processes will need to be undertaken prior to coding.
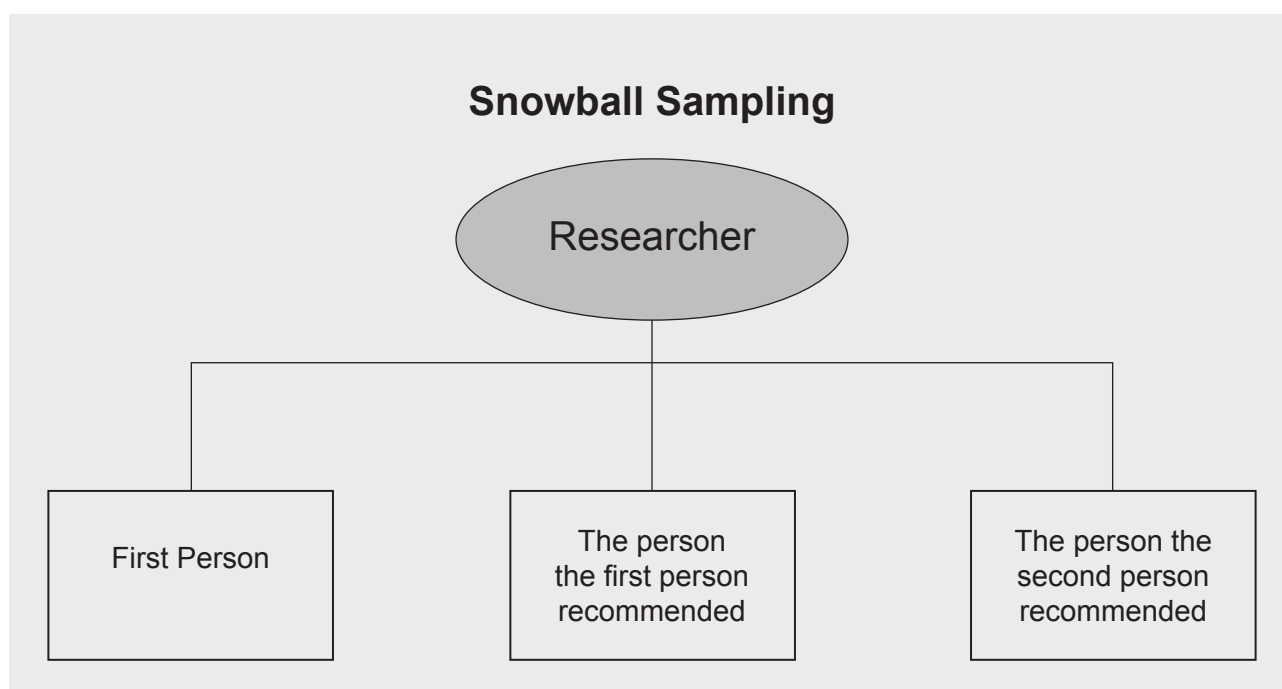
Snowball Sampling

Figure 20: Snowball Sampling (Blankenship, 2010)

To recruit the interviewees I used a 'snowball sampling' strategy because, according to Robinson (2001), this method is useful when participants need to meet unusual criteria and are thus hard to locate. Given the difficulty in finding and contacting costume designers in the UK and Kuwait, especially the latter due to institutional affiliation and confidentiality contracts, I had to rely heavily on word of mouth and professional familiarity between participants when finding and contacting new participants.

Nevertheless, I was able to recruit new participants for the interviews and could therefore proceed as planned. For example, when conducting an interview I inquired whether the interviewee knew someone they could recommend for the study. The next interviewee was therefore someone who was recommended by the previous participant. This process has proved very useful as a way of building connections with costume designers in both the UK and Kuwait (see Figure 20). For example, once I had received full ethical approval to conduct the interviews in May 2016, I interviewed a lecturer in costume design at the Art Academy in Kuwait. I was able to request and receive contact details for another eligible participant, as well as multiple costume designers in Kuwait. The same process then took place in the UK. When I interviewed the first costume designer in London in November 2016, he provided me with contact information for another costume designer living in York.

It was this process that I kept uppermost in my mind before and after contacting each possible participant. It proved to be a very successful way of setting up subsequent semi-structured interviews with UK and Kuwaiti costume designers, academics, and theatre specialists; all of whom, in turn, recommended other costume designers and specialists for interview.

Using a snowball sample ultimately saved me considerable time and effort during the research (Kalof et al., 2008). I conducted the invitation process through phone calls or email, depending on the contact information provided. Subsequent sections will explain in detail my procedure for writing the semi-structured interview questions.

4.6.3   Semi-Structured Interview Guide

The main purpose of the questions included in the semi-structured interview guide was to provide me with key insights and understanding pertaining to reuse/recycling strategies in costume design. This was to enable me to make recommendations regarding the methods that can be employed in Kuwait theatre production for reuse and recycling when creating costumes, and also for preparing materials for reuse and recycling. For example, I explored how materials are sourced for different productions, as this is another factor that affects the recyclability of materials. Although as a researcher this leaves me susceptible to the challenge of working with a large amount of data (Gideon, 2012), semi-structured questions retain the phenomenological intention of providing space for the individual specificity of experience. Preparing the questions for the interview was therefore a two-fold process. Agee (2009), for example, advises that "All of the questions created should be focused around one specific research question." This helped me ensure that the data I gathered was useful and not a waste of time.

The semi-structured interviews began with questions eliciting basic demographic information about the participant and their general role in the costume design industry. This was intended to both situate the interview and break the ice between the interviewer and the interviewee, thus ensuring that the interviewee felt comfortable enough to participate (Magnusson and Marecek, 2015; Robert and Weiss, 1995). Subsequent questions were then constructed in an open-ended manner, enabling the participants to share their experiences in depth rather than answering questions in a direct and curt manner. This also gave participants the freedom to express their thoughts. As such, the semi-structured questions did not necessarily need to be asked in order, indeed I was able to develop and include new questions in line with the development of the conversation (Maykut and Morehouse, 2003). The questions then focused on asking the participants about their views on the role of a costume designer, the methods they use to design and produce costumes, the materials they use, and where they are procured from. As part of the interview process, I also asked the participants to provide details about the tasks they undertake while working in the costume design industry.

Additionally, they were also asked about the tasks they had undertaken in the past, even if they happened to be working on something specific and/or entirely different at present. In terms of relevance to the research questions, however, the interviews narrowed their focus towards costume reuse and recycling, what participants considered sustainability to be, and how they felt about the practices and their reasons for reusing (or not) costumes and materials from one production to the next.

Finally, I included a question on whether participants thought that sustainability applied (or did not apply) to costume design in Kuwait/UK. In total, the interview comprised 10 semi-structured questions, all addressing the main points needed to properly explore the core issues relevant to this research (see Appendix 5) .

4.6.4 Invitations and the Interview Process

I distributed participant invitations via emails, phone calls, and the 'WhatsApp' phone application. These methods were used to contact both UK and Kuwait costume designers. However, I found it easier to reach participants in Kuwait using phone calls and WhatsApp (see Figure 21), as this is how communication is usually conducted in that region, whereas in the UK it is more common to use email (see Appendix 6). I found that the best way to contact a potential interviewee was to use a combination of methods until a preferred mode of contact was identified for each participant (Berkowitz, 2016). My first invitation consisted of a letter outlining the aims and objectives of the research along with information about the interview process. I also included a participant information sheet and consent form to sign on the day of the interview.

Figure 21: Screenshot showing a Kuwaiti participant discussing the place and time of the interview with the researcher using the 'WhatsApp' application. (Screenshot by Author)

This ensured the integrity of the research process. Following initial contact, participants who were willing to engage in the research often forwarded their phone number as a means of contacting them to arrange an interview. This meant I had to travel to many cities throughout the UK and Kuwait, a process discussed in more detail in the next section.

Interviews with participants in Kuwait took place between July 2016 and December 2016. Thirteen participants were selected from among the costume designers, academics, and theatre specialists who had been interviewed previously (see Table 6). To complete Study 1, interviews with UK participants then took place from November 2016 to March 2017. I interviewed participants in several different cities, including Sheffield, London, Leicester, and York. All the interviews were held in public places such as cafes and offices. By the end of March 2017, Study 1 was complete as I had interviewed 26 participants in both the UK and Kuwait (see Appendix 7 and 8).

4.6.5 Conducting the Semi-Structured Interviews

I conducted the semi-structured interviews face-to-face. This enabled me to develop a rapport with participants. This multifaceted approach aligns with Kvale's guidance in *Doing Interviews* (2007), where he advises that interviews should be recorded in order to produce high quality data for analysis. In accordance with this approach, the interviews held in both Kuwait and the UK were recorded using a digital audio recorder and/or through taking notes.

4.6.6 Data Saturation

The recruitment of between 8 and 15 interview participants is widely recommended for research of this scale and when using this form of methodology (Hill et al., 1997). Fewer participants risks yielding overly homogenous findings. However, Ritchie et al. (2003) argue that a greater number of interviews does not necessarily add further information. Therefore, I had to be mindful of the possibility of reaching what I term the saturation point. This refers to the stage where recruiting additional participants would not add any new information or themes (given the nature of the analysis). The data saturation point proved to be 12 participants in the UK and 11 participants in Kuwait. Thus, although the final number of interviewees was 26, no new information or themes emerged in either the UK or Kuwait after the 12th and 11th participant, respectively.

4.6.7 Summary

Study 1 comprised the implementation of a series of semi-structured interviews based on phenomenological qualitative methodology. In the next section, I will discuss the second study: the Kuwait costume making workshops.

4.7 Study 2: Kuwait Costume Making Workshops

4.7.1 Introduction

In this section, I will first describe my theoretical and practical reasons for designing three costume making workshops for Kuwaiti participants. I will then explain how these link to the wider aims and objectives of my research and the specific research questions I will address when conducting these workshops. I will then clarify the aims and objectives of the workshops before moving on to describe in general terms how they will be structured, what the content of each workshop will be, and the overall timetable for completing them. This will be followed by a more in-depth explanation of the purpose of each specific workshop task and what it entails. Finally, I will provide an overview of how the workshops were introduced to participants through a dedicated Introduction Day, and how they were concluded through the use of photo-shoots and "wrap-up" interviews.

4.7.2 The purposes of designing the Kuwait costume making workshop

As outlined in the literature review in Chapter 2, specifically in the section on Kuwaiti costume design and approaches to designing and making costumes, there has been a serious lack of literature regarding sustainable costume design in Kuwait, and the concepts of reusing and recycling are rare or absent from Kuwaiti costume designers' practices. There are no recent or even older study books, journals, or other documents. This provides some explanation as to why Kuwaiti costume designers always throw away the costumes after the end of a show. It also explains their inability to reduce

textile waste in the Kuwaiti theatre costume design industry (Alhumoud and Al-Kandari, 2008).

As discussed in Chapter 1, in the section on sustainable design strategies that revolve around reusing and recycling costumes or materials, implementing creative sustainable design is a challenge. Having identified this problem, it was necessary to investigate further and here the Kuwait workshops became relevant. At this stage, the Design Thinking method emerged as the most appropriate for conducting both the workshops and the research thereafter. Additionally, Design Thinking is an approach through which many methods and tools can be used to creatively solve 'problems'. The method not only searches for the optimum solution to the given problem, it also tests and assesses it (Lawson 2006; Cross 2011; Vianni et al., 2011). It is an exploratory process and serves as both a starting point for investigation and a path for further analysis of data (ibid.).

As such, I placed it at the core of my workshops in order to see how Kuwaiti costume designers meld their normal design and making process with sustainable ones (reusing and recycling), providing abundant and varied evidence for subsequent examination and investigation. The final element required was a set of clear research questions. The aims and objectives of the study, coupled with the literature review undertaken, enabled me to devise the following questions:

1) What are the barriers preventing Kuwaiti costume designers from applying methods of reusing and recycling, or otherwise reducing textile waste?

2) Do the Kuwaiti costume designers lack technical skills when making the costumes?

3) Are there any particular hitherto undiscovered issues preventing the Kuwaiti costume designers from reusing and recycling textiles in Kuwaiti theatre production?

Hence, I designed the workshop in accordance with the Design Thinking research method; this is a systematic approach whereby Kuwaiti costumes designers were tasked with using creative thinking methods to design objects. In this case, the relevant objects were theatre costumes (Lawson and Dorst, 2009). It is also a method developed to identify solutions to issues external to professional design practice (Lawson, 2005; Gagnon, 2010). Because reuse and recycling definitely lie outside the scope of standard professional practice in Kuwait, design thinking research proved to be particularly effective in the formation of the Kuwaiti costume making workshops (Cross, 2011; Vianna et al., 2011).

As Lawson and Dorst (2009) advise, these questions enabled me to conceive, formulate, and develop both the problem itself (sustainable costume design in Kuwait, or lack thereof), and ideas for a solution (reuse and recycling practical applications). A constant shuttling to-and-fro between the problem and the solution therefore occurred. Lawson and Dorst (2009) regard such an approach as essential (2009). In essence, the Design Thinking approach was useful for my purposes as it enabled me to explore the complex, personal, and interpretive factors underlying each Kuwaiti participant's approach to costume design, and how reuse and recycling aligned with this (or did not). The rationale, aims, and objectives for pursuing these workshops in my research are presented in the next section.

4.7.3   Rationale, Aims, and Objectives of conducting Kuwait costume making workshops

The rationale behind the decision to focus on the workshops involved:

- Understanding what Kuwaiti costume designers think and feel about the production process, as well as the technical strategies used in costume reuse and recycling.
- Gathering empirical first-hand observations to provide a comprehensive source of data. The Kuwait workshops enabled me to observe, record, and analyse the nuances of Kuwaiti costume designers at work, detailing how they experiment and combine ideas and skills to create a complete costume.

The methods were chosen in order to achieve the main goals relating to designing and making the workshops. A detailed account of the approach, coupled with the specific aims and objectives, is outlined in Table 4. Table 5, meanwhile, details the tools I used to conduct the data collection and analysis during and after the Kuwait costume making workshops. Overall, the aim was to investigate how different Kuwaiti costume designers approach the production process, identifying current practices as well as respective differences in terms of process. In the next section, I will outline the duration times of the Kuwait costume making workshops.

Table 4: Kuwait Costume Making Workshops: Aims and Objectives

Aims	Objectives
1. To explore Kuwaiti costume design in practice, and the implementation of reusable and recycling strategies as a means of reducing textile waste in costume design in Kuwaiti theatres.	1. To understand the skills and techniques used by designers to recycle costumes, and to understand how these techniques are applied to each of the three scenarios.
2. To investigate the reusing and recycling skills and production processes used with costumes and materials by Kuwaiti costume designers during the workshop tasks.	2. To discover what is required to support, promote, and maintain an understanding of sustainable design strategies (reuse and recycling) in the Kuwaiti costume theatre industry.
3. To watch Kuwaiti designers in action, allowing for the observation and description of particular characteristics (or *qualities*) exhibited by the Kuwaiti costume designers, and to identify obstacles to reuse.	3. To discover methods of costume production that promote the use of recyclable and reusable garments.

Table 5: The tools and methods used during the workshops to gather the data.

1. To explore costume design practices, I engaged the Kuwaiti costume designers in active discussion (via informal conversation). Additionally, I wrote down relevant notes from their conversations during their practical work in the three different workshop tasks**.** As Douglas asserts, "*when one's concern is the experience of people, the way that they think, feel, and act, the most truthful, reliable, complete and simple way of getting that information is to share their experience*" (1976: 112).

2. I supplemented my research with photographs of their work during the design process and observed their activities, especially the practical hand works during each task (Kawulich, 2008). These are all necessary steps when conducting qualitative research (Holmes, 2013). I was also able to identify common costume design strategies. Thus, I was able to view and then document the ideas, sketches, and visions developed by each participant (Kawulich, 2008; Cross, 2011).

3. Finally, I asked the Kuwaiti costume designers to document their work in scrap book 'diaries' throughout the workshops. This further enriched my findings and provided a strong basis for the thematic analysis, which will be outlined in detail in Chapter 7 (workshop findings).

4.7.4 Workshop: Structure, Content, and Duration

Figure 22: Preparations for the Kuwait workshop tasks
(Photograph by author)

The Kuwait making workshops began in January 2016 and continued for six weeks until February 2017. These consisted of three workshops at different levels and involved asking three native Kuwaiti costume designers to undertake costume design tasks involving reuse and recycling techniques (see Figure 22 and Table 6). These three participants had not taken part in the interviews and had been recruited using the snowball sampling strategy outlined previously. I led the workshops at the Centre of Arts in Kuwait. Each workshop lasted for half a day each week over a six week period (see Appendix 9). The schedule times were chosen during the introduction week, when I met the three Kuwaiti costume designers and discussed times that would best suit their schedules (they agreed that half a day every week would be possible).

When arranging this, I had to consider Claessens et al.'s (2004) comments about the challenges of efficient time management: "*in spite of all popular attention to managing time, relatively little research has been conducted on the process involved in using one's time effectively (e.g. by using "prime time" to carry out important tasks) and completing work within deadlines.*"

I gave each of the three Kuwaiti participants (designer, academic, and theatre specialist) the task of creating three different costumes, inspired by a trio of specific, pre-established play scripts (scenarios) along with distinct stage scripts (see Appendix 10). In the next section, I will explain in detail what these three tasks were, how and why they were different, and how they contributed to my research project.

4.7.5 Description of the Workshop Tasks/ Three play scripts

Table 6: The three play scripts for each workshop

Scenarios	Play Name	Play Style
A	**Amena**	Traditional Kuwaiti style
B	**Cleopatra**	Egyptian Pharaonic style
C	**Alice in Wonderland**	Western style

For the workshops I designed three tasks for each participant that were inspired by three well-known plays (scripts) (see Table 6 and Figure 23). Each of these served to explore independent and distinctive developmental, artistic and technical processes pertaining to costume design. In addition, as described in Chapter 2 (literature review), the role of the costume designer in designing and making costumes is intrinsically tied to the play script (scenarios), in which an idea for a production is presented in the form of a written story outline (Jackson, 2014). This includes details regarding how the play/scene is going to be enacted, what the character looks like, in which era this play is set, the dialogue between the actors (or in this case actresses), and how a costume should look on the stage (Monks, 2010). I provided these scripts in order to furnish the three Kuwaiti costume designers with all the information needed to properly simulate the natural costume design environment. In the next section, I will explain the purpose behind selecting three different workshop tasks.

Figure 23: Copy of a play script received by the three participants (Photograph by author).

4.7.6 The reasons for choosing three different workshop tasks

I engaged the three Kuwaiti costume designers in reading three separate stage scripts (see Table 6). Each of the three different scenarios connected to the three workshop tasks helped me achieve the key aims and objectives outlined in Table 5. By the end of the tasks, the three Kuwait costume designers had to create three complete costumes capable of lasting many performances.

Each participant produced one costume at the end of each workshop. This meant that after they had finished all three workshop tasks, each designer had completed three handmade costumes by themselves, using as much recycled material as possible. This contributed significantly to achieving the main aims of my qualitative research project, as discussed in the literature review, and the aims and objectives of the workshops, as stated in Table 4. All these approaches helped me to explore both the problem and the solutions (Cross, 2011), ultimately showing that this was a challenging prospect for Kuwaiti designers as no methods of textile reuse and recycling are currently being implemented in Kuwaiti theatre (Al-Ghareb, 2001; Alhumoud and Al-Kandari, 2008).

Based on the above, I was able to generate three different workshop activities comprising three different tasks and play scripts (scenarios). This meant each task addressed a different aspect of design for the individual designers to complete by the end of each workshop. There were three main reasons for selecting this three-fold approach and for issuing different tasks to the three designers.

Firstly, I had certain time management concerns to observe, as the data had to be collected by a certain deadline (Finn, 2008). I therefore designed the Kuwait making workshops in such a way as to best pursue the strategic objectives identified previously. Similarly, choosing distinct tasks that nevertheless fit squarely within the context of sustainable costume design (reusing and recycling) complied with Fleming's (2011) assertion that strategic tasks should be identified and achieved in an appropriate manner, namely by selecting suitable tools and techniques for the completion of those tasks. In essence, the three Kuwait workshop tasks fulfilled the fundamental conditions of effective time management by virtue of their design alone (Finn, 2008).

Secondly, the workshops had to be conceived in such a way as to maximise the number and variety of ideas generated (hence the different tasks), as well as allow particular situations to be investigated (Lawson, 2006; Vianna et al., 2011). This is widely accepted as requiring at least three participants or three groups, or both, depending on the tasks and activities chosen (ibid.). Furthermore, Cross (2011) noted an advantage in design thinking experiments (Kuwait making workshops in this case) when undertaken with three people in that they will generate richer results and more effectively highlight the problems by investigating participants' skills while they are working on the projects (tasks). This is distinct from investigating the problem from the perspective of one single person to obtain more efficient research results (Lawson, 2006).

Thirdly, the three tasks were meant to provide the means, motivation, and time for creativity and experimentation, which is the core of any experimental workshop (Cross, 2011). This is shown in Tables 10 and 12. Giving each participant three different play scripts (scenarios) played a significant role in this respect. Each script had a different story and characters, which allowed the characters' look at the end of each task to be more effectively compared and differentiated. In other words, the multifaceted nature of the workshops generated more ideas (especially different play scripts with different roles/ 3 tasks) (Vianna et al., 2011). This allowed for multiple techniques, thus enabling different advantages and disadvantages to be explored in relation to the design techniques themselves (i.e. reuse and recycling). As each had at least some possible advantages, this was a crucial part of the research in that, rather than focusing on one single idea, participants would work on three scenarios and three levels of tasks (Lawson, 2006).

In so doing, rich data was produced by each Kuwaiti costume designer from the workshops. This enabled me to account for the potential disparities in the relative levels of skill displayed by each designer during these activities (tasks). Furthermore, it allowed me to ascertain whether, to be really effective, the Kuwaiti costume designers relied upon complementary combinations of skills, which is a common feature in any design industry (Lawson, 2005; Cross, 2011).

Moreover, the setup allowed the design thinking activities (workshops, projects) to occur in a context where participants (Kuwaiti costume designers) could be questioned on the assigned tasks and how one or more activities fitted, or did not fit, into their usual approach (experiments, workshops). All told, the research design compelled the three Kuwaiti costume designers to engage in new thinking patterns, resulting in the best data at the end of each task (Lawson, 2006) while still delivering different interpretations and understandings of the problems under investigation, thereby advancing my investigation into Kuwaiti costume design.

Finally, this multi-dimensional approach to designing the three workshop tasks resulted in three different scenarios being generated (Douglas, 1976; Cross, 2011). This contributed a considerable volume of information to my research project. It enabled me to gather the most useful data to achieve the aims and objectives of the study (Kuwait workshops /tasks). Thus, the main advantage provided by these workshops regarding initiating sustainable costume design (reusing and recycling) in Kuwait comes from understanding the pitfalls that Kuwaiti costume designers encounter during the design process. In the next section, I will provide a detailed account of the three tasks.

4.7.7 Task/Level 1: Redesigning (Minimal Intervention) - working with a one used garment

Figure 24: Redesigning one single garment (Photograph by author)

For **Task 1/Level 1**, the three Kuwaiti costume designers were provided with a recycled/second-hand garment. Some designers received a damaged garment in order to determine their usability potential. Each of the designers was allowed to choose which character they would be designing the costume for (Koester, 1994). Designers were also provided with access to a mannequin (Figure 24) that would aid in the process of redesigning the garment they had received to produce a costume for their chosen character.

The Redesigning (Minimal Intervention) level is the first level of applying recycling techniques and involves reconstructing worn garments to obtain a new usable piece of clothing (Burns, 2007). The process does not involve the total transformation of the worn garment, but rather an addition of minor design details which signal its reusable status (Koester, 1994; Strahle, 2017). This includes adding a decorative trim, adding buttons or a zipper, cutting and changing the sleeves, and changing the silhouette of a garment. For example, a long dress could be changed into a top by applying trimming techniques (Burns, 2007; Strahle, 2017).

4.7.8 Task/Level 2: Makeover Garments – selecting used garments, working on additional garments, using additional materials

Figure 25: Various second-hand garments provided for the participants during Task 2 (Photograph by author).

In the second workshop task (Level 2), I asked the three Kuwaiti costume designers to carry out a costume makeover; specifically, to use multiple second-hand garments to redesign a costume. Garment makeover means "a complete transformation of the appearance of someone or something" (Koester, 1994; Jones al., 2013), which in the costume design sector means to remodel, renovate, and restore a garment using old materials (Burns, 2007). The designers had to cut fabric from one garment to create another, and generally use reconstruction methods and techniques at a higher practical level than for task 1. Specifically, they had to re-cut and construct a costume using more than 2 garments with a bundle of fabric pieces / scraps (see Figure 25) in a pattern different from the original (Evans, 2015). Unlike Task 1, Task 2 forced them to use their creative skills to incorporate pieces of different garments into a unified, coherent whole which, in theory, would boast chromatic and textural harmony, as well as convincing conceptual harmony. Other than that, the goal was the same as for Workshop 1, namely for the final result to suit the character selected from one of the plays outlined in Table 6.

4.7.9   Task/Level 3: Complete Costume Design – making a complete costume from scratch

Figure 26: A variety of second hand (recycle) fabrics used for Task 3 (Photograph by author)

For the third and final task in level 3, I provided the participants with recycled fabrics alone, which means lengths of fabrics and scraps but no actual garments, whole or damaged, as this is how complete costume design is defined (Evans, 2015; Koester, 1994). I then asked them to design and create a costume from scratch using a bare mannequin (see Figure 26). They did, however, have the chance to select the materials they wanted to use for this final task. Each selected the fabric they felt best suited the characters for whom they were designing the costumes. This provided insight into their design thinking (Cross, 2011). It also tied in with my broader aim of assessing how the three Kuwaiti participants would approach the task of creating a costume from these recycled fabrics (Evans, 2015) and to observe their methods of costume design from start to finish. The next section will explain the Kuwait making workshop activities.

4.7.10 Kuwaiti Costume Designer Activities during the Workshops

Figure 27: The three Kuwaiti costume designers attending the introduction day (photograph by author)

On the introduction day, I met the three Kuwaiti costume designers for the first time. I essentially asked them to collaborate towards developing a set of practical applications that would work in a particular situation, thereby facilitating the diversity and thematic variety that scholars consider necessary for such projects (Miles et al., 2014; Vianna et al., 2011). This was primarily made possible through a creative work session I had arranged, in which participants were invited to interact by generating ideas collaboratively. This served to develop dynamic activities, interspersed with presentations of the aims and objectives of the workshops (Vianna et al., 2011). On the introduction day (See Figure 27, appendix 9) I was able to generate an informal general discussion regarding reusing and recycling costumes with the three Kuwaiti costume designers. This helped to dispel any shyness and make the participants feel more comfortable.

By the end of this "icebreaker," the participants (Kuwaiti costume designers) (Cross, 2011; Vianna et al., 2011) were beginning to get acquainted and felt sufficiently comfortable to share their ideas and stories, including their knowledge regarding reusing and recycling costumes. I subsequently provided them with the play scripts, and each selected the character they would provide a costume for (designing and making) (Lawson, 2006). Therefore, on the introduction day, I followed the same standard process regarding costume design (as discussed in Chapter 2), from describing the characters to letting the Kuwaiti costume designers read the script to acquire some inspiration. This also gave them the opportunity to select one character to work on (see appendix 9).

They also considered how they would undertake the process of making a costume for the actress. Cross (2011) states that "*in the process of designing, the problem and the solution are developed together*" for all three tasks (as described in the previous sections) in the different workshops, so that they might best manage how to envisage and apply reuse and recycling practices during the workshops. At this point, the tasks were ready. The three Kuwaiti costume designers then utilised their own ideas, sketches, and visions (Lawson, 2006) and created their own hand-made costumes with reference to each of the three play scripts.

4.7.11 Concluding the Workshops

The concluding stages of the workshops comprised a day-long photo session/performance held in February 2017. Throughout the day I took photos of costumes that compared the designers' professional work both before and after their participation in the workshops. In the final week of the workshop, each participant presented a full costume and took part in an interview (see Appendix 9 and 10) where they discussed their experiences and their theoretical and practical understanding of reusing and recycling costumes. This allowed me to frame my subsequent findings in the context of several theories of costume design and sustainable design (reusing and recycling) (see Appendix 11). Consequently, I was able to evaluate the impact of the workshops on each person's professional behaviour with respect to reusing and recycling in costume design and reflect on the influence the workshops had on the designers' 'visions' within the industry. I also evaluated each participant's set of practices and examined the methods of reuse and recycling they implemented.

4.7.12 Summary

In this section, I have described in detail the development of the two studies and the methods used in each. Study 1 consisted of 26 semi-structured interviews with designers from the UK and Kuwait. Study 2 comprised a set of three workshops held in Kuwait with three native costume designers. During the workshops; redesigning, makeover, and complete costume design techniques were carried out using reused and recycled costumes. Having described the methods used, the next section will present an analysis of the findings.

4.8 Data Analysis

In this section I will describe the procedures for coding the interview transcripts, extracting relevant themes from the data, and converting the language to English. I will also explain how the interview data was categorised and coded and present the themes and sub-themes that emerged during the coding stage. I will then provide an account of how the themes were identified and assessed using thematic analysis. Finally, when describing the process of transcribing and coding the data, an assessment of the validity and reliability of the data will be presented.

4.8.1 Interview Analysis: The Initial Transcription and Coding Process

The process of data collection involved both electronic and manual procedures. Data were subjected to several transcription processes prior to coding. Several research philosophies applied in previous qualitative research (Hepburn and Bolden, 2017) were initially considered, including grounded theory and phenomenology; however, thematic analysis was eventually considered the most suitable. I used a manual coding process whereby descriptive coding was applied to all the data collected. As previously demonstrated by Sladana (2013), manual descriptive coding helped me collate all the various examples, recommended applications, and exercises for coding and further analysis. Moreover, because the semi-structured interviews and workshops produced very descriptive data, manual descriptive coding also facilitated easy verification of the coding process, as well as providing trustworthiness, thus enhancing the validity and reliability of the overall study.

The thematic analysis was therefore conducted using a combination of script reading, analysis, and interpretation to identify appropriate themes (Boeije, 2010). For the preparation stage, the transcription process developed by Kvale (2007) was used and adapted. This process is described in Table 7. In the next section I will describe the analytical process in greater detail, covering the conversion of audio files to text as well as the translation process used to transform the words of Kuwaiti participants into English.

Table 7: Semi-structured Interviews: Analytic Process

Conducting 26 interviews with Kuwaiti and UK participants
Listening to the interviews
Transcription of interviews: -Converting electronic recorded materials from the UK participants to written text. -Transcribing and translating interviews from the Kuwaiti participants.
Organising Data
Reading the transcripts and field notes several times
Trying to identify the general codes of the framework. Organising the data into main themes and sub-themes.
Answering the research questions. Understanding how qualitative, phenomenological data relates to the main research question.
According to Ritchie and Spencer (2002), stage five involves indexing and charting the data, whereby the data is classified according to the final framework of categories and grouped under the corresponding themes and subthemes.
Using thematic coding to facilitate effective presentation of the findings and subsequent discussion.
Drawing conclusions

4.8.2 Transcription of Interviews (Converting Electronic Recorded Materials to Written Text)

Hepburn and Bolden (2017) are among many who argue that the transcription process is a basic but necessary chore in the research process. Wellard and McKenna (2001) assert that, "The transformation of spoken conversation into text is largely taken for granted." Kvale (2007) agrees, stating that this process is pivotal in a qualitative inquiry. However, he argues that too little attention is given to this process; for example, in one of the most widely cited textbooks on qualitative analysis by Denzin and Lincoln (2005), the transcription process is mentioned fleetingly in a single chapter. At the other end of the spectrum, Oliver et al. (2005) concur with Kvale (2007) in contending that the transcription process is pivotal in a qualitative inquiry.

To conduct the transcription process, I based my approach on that of Wellard and McKenna (2001) and edited out any lengthy use of slang and other colloquial utterances from the transcripts. Furthermore, discussions that diverged from the topic were removed to save time and preserve intellectual resources (Kvale, 2007). To transcribe all the interviews obtained from UK participants, I used Trint programme software. This programme is available via trint.com (Appendix 12). It facilitates the manual upload of audio files which are then converted to editable text, thus enabling the removal of any errors in transcription (i.e. unclear words, terminology). A challenge I faced at this stage concerned the transcription of interviews conducted with Kuwaiti participants (Appendix 13). For these transcripts, no software was found that could translate audible files into Arabic. It was for this reason that I switched to the manual identification of codes and subsequent development of themes. Therefore, to transcribe these files, I used a manual process whereby I listened to the recorded interviews, then wrote the text down and translated it. Finally, I applied a denaturalisation process to the transcription of interviews in both languages (English and Arabic). This process is illustrated in Figure 28. In the next sub-section, I will present and illustrate the strategies employed in the transcription process.

4.8.3 Translation of Arabic Text into English
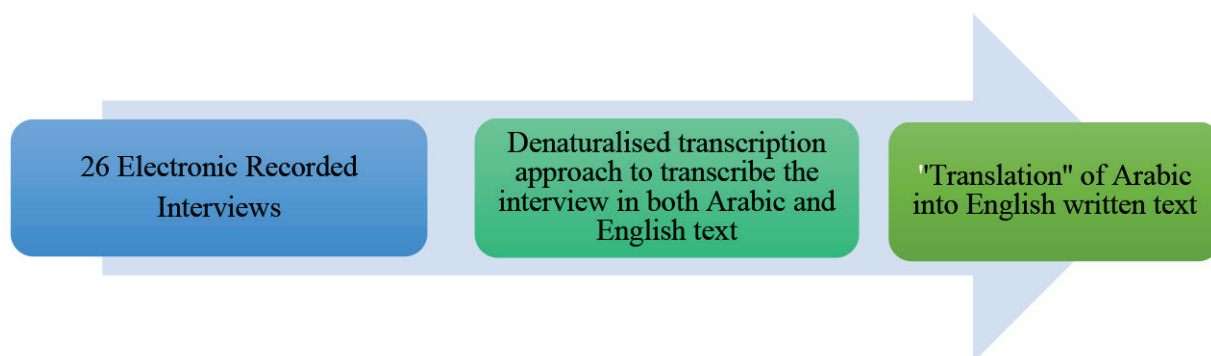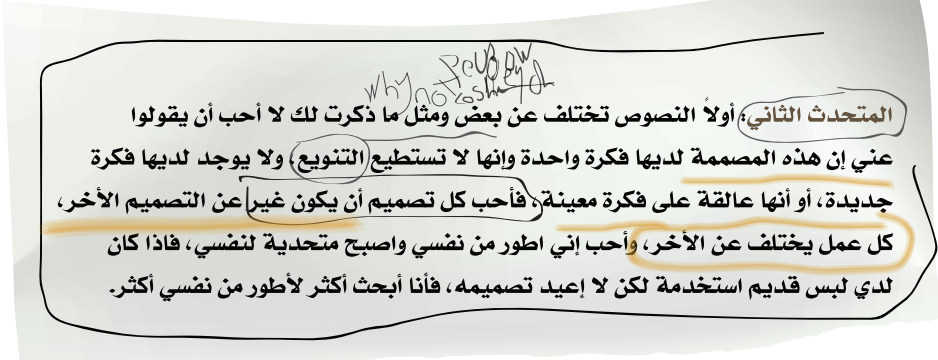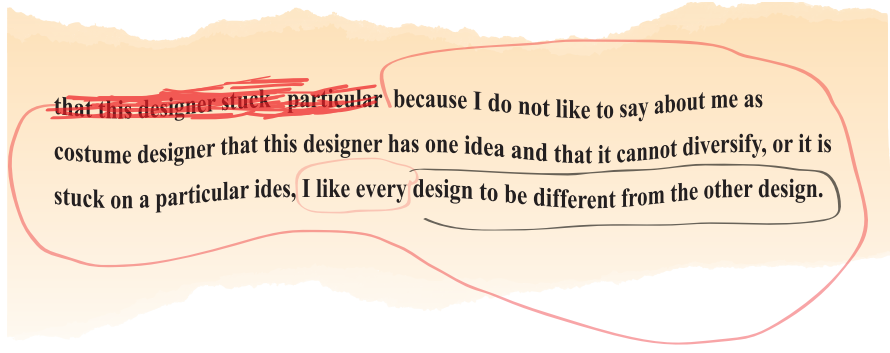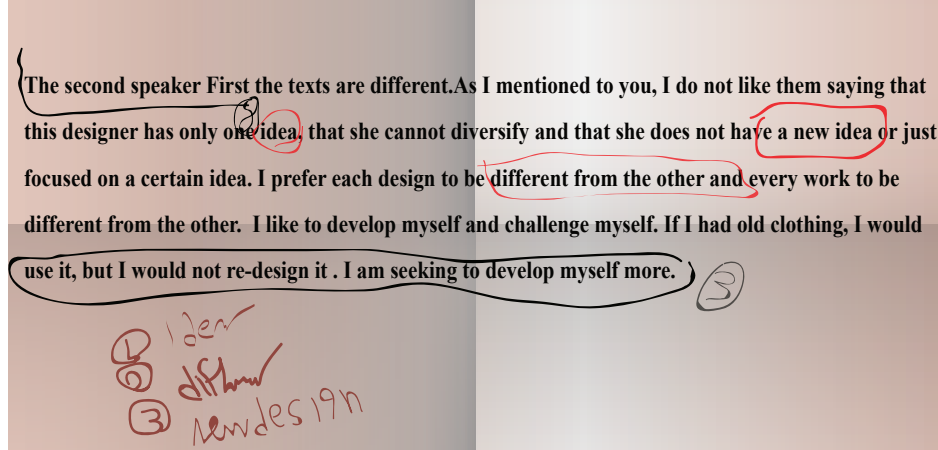
Figure 28: The process of converting audio electronic records to Arabic and English text

Squires (2009) states that researchers can encounter difficulties in the translation process at any stage, from analysis through to dissemination. Abdalla (2018) agree, arguing that this is a laborious process characteristic of multi-lingual investigations. In the present study, the process was time-consuming and involved several interpretations and adjustments. Attia (2008) argue that translating Arabic into English is a challenging task, as Arabic contains many nuances and has a complex linguistic structure that is difficult to interpret in other languages. Abdalla (2018) therefore emphasises the importance of minimising interpretation bias when conducting research that requires the translation of Arabic into another language. Furthermore, records should be maintained to support the observations made and described during the interview process (Kvale, 2007).

To ensure the translation was accurate, I completed the first translation set myself. The process was carried out in sets as this proved more efficient in terms of time (Magnusson and Marecek, 2015). I then had the resulting text checked and proofread by the Language Advisory Service (SHU) to ensure the terminology was correct and to verify clarity and intelligibility. This also provided an additional method of ensuring both content accuracy and reader intelligibility (see Table 8).

This section has explained in detail the processes employed to translate the Arabic interviews into English. In the next section I will describe and explain the process of identifying codes from the transcripts and the subsequent emergence and development of themes and sub-themes.

Table 8: An example of a translation from Arabic text to English and the use of the language advisory service to ensure the transcription is grammatically correct

Original Arabic text	المتحدث الثاني، أولاً النصوص تختلف عن بعض ومثل ما ذكرت لك لا أحب أن يقولوا عني إن هذه المصممة لديها فكرة واحدة وإنها لا تستطيع التنويع، ولا يوجد لديها فكرة جديدة، أو أنها عالقة على فكرة معينة، فأحب كل تصميم أن يكون غير عن التصميم الأخر، كل عمل يختلف عن الأخر، وأحب إني اطور من نفسي واصبح متحدية لنفسي، فاذا كان لدي لبس قديم استخدمة لكن لا إعيد تصميمه، فأنا أبحث أكثر لأطور من نفسي أكثر.
First initial translation	that this designer stuck particular because I do not like to say about me as costume designer that this designer has one idea and that it cannot diversify, or it is stuck on a particular ides, I like every design to be different from the other design.
The text after it has been proofread by the language advisory service.	The second speaker First the texts are different.As I mentioned to you, I do not like them saying that this designer has only one idea, that she cannot diversify and that she does not have a new idea or just focused on a certain idea. I prefer each design to be different from the other and every work to be different from the other. I like to develop myself and challenge myself. If I had old clothing, I would use it, but I would not re-design it . I am seeking to develop myself more.

4.8.4 Thematic Analysis
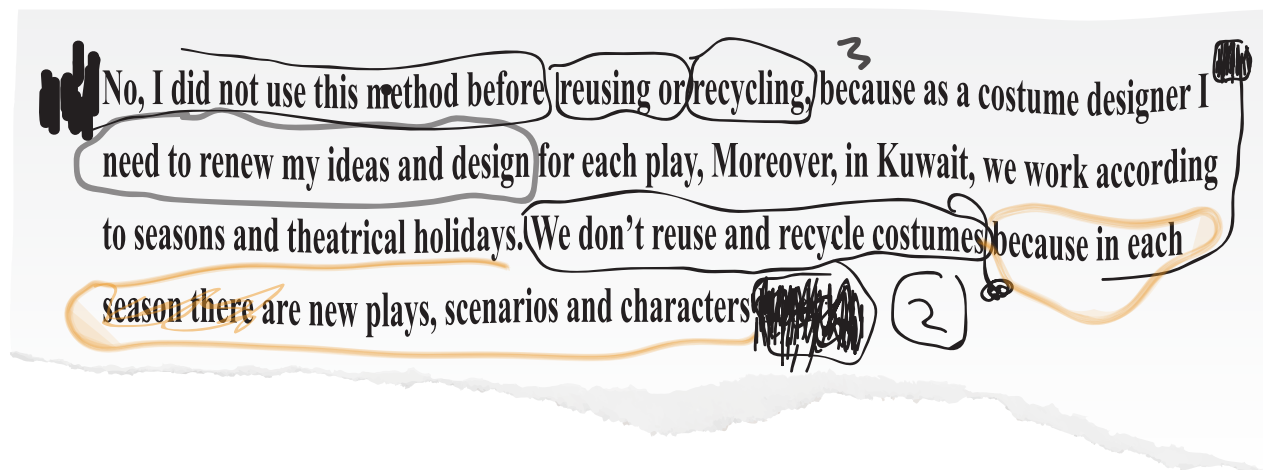
Figure 29: Example of the Manual Coding Process (photograph by author)

To carry out the manual coding procedure, I made extensive use of a whiteboard, paper notes, and charts. Although I could have used computer programmes, I considered this approach more expedient given my greater comfort with manual techniques, especially after the failure of NVIVO to provide me with acceptable results. Furthermore, using these materials felt more familiar and natural than using software. Figure 29 illustrates how the coding process was conducted manually.

Braun and Clarke (2006) describe thematic analysis as an approach characterised by the identification and analysis of patterns within the data, which are then used to construct themes. Consequently, thematic analysis is a flexible tool that can be used to provide a detailed interpretation of qualitative data (Boeije, 2010). The manual process of coding consisted of scrutinising the transcripts for specific words and patterns, and then identifying thematic links between them. Once this was accomplished, I was able to identify all the relevant themes.

4.8.5   Categorising and Coding Interview Data

Having categorised the answers, I proceeded to sort them in accordance with the aims of the research. Brannen (2004) argues that data collected through laborious processes should be the "star" in the relationship created between the data and the research objectives, aims, and questions.
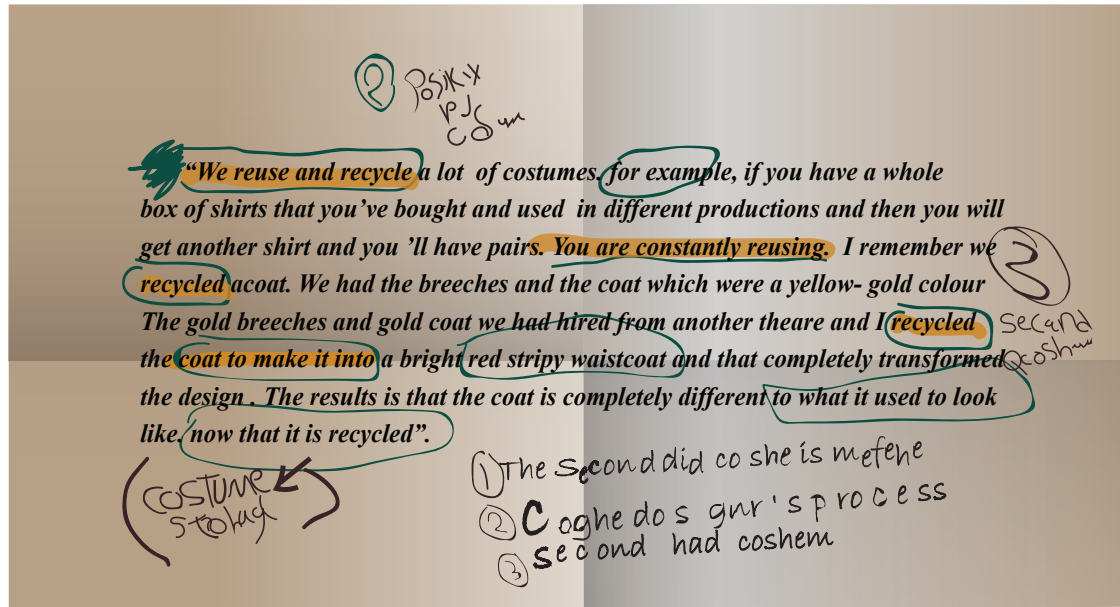
Figure 30: Breaking the data down into passages (photograph by author)

Miles et al. (2014) outline two stages in this process: *data reduction* and *data interpretation.* In practice, this meant I began by breaking the data down into passages, each containing a specific idea with a suggested meaning (Gibbs, 2007). I then had to attribute a specific colour to each meaning (see Figure 30) and then grouped these meanings into categories, each of which captures the essence of the meaning(s) conveyed. When a meaning became relevant to other categories, a set of new categories were created that were not reflected in the main themes. Saldana (2016) refers to these as descriptive categories which, when placed on a topographical map, can facilitate the discovery of new patterns in meaning units and then used at a later stage to trace associations between main categories.

Tables 9 illustrate the major topics identified and discussed in the chapter, along with the associated descriptive categories. Based on Gibson and Brown (2009), these categories show how the topics are linked to the principal aims and objectives of Study 1.

Table 9: Costume Design Practices and opinions in the UK and Kuwait

Topics	Description
1. Costume design processes	This topic encompasses the many differences between Kuwaiti and UK costume designers in terms of the process of costume design, and between prototype and manufacturers' costume garments.
2. Providing costume materials	This topic concerns the suppliers from whom UK and Kuwaiti designers obtain materials.
3. Technical differences in costume design construction	This topic illustrates the numerous differences between UK and Kuwait costume designers when designing and producing costumes, including the different skills and technologies used.
4. The second life of costumes and materials (reusing and recycling).	This topic addresses the different strategies used to reuse and recycle costumes and materials by Kuwaiti and UK costume designers.
5. Discarding costumes	This topic addresses UK and Kuwaiti costume designers' tendency to dispose of costumes after each show.
6.Understanding of sustainability	This topic addresses the gaps in knowledge and understanding among Kuwaiti costume designers in relation to sustainability and compares the situation in Kuwait to that in the UK.

4.8.6   Chapter Summary

The 26 semi-structured interviews in Study 1, as well as the data gathered through the three workshops, were analysed using thematic analysis. These enabled the various themes pertaining to costume design and, more specifically, reusing and recycling costumes, to be detected, collated, and analysed. The first study allowed participants to freely discuss topics that answered the research questions, offering deeper insight into the subject matter. Following this, the three workshops challenged the Kuwait designers to restyle, makeover, and design a completely new costume while reusing and recycling as many costume parts and textiles as possible. The ideas, themes, and methods revealed during the semi-structured interview stage served to provide the three designers with the necessary foundation to achieve this, enabling them to identify and experiment with the various reuse and recycling methods that are ubiquitous in UK theatres, yet unheard of in Kuwait. In the next chapter, I will explain these themes in detail and the issues they have brought to light.

5 Chapter 5: Study 1: Analysis of Interviews

5.1   Introduction

In this chapter I will present the findings from the semi-structured interviews conducted with both UK and Kuwait costume designers. These elicited information on the practices they adopted and their opinions on these. A comparative approach was adopted, comparing the reuse and recycling strategies utilised in both countries. This included exploring the design process and the participants' views on sustainability practices.

Following the analysis, I will explain and interpret the main topics and themes in this chapter. This will achieve one of the main aims of the research, which is to provide an increased understanding of divergence regarding the practice of sustainability (reuse and recycling).

5.2   Chapter 5: Structure

The semi-structured interviews with the Kuwaiti and UK costume designers focused on each participant's experiences and practices in the process of making costumes. From these, the main topics were identified, each of which contains several themes. This chapter was therefore structured as follows (see Table 10).

Table 10: Costume Design Practices and opinions in the UK and Kuwait

Topic 1: Steps in the costume design process
Theme 1: Inadequate understanding of the process – Kuwaiti practices
Theme 2: A robust understanding of the costume design process – UK practices
Topic 2: Technical differences in costume design construction
Theme 1: Preference for new materials with poor costume design skills – Kuwaiti practices
Theme 2: More advanced technical skills and creativity – UK Practices
Topic 3: Providing costume materials
Theme 1: Focus on purchasing new materials – Kuwaiti Practices
Theme 2: Focus on reusing and recycling old materials – UK Practices
Topic 4: The second life of costumes and materials (reusing and recycling)
Theme 1: Lack of skills and knowledge regarding reusing and recycling – Kuwaiti practices
Theme 2: Evident skills and knowledge regarding reusing and recycling – UK practices
Topic 5: Discarding costumes and materials
Theme 1: Storing and Reusing require costume making skills - Kuwaiti practices
Theme 2: Long-term storage techniques for costume and materials– UK practices
Topic 6: Understanding of sustainability
Theme 1: Failure to grasp sustainability - Kuwaiti views
Theme 2: A deep understanding of sustainability: UK views

The semi-structured nature of the interviews meant there was a degree of overlap between the categories as participants touched on one or more of the other categories when responding to specific questions.

5.3 Costume Design Practices and opinions in the UK and Kuwait

5.3.1 Introduction

Sketching and designing are important aspects of the costume creation process because they enable the costume designer to develop a clear vision for the costume and how it will look on the stage (Ingham, 2003). This includes determining what kind of materials will be used to sew the fabrics and how the costumes (garments) will be manufactured (Niinimaki, 2013). I therefore asked each costume designer about the process they followed when designing costumes. This enabled me to investigate, understand, and explore their use of sustainable and practical techniques (the use of reused or recycled costumes or fabrics). These will be analysed later in the discussion chapter. To this end, a multi-pronged approach was used when I formulated the semi-structured interview questions. These addressed the following points: the extent to which reused or recycled fabrics are adopted: how costumes are constructed; and what solutions costume designers have used or have contemplated using when building a costume in circumstances where new textiles cannot or will not be purchased.

I will now present a detailed breakdown of the answers given by participants to questions regarding costume design practices. Participants were asked to describe the different stages of costume design in the country where they ply their crafts. More specifically, the respondents were asked to detail five distinct processes. The responses provided by participants regarding these five topics will now be described sequentially in themes created during an analysis of the practices of Kuwaiti and UK participants.

5.3.2 Topic 1: Steps in the costume process

Inadequate understanding of the process – Kuwaiti practices

Kuwait provided a sharp contrast to the UK, as interviews revealed a conceptualisation of the role of a costume designer that was almost entirely different. Kuwaiti designers basically create a sketch, costume doll, or written descriptions (and sometimes not even that). The actual job of creating the costume, however, falls to the tailor. The only thing Kuwaiti practice has in common with UK practice, beyond the concept art stage, is some form of on-stage fitting once the costumes are created but, even then, all alterations are made by the tailors. I asked the Kuwaiti costume designers about the sequential steps they followed when designing and construct a costume garment. I also wanted to understand more about the processes involved in designing and manufacturing costumes during this early stage. This area proved to be quite problematic in Kuwait. The responses made by the Kuwaiti participants will now be presented in detail.

Four of the thirteen Kuwaiti costume designers **(1.H, 3.N, 6.A and 2.B),** who have worked for many different theatres and designed costumes for various plays in Kuwait, shared the view that tailors play a central role in the costume design and manufacturing process. This practice contravenes the scientific theory of costume design and, as discussed in chapter 2, Crist (2014) and Geneseo (2014) argue that the basic responsibilities of costume designers are to stitch and contrast their costumes using very basic tools. These tools are: the fabrics or other materials out of which costumes may be created; the various methods of putting costumes together, such as using a sewing machine, needle, and thread; and the bodies of the actors themselves, because no

costume will make it onto the stage without an actor in character wearing it.

For instance, **1.H**, talking about his costume design experience in many theatres and plays in Kuwait and the Middle East, stated:

> "*I always read the script first, 2) then I look for the actors' and actresses' sizes to know which kind of textile fabrics I will use and purchase from the Kuwait textiles market, 3) then I draw the sketches, and 4) the final process involves the tailors sewing all the costumes.* (**1.H**)

A second respondent, **3.N**, drawing on his experience as one of the first Kuwaiti costume designers to have emerged after the Iraq invasion in 1991, echoed this point, stating:

> "*Firstly, I read the script, then I went directly to the Kuwait textiles market to buy fabrics and costume accessories for the costume, and the last important process in my design is describing to the tailors how to manufacture the costumes by using quick sketches of what I need in stitches when sewing each costume.***" (3.N)**

A third costume designer, **6.A**, added particular weight to the above view due to his background as a theatrical costume designer specalising in academic theatre productions. He commented that :

> "*The final important step after designing is to make and produce the costumes through the period tailors. There are many tailors in Kuwait who have different advanced and less advanced skills in the manufacturing of costumes, and their skill will be reflected on the stage in the way the costumes are made, whether professionally or not.*" **(6.A).**

A fourth costume designer (**2.B**), who has worked on several plays in Kuwait, stated that he did not adhere to a specific process and instead preferred to approach costume design according to the requirements of the theatre production:

> "*You know, it depends on the theatre production. I don't have a standard design process but, as always, it involves reading the script, looking for the textiles from the Kuwait market, then meeting with the director to see if he/she needs to add anything to the costumes before going to the tailor*" **(2.B).**

A somewhat contrasting response was provided by **10.R and 11.A** who stated that they effectively shared the costume design process with freelance professionals whenever appropriate, even if the company was leading the overall design theme and process. However, this was limited to verbal description so that other contributors or tailors can then change these into a visual format if required. Kuwaiti designers never make the costumes themselves. For instance, **10.R** states that:

> "*I read the text (script) so that I can live with the play and with the characters, and so that I will design for them the appropriate costumes for each character's role.... I will then ask freelance professional costume designers and painters to design all the costumes, sketches of characters*

*for any production, and the end process. I will give all the sketches to the freelance tailors so that they can sew all the costumes required for any production." **(10.R)**.*

A similar answer was given by respondent 11.A, a freelance set and costume designer who has worked on different plays for the past 6 years. I found his vision regarding the process of designing costumes to be akin to that of costume designer 10.R in that they follow a lead but make a valuable contribution by working on the portrayal of the characters and how the costume will look. This can be achieved via sketches or drawings or, as in the case of 11.A, through verbal description during the design process so that other contributors or tailors can change them into a visual format as and when required:

> "*I am not a professional drawer of figures and costume; I am good at explaining what I need to the tailor and the staff. They always understand how each character will look, and sometimes during my conversation with the tailor he draws a quick sketch while I am explaining what I need up until the final look so that he can manufacture all the costumes.*" **(11.A).**

Thus far, it is apparent that Kuwaiti costumiers never make their own costumes and never hire or reuse older costumes. However, as discussed earlier in Chapter 2 regarding the role of costumiers, those working in stage costume productions in the UK and other western countries are reusing and recycling older costumes as part of the sustainable design process (Jones et al., 2013; Heward, 2018). Such costumes are usually stored in designated costume wardrobes. In the UK, this practice is known to take place in the following theatres: 1) National Theatre, 2) Royal Exchange Theatre, and 3) York Theatre Royal (Carlson, 2003; Maclaurin and Monks, 2018; Sid, 2019).In contrast, the notion of sustainability does not emerge naturally in the responses of Kuwaiti participants. The only issue that emerged, albeit tangentially, was to do with the budget rather than the environment.Curiously, Kuwaiti costumiers were no more predisposed towards non-sustainable practices. They have merely been educated differently (or not educated, according to my respondents), otherwise they were just as determined to see the job done well and become as involved as possible in the costume making process, as evidenced by participant **7. I,** who stated that**.**

> "*My process for designing any costume collection involves reading the play script in detail to know in which era I will design characters' costumes. Are the costumes in the modernish era or Meadville era, etc.? Then, after reading I write a note for each character, I consider how the costume will look, and will discuss the character with the director to figure out whether anything needs to be changed before I take the final steps, which is sewing all the costumes at the tailors. I find writing a note about the character is an easier method for me than sketching the costumes.*" **(7.I).**

Costume designer **12.6** practices their own specialty (children's plays and costume design) and showed with his answers that the process described by costume designer **7.1** is widespread (reading the script, meeting the director, and showing the costumes to the tailor). This suggests Kuwaiti designers might have developed along the same lines as UK designers if they had been invested with the same responsibilities (i.e., actually making the costumes). These findings complement those that emerged in the literature reviewed in Chapter 2. For instance, Donaldson (2018) stated that, ''Costumiers are responsible for developing, creating and fitting the costumes for characters in theatre productions. And head of the wardrobe department translates the director's

vision by studying the script to create looks that naturally develops and/or represents each character''. As things currently stand, they never make their own costumes and they never hire or reuse older costumes. Sadly in Kuwait the costume department is very rare as they do not have a costume wardrobe (Al-Ghareb, 1988). The only difference lies in their propensity for visual illustrations; for instance, **12.6** claims that:

> *"While I read the script, I start to draw quick sketches of the costumes that I want, but I prefer to write in the script margin notes for each character's personality, how they will look. It's better to compare the set for many hours than drawing the costumes, and it saves time"* **(12.6)**.

In addition, respondent **5.M**, who has designed costumes for more than 12 theatrical works (children's theatre and adult theatre), claims to have his own philosophy for making costumes. This means he creates and applies his own roles and standards for costumes in order to finish his costume design project :

> *"My processes are that I briefly read the script and design all the costumes according to my childhood imagination. I always used my imagination to design any character for any play on the stage, child or adult, so it's really rare that I draw sketches for any costumes. Then, in the final steps, I explain to my staff tailors how each costumed character will look; sometimes I draw a quick sketch at the studio while I explain to the tailors what each character needs to look like."* **(5.M).**

The overall budget often seems to be of concern during the design process, as was indicated when I interviewed participants 8.Z and 13.S. Aside from their individual design processes (reading scripts and collaborating with tailors), they state that budgets play a big part in dictating the costumes they design. For example, the costume designer from the Al-Bwadi Theatre Company commented that:

> *"If I am working with strong theatre companies with high budgets for producing the costumes, for sure I will select high quality textiles and tailors to sew the costumes. If it is low budget, I will try to find a low-quality hand tailor to manufacture the costumes."* **(8.Z)**

Similarly, respondent **13.3** stated that:

> *"It's important to read the script first as a design process and meet the director, but it's rare that I accept the offer from any theatre production if they do not have enough budget to produce the costumes. The Kuwait textiles market is really expensive if you want to produce high quality costumes for any production"* **(13.3)**.

Regarding the budget during the design process, **8.Z , 13.S** and **13.3** agreed that if this is low they will hesitate to accept any offer to design and complete the costumes. However, this suggests costumiers lack design thinking skills as design thinking practices are part of their responsibilities (Cross, 2011; Jones et al., 2013). Moreover, as discussed in chapter 1, design thinking involves finding a solution to the garment part of creative design when creating costumes.(Stone, 2009; Dieffenbacher, 2013; Miller, 2017), primarily by using the sustainable waste management strategies of reduce, reuse and recycling.

Costume designers 4.R and 9.K stated that they use a design process whereby they read the script, draw sketch-

es, then go on the internet as the final step before asking tailors to manufacture the costumes. For example, (4.R) a stenographic and theatrical author and costume designer, offered the view that:

> *"Sometimes, if the play is an international one, such as Shrek or Harry Potter, I would look for some international websites to see if I can purchase some material and accessories for the play,"* **(4.R).**

Similar views were expressed by the Kuwait costume designer **9.K**, owner of the Mudian Moda company for costumes and props, who said:

> *"In our company we have our own tailors to sew all the costume collections for any play production or, sometimes, I will order online costumes from Europe and sew new pieces of costume and then mix them together according to the character personality in the script."* **(9.K)**.

Finally, all Kuwaiti costume designers agreed that, from reading the script and meeting with the director to the final steps in the design process, **tailors** play a primary role to the point where they are often hired long-term. This finding highlighted the issues kuwaiti costumiers face from the initial design process until the final stage. In some cases this means that, if the tailor is not available, the costume will not completed. According to Lambeth (2017), "A costumier needs to be experienced in pattern making and sewing to explain how a costume is to be constructed." This is an issue that also emerged in the literature review. When western costumiers faced this issue they looked for second hand clothing and costumes from charity shops and the costume wardrobe rather than making costumes from scratch. In the next section I will present the views of UK costume designers regarding the process of costume design.

A robust understanding of the costume design process – UK practices

The UK costume designers I interviewed originated from several different cities, including London, Sheffield, and Liverpool. This was because I wanted to cover as broad a range of experiences as possible and ensure that any procedural and policy differences from Kuwait are easily made apparent for the purposes of later discussion. A wide variety of costume design processes were revealed; however, one aspect immediately stood out as drastically different from Kuwaiti practices: the proactive use of recycling and reuse in the earliest stages of the process.

During this early phase of the interviews I did not strictly focus on sustainability (reusing and recycling), nevertheless costume designers **12.L, 7.A,** and **11.A** were clearly conscious of it. They spoke of resorting to reusing and recycling techniques from the earliest stages of the design process. This was in line with the research on sustainable design thinking detailed in chapter 1, where reusing and recycling practices as part of the design process were deemed important in helping costumiers create design solutions before making an actual garment or costume (Brown, 2008; Norman, 2013). This enables them to test their assumptions (Dam and Siang, 2018) and obtain a deeper understanding as to how they can make a costume using creative sustainable design thinking practices (Andersen and Earley, 2014; Dam and Siang, 2018).

Creating a Pinterest mood board was also one of the practices employed by the costume designers, specifically

3.S. Another approach, volunteered by participant **6.B**, was based around involving actors in the costume design process; however, regarding the practices used in the costume design process **12.L** stated:

> *"In my process of designing costumes I generally start off on a collage mood board and make loads of mood boards. And then, from the mood boards, go to design meetings and come to them with certain images. For instance, if I do start with a script, I'll look at the different characters and try and find bits of their personality that would reflect what they would wear, and then just gather a huge pool of research and knowledge and make a mood board of a collage of images, then I will start to create mini dolls."***(12.L)**.

As noted earlier, or, 3D dolls are used by participant **12.L** as substitutes for the process of fitting and making trial designs. In her design studio, I found a mini doll wearing a costume for a character and I asked her to tell me why she created these dolls. She responded that:

> *"This is also a part of my design process. I create a character doll, which helps me build a vision of the fabrics that will be used and enables me to see the costume characters in 3D perspectives, It also helps me know which materials I will use for each of the characters and to understand the quantity of materials and fabrics that I need, rather than wasting textiles. I develop the dolls while watching the inmates rehearse, creating their individual backstories - enabling the creation of a costume suited to each personality by ensuring I have a full understanding of the character who will wear the costume on stage."* **(12.L)**

3.S, who created a Pinterest mood board, explained her costume design process as follows:

"I always use smart online programs. I use Pinterest quite a lot because I use that to gather ideas together and put them all in little mood boards online that I can look up on my phone. I make costumes usually for circus performances because that's my discipline, then meet the director and sew the costume collection by myself up until the final stage." **(3.S)**.

Participant **6.B** is a freelance costume maker and tailor currently working for Yorkshire Art Space Exchange Place Studios, which was where I interviewed her in Sheffield. She explains her costume design routine as follows**:**

> *"I also work from historical references of how things were made. Then I start sketching the character costume before going on to start drafting the pattern and obtaining rehearsal measurements from the actress, getting an overall feel for what size and shape they are, and finally, according to their measurements, I will start to cut some reused fabric in my studio. […] Finally […] I make alterations to the pattern. Cutting anything else from fabrics I have left that I need to use as lining, then sewing the costumes."* **(6.B)**.

The costume designer 1.Y, from London, (described his general process for designing, producing, and creating the costumes in terms of looking to reuse old costumes and textiles as soon as the preliminary sketches are made and before anything else begins. He commented that:

"First, I read the script, and then I speak to the director. Then the step that I take is to establish the research process which is crucial in the creation of the costumes. After that I go through drawings (designing costume sketches). I think a drawing is also a very good way to put together how this character will combine their clothes, what the final look will be and always from 2D, as from 3D there's always a massive journey, and the final steps involve looking for any similar costumes and textiles that are left to produce a new collection facilitating manufacture of all the costumes by myself and my own staff for the play production." **(1.Y).**

Ultimately, only two respondents besides **1.Y** (detailed at the start of this sub-section) spoke specifically about sustainable practices during this earliest stage of costume production. One was the London-based costume designer **8. R**, a designer of multiple trades. Interviewed in London, he stated that:

"I usually read the script with the initial character sketches following a dicussion with the director about the characters, and then I will try to adapt the costumes I already have. You know I don't immediately go and purchase textiles, I always try to reuse and recycle and look at what I already have in terms of pieces of costumes and textiles and start sewing them together." (**8.R).**

Participants **1.Y and 8R** appear to be more interested in using the sustainable design waste management strategies enshrined in the 3Rs (reduce, reuse, and recycling). For instance, **1.Y** always looks for used costumes (second hand garments) (Fletcher, 2012 ; Maclaurin and Monks, 2018) and leftover textiles they can recycle to make costumes, while **8.R** strives to use the reuse and recycling strategies **(LCA)** applied to the life cycle of garments (Blackburn, 2009; Niinimäki and Hassi, 2011): they prefer to adapt (reuse and recycle) costumes rather than purchase new textiles. According to the organisation "Be group recycling solution" (2019), *"When textiles have to be processed in order to be suitable for re-use, this can be achieved by performing minor adaptations to the material such as cutting it into wiping rags or by using more extensive processes, for example to manufacture insulation material."*

Another costumer designer, 10.S from Sheffield, has worked on a variety of plays in the theatre, pantomimes and festivals including Glastonbury. Like other UK costume designers, she used sketching, but differed in her approach in that she relied on collaboration with the play director and worked best when designing costumes during actual stage rehearsals. She related this to her costume design process as follows:

"I will read the script, then I will go away and draw some initial designs and then meet the director, which is very important for discussing points about the way to produce the characters on stage from his/her vision. And then once the designs, costume wise, are signed off by the theatre itself, they then get passed to the costume supervisor who can begin casting and start sewing the costumes" **(10.S).**

The costume designer from York (**13.C**) expressed similar views regarding the importance of meeting the director.

"I mean the process is pretty much standard wherever you go, such as reading the script and discussing it with the production team, especially with the director at first, because the director

has a right to accept the designs, then finally I go out and basically source the fabric for those pieces of character costume." **(13.C)**.

Another freelance costume designer, **4.M,** has worked for the past 12 years for the National Theatre in London's West End in the UK. I interviewed her in Leicester and asked her about her approach towards the design of the initial costume concept. She differed from the previous two respondents by stating that manufacturing processes that would be available. She acknowledged the importance of extensively researching and finding references for characters she needed to design costumes for, and was always on the lookout for any existing or new methods of sewing, stating:

> *"Researching is the most important step in my design process. I search for many references related to the costumes that I want to design and manufacture to gain knowledge of how the costumes are made; usually this kind of research gives me a steer on what they are like, what direction they will take, and then I end up doing lots of sketches. This involves trying sketches, and selecting appropriate fabrics, and materials to stick on the paper sketches. This helps build my imagination and give the director a full picture of how the costumes will look. The final step is that sometimes I sew the costumes or hire them from the costume stores if I find something related to the characters in the script."* **(4.M)**.

A similar view emerged when I interviewed **5.P** in York. She is a freelance costume maker experienced in cutting, making, and supervising costume design for a variety of characters in many different theatres. She made the following comments regarding the process of making costumes:

> *"The process is pretty much standard wherever you go; in a sense, you get a designer who comes in, reads the script with discussions with the production team, goes away from there and draws up designs of what they think [...] they'll go back to the director [...], and then they work with the costume supervisor in an established theatre [...]. Then I go out and basically source the fabric for those pieces and then I am the one who makes them."* **(5.P).**

Participants **10.S, 13.C, 4.M** and **5.P** prefer to sew and stitch costumes themselves or hire them from the costume wardrobe. Their view of the process of design practice aligns with the earlier discussion in chapter 2. This highlights the importance of costumiers having the knowledge and know-how to help realise the play (script) and bring the stage director's vision (Bowden, 2018) to life. This is why they are often on hand to be consulted regarding any related problems during the pre-production process, i.e. when designing the costume from the beginning up until the final stage (Ingham, 2003).

For instance, two costume designers (**2.L** and **7.A**) , who I interviewed in Sheffield and London, along with a costume designer and maker (**11.A**), and (**9.Z**) were perhaps the most practical and were ready to resort to reusing and recycling techniques during the early design process. The similarities in their comments are demonstrated as follows:

> *"I would normally go through the design process, read a script, meet the director with the ideas, sketches, things like that. And then I'll source or make costumes for myself. But most of the time I find my own costumes and adapt them, make them fit for whichever projects I'm working on."*

(**2.L**).

"I start from the reader script, then sketch the design for the character. And, when I finish, I show it to the director. If he or she likes the character costume design, we will discuss the costume budget for manufacturing the costumes. Mostly I sew the costumes by myself, but only if it's a huge play production." **(7.A).**

"My main role here is to study the script; study all aspects of the costume and then design it in line with the personality of the character. I use a very wide range of resources. I've got access to the library, so I guess I'm quite fortunate with that. Library, internet, online. Then I create costumes, envisioning a personality for the character within the boundaries of the director's vision. Because I create a costume with the vision of the production manager in mind, I then fit and measure the actress. The final process of manufacturing is that of (sewing) the costumes by myself." **(11.A).**

9.Z was another costume designer predisposed to using sustainable practices from the very beginning of the costume design and creation process. When I interviewed her in Ashford, she stated the following:

"Mostly I write the play script, so I will get the assistant costume designers to discuss and draw some sketches about the character costumes, working to first establish the prevailing colour themes for the costumes. Then we always have some costumes left from other productions, so we will reuse and adapt them to match the theme of the characters." (**9.Z**).

As shown, participants **2.L,7. A, 11.A,** and **9.Z** agree that adopting reusing and recycling as part of their early design process means adapting and sewing the costumes. Their creative approaches to design thinking in the earlier stage of making costumes and their vison of how to reuse and recycle the costume by themselves corresponds to the scientific theory discussed in chapter 1 and 2. This highlighted how important it was for costumiers and garment designers to have the basic skills and techniques needed to sew and adapt garments using sustainable design thinking strategies such as ideas, concept, prototype, and test (IDF, 2018) As Dieffenbacher (2013) stated, "*The relationship between the design thinking process and the method of manufacturing sustainable garment relies on designers being open to all ways of working*". UK designers also described the general process of designing, producing, and creating costumes in terms of looking to reuse old costumes and textiles as soon as the preliminary sketches are made and before anything else begins. This aligns with the views of scholars presented in chapters 1 and 2 regarding the concept of (reusing costumes) when they contended that layers of discarded garment or pieces of textiles can provide the outline of the character's personality as scripted (Anderson and Anderson, 1984; Clancy, 2014; Pollatsek and Wilson, 2017). This means costumiers must therefore not only create an outfit that can bring a character to life, they have to make certain it can withstand wear and is renewable if needed (Ingham, 2003).

The similarities and differences between the UK and Kuwaiti costume design process are summarised in the next section.

5.3.2.1 Similarities and differences between Kuwaiti and UK costume designers

UK-based costume makers seem to have similar ideas regarding sketching and envisioning costumes, and

there is a greater familiarity with technology than there is in Kuwait. Online/computer design programs are particularly popular in the UK compared to Kuwait. Pinterest mood boards have been mentioned more than once. Other designers produce physical miniatures or go that extra mile and work with the actors and even directors to design costumes during rehearsals, even taking measurements from the actors themselves. Designers are also known to design costumes with the aim of making them personally. This contrasts with **Kuwait**, where the designers focused on their own vision for the characters and made their designs based on the expectation, they would contract tailors for the actual production of the costumes. In short, costume design often seems to be multidisciplinary, collaborative work in the UK, as opposed to Kuwait where it is predominantly individual work, except for those designers who talk with directors and actors. This also shows that, on an individual basis, UK-based costumiers have a more diverse skillset than Kuwait-based costumiers. This is perhaps because, as highlighted in **chapter 2**, costumes are not made from reused and recycle materials due to the fact that Kuwaiti educational institutions devoted to theatrical arts teach costume design as a subject area within the department of stage design rather than as a full degree (Ismail, 1999). Furthermore, during the 1991 post-liberation war, important theatres, studios, and their resources were unfortunately destroyed including the largest costume wardrobe in Kuwait (Al-Ghareb, 1988). In the next section I will present the practices of Kuwaiti and UK costume designers in terms of the technical issues involved in costume design construction.

5.3.3   Topic 2: Technical differences in costume design construction

The research literature and this study itself have fundamentally demonstrated that the goal of any costume design construction technique is to ensure the result is beautiful, strong, and provides the required utility (Ingham, 2003). However, although all costume designers talk about "building" or "constructing" costumes, the procedures they use are not universal. Indeed, costume designers employ diverse ways to create and maintain costumes and their various accessories (Ingham, 2003). When asking interview participants from both Kuwait and the UK about their costume design techniques, several points were paramount. I needed to address the main research aims which were 1) to investigate current practices employed in Kuwait and the UK (skills and techniques) to make a costume, and 2) understand their attitudes and perceptions regarding reusing and recycling as ways of reducing textile waste. Primarily, I asked respondents to formulate their answers while keeping in mind the following questions: 1) What techniques do costume designers use to create stage costumes? 2) Are there specific processes to limit the use of costume (garments), such as reusing and recycling methods, fabrics, costumes, and materials? 3) .

In the next section, I will present key themes arising from Kuwaiti costume designers' perspectives on costume design techniques and the practices they adopt.

Preference for new materials with poor costume design skills – Kuwaiti practices

This is where the difference in mindset and a lack of education on sustainability in Kuwait start to become evident. As stated at the close of the previous section, Kuwaiti designers informed me that all the textiles they use in costume design are brand new. For instance, costume designer, **1.H,** explained that his technique for

designing and making any costume consists of gathering different textile materials from the market (all of them new) and then cutting them into small pieces. He explained that:

> "I have one character whose personality in the scenario was someone who lives in a negative light, and he did not accept that changing his community to a positive side is a good thing. So, I bought fifteen small padlocks and I told the tailors to stitch them to the costume, because the locks will give an indication and symbolise the socially negative personality complex for that character on the stage." **(1.H).**

The tailors are therefore the ones who do the work, which means that most of the practical skills in the above list are not possessed by the designers. Furthermore, new textiles are used in all cases. Throughout the interviews, there was no mention of reuse or recycling techniques. The lack of sustainability is important as my questions deliberately encouraged participants to think about these aspects, only to elicit confusion and surprise at the very idea. These findings are supported in the literature presented in chapter 2, which shows clearly why kuwaiti costumiers lack sustainable practical skills and why tailors play such a big role in completing the final stages of the costumes. For instance, when I asked participants **6.A** and **11.A** about the techniques they employed when designing and making costumes, they described specific practices and their attitudes towards their vision:

> "I have my own technique when I make my costumes, I tend to purchase some accessories and add them to the costumes, such as cords, thorns, newspapers, and cardboard. Everything I feel will serve the costume. I do not adhere to one style and technique. It is best for the costume designer to vary his style so that the audience will be surprised at his design on the stage. If I follow one style, it does not help me as a designer to show my advanced skills in making costumes for any productions." **(6.A)**.

> "From my vision and my technique, when I want to make a costume, I look firstly to the character personality. For example, if I have a woman from a modern era and her personality in the script is that of a strong woman, for sure I will try to purchase a variety of fabrics to mix and match them, to give the costume and the audiences an outline of a strong woman on the stage." **(11.A).**

Participant **7.I**, who has worked on a variety of academic and freelance plays over the past 10 years, shares some ideas with **6.A** and **1.H** but explicitly mentions using all-new textiles every time she makes a new costume, stating that:

> "I don't have a specific technique while I am designing or making costumes at the tailors, but I choose and am concerned about the textile fabrics when I purchase new fabric materials, in accordance with the movement of the actor on the stage so as not to impede or affect the movement and to ensure the quality of the cloth so that it does not break (shred) on the stage during the actresses' performances." **(7.I).**

In contrast, the costume designer at Al-Bwadi Theatre Company, 8.Z, does not even mention any textile reuse or recycling techniques. He focuses on mixing and matching a new expensive materials and colours to fit with the actor and, more importantly, character psychology, as he explained:

"My technique for making and designing any costume is that I care first about the psychological aspects of the character, then I focus more on selecting the right colours and textile textures, and a new luxury material for any costumes that appear on the stage." (**8.Z**).

Costume designer 3.N was similarly unconcerned with sustainability, talking instead of accessories and generally summarising the essence of Kuwaiti costume design techniques as being related to their experience as one of the first costume designers to have emerged after the Iraq invasion in 1991. The lack of sustainability, here and with other respondents, is important as the questions deliberately encouraged participants to think about these aspects:

"It depends on the play script, if it's fiction I will try to add used techniques for the costumes, such as purchase some stupendous accessories and textiles materials to the costume to draw attenion from the audience." (**3.N**).

The views of participants **1.H, 6.A, 11.A ,7.I, 8.Z,** and **3.N** align with the findings in the literature (presented in chapters 1 and 2) regarding a lack of understanding of the techniques costume designers use to create costumes for stage shows. This explains why there is an increasing amount of textiles waste in Kuwait landfills as costumiers purchase new textiles for each production and then throw them into the landfill rather than reusing and recycling scrap fabrics for other costume productions (Alhumoud and Al-Kandari, 2008; Al-Fadhli, 2016). For instance, according to Stone (2009), "There are many different uses for these scrap fabrics that can spare them from being thrown into the trash and dumped into a landfill", such as making new costumes (Monks, 2010).

Another finding was that maintaining the primacy of colour and texture quality is important, as shown in the responses of participant **10.R**:

"I don't have any techniques for making any costume; it's all about the scenario and the storyboard. For example, when I finish making a new character costume, I have a coffee and then use the coffee on the costume to give me an old dirty texture for one of the poorer character's costumes." **(10.R).**

Similarly, participant **12.G** mentioned using cartons and other materials in his costumes but said nothing about reusing or recyling techniques:

"I prefer to purchase and use hard materials such as cartons and cut them, painting them to create costume accessories to suport the costume outlines while they appear on the stage." **(12.G).**

Participant **4.R** appeared confused when answering the question regarding costume design techniques An academic, stenographic, and theatrical author, he described using paint to decorate his costumes for the following reason:

"I used some paints to draw decoration onto the costumes, to create the personality of the

character." **(4.R).**

When I finally grew specific in my questions regarding textile procurement and waste, participants **2.B** and **9.K** admitted being completely confused about recycling, reusing, and generally practicing sustainability when applying costume design techniques. For example, **2.B**, a prominent costume designer who has worked on several plays in Kuwait and Spain, said:

> *"I don't know what you mean by techniques, are you talking about the textile textures?"* **(2.B).**

Similarly, respondent **9.K** stated that:

> *"I remember two years ago, I purchased aluminium foil for one play production because the play was about aliens, so I mixed the aluminium kitchen foil into the costume."* **(9.K)**

Similarly, **13.S**, a Kuwaiti costumier who designs costumes for traditional plays in the theatre, was very confused when describing his costume making techniques, commenting that**:**

> *"The theatre has many techniques from the lighting design and stage design, but costume design I think means to select the right and special colours and fabrics for the actress."* **(13.S)**

Participants **12.G** and **4.R** showed they have limited experience regarding the technical issues involved in costume design construction. This corroborates the research discussed in chapter 2, which found Kuwaiti costumiers lack the knowledge required to make and construct costumes, and also lack experience in drawing costumes ((Najam et al., 1997). For instance, Beaumont (2016), discussing costumier skills and practices, stated, *"a costume designer should ultimately aim to create comfortable, flexible and durable pieces: The costumes might involve corsetry, tailoring, dying, painting, distressing, all those different elements that make a costume believable"*. Anne and Hindle (2018) also contended that those who specialise in certain areas such as period costumes used recycled textiles. However, Kuwaiti costumeries **2.B** , **9.K and 13.S** were confused when asked about reusing and recycling techneques because all their studies at the university had focused on drawing costumes and offered only limited experience in costume construction. Thus, regarding the opportunity to use the 3Rs waste management strategies in the garment and costume design industry, they were unfamiliar with reducing, reusing, and recycling costumes (Dissanayake and Sinha, 2012). Julie's Bicycle (2019) is an organisation that specialises in helping theatre and production become more sustainable, which accords with the exhortation of scholars presented in chapter 1 to use the 3Rs to ensure sustainability in wardrobe departments. It states that: *"Reduce, Reuse, Recycle. If used in the correct order as listed, these serve as a valuable methodology to simplify your decision-making process."* The main theme is therefore a complete lack of any concept of reuse and recycling among Kuwait costume designers, which is diametrically opposed to the situation in the UK where such practices are not only commonplace but fundamental. In the next section, I will present the UK costume designers' views on the different techniques they employ when making their costumes.

More advanced technical skills and creativity – UK Practices

When interviewing UK costume designers, I learnt about a greater variety of techniques and perspectives than I did in Kuwait. In terms of their technical design philosophies, UK respondents proved mindful of sustainability from the start. For example, **UK** costume designers such as **7.A** and **6.B** state they often reuse and recycle older costumes and that fabrics from old productions are deliberately stored where they work, leading to massive supplies of costumes and clothes and a variety of coloured fabrics and materials that can be used to make costumes. These are then used as the basis for new costumes rather than developing new designs for which new fabrics need to be bought.

In addition to recycling textile materials by taking old costumes apart and reusing the materials, newer and more complex methods also rely on sustainable practices, such as organic printing on existing fabrics. Participant **7.A** provided the first major example of this when he stated:

> *"I use a variety of different techniques while producing any costumes on the stage, it's a part of sustainability, to reuse something I have left from textiles and fabrics and materials for any costume projects. I disassemble garments to reuse something I have left from textiles and fabrics and materials for any costume project"* **(7.A).**

Similarly, **6.B,** a costume designer, shows that this mindset is common across the UK and does not just resided in London. I interviewed her in Sheffield at her studio where she described an approach similar to that of **7.A.** She explained this as follows:

> "*I adapt my techniques to what the fabrics and costumes are. I worked on over 20 pieces of costume, pants, shirts, jackets. Breaking them down, I adapted them again up to the final look for each character. I can say it's a part of the recycling process, what I mean, for example I have one show and all the costumes should look dirty (broken down) on the stage, so in my studio I have over 60 pieces of old costumes from old shows that I want to break down and use for this particular broken-down show.*" **(6.B).**

In terms of newer and more complex methods, **(1.Y)**, a stage and costume designer trained in Theatre Design at the renowned Motley Theatre Design in London described his costume design and making technique as using organic printing on existing fabrics, as well as recycling textile materials by taking old costumes apart and reusing the materials. He explained this as follows:

> *"I often use this technique while making costumes, which is doing [* organic inks as a freehand drawing] *on any old textiles that I have from theatre storage. And in terms of making a garment (costumes), I stitch to combine and recycle fabrics together and then find new materials that excite."* **(1.Y).**

Notably, all UK costume designers do these tasks themselves, such as **4.M** who works with second hand textiles directly with the actors on stage . She stated that :

"My technique is all about a combination of experimenting using patterns and doing stuff directly onto the floor, more directly on to the actor as well sometimes. I use traditional leftover materials and textiles and utilise them for any costumes to fit any characters." (**4.M**).

Ashford-based participant 9.Z is yet another example of a designer who practices mixing the costumes and materials that are left into new costumes. Her work is heavily based on reusing and recycling costumes and materials for all the shows at the Sabotage theatre. She explained her techniques as follows:

"I use a variety of different techniques to make and produce costumes, but I always try to mix all the pieces of my costumes and materials with other wardrobes. For any theatre production that I work on, it's a creative process for any costume designer to think how to make a costume without wasting textiles and materials. Everywhere, always, there's material waiting for new life, for recycling and then reusing for a new life." (**9.Z**).

Costume designer **5. P**, from York, also spoke about her *techniques* when drawing on her experience in cutting, making, and supervising costumes for theatre. However, during our conversation, she stated that:

"It's very rare that I make costumes from scratch, because there are a variety of different techniques for copying old costumes. For example, I look at old original costumes and books and see how they've been made, make that pattern and then adapt them into a new costume, or otherwise reuse or recycle old costumes and props." (**5.P**).

Participant **8.R** from London also spoke of using sustainable practices in his many trades, and was experienced in the fields of costume design and illustration:

"My technique in making costumes, I always if I can start with something that already exists, like a jacket or maybe like a waistcoat. Cutting shoulders from the jackets and transferring these pieces to other costumes, it's all about doing the construction costume techniques as much as I can before purchasing any new textiles." (**8.R**).

Liverpool-based costume designer and costume maker **12.L** also spoke of reusing old fabrics in pattern cutting and costume construction alongside the design aspects. Her techniques were to first look for any pieces of textile and material left over from prior productions. She explained her technique as follows:

"My technique in making costumes is a construction technique, I often use second-hand materials to build new costumes. Because, obviously, I work as a costume maker as well, I often construct a lot of the garments myself. For example, I made one costume in the summer that they wanted really bulked out so I had to figure out how to build a fat suit underneath to make him look like the actor had more muscles. I then constructed the garment around that." (**12. L**)

Of the remaining participants that I interviewed, 10.S from Sheffield, 13.C from York, and self-employed free-lance costume designer 13.C all told me about similar skills and techniques for sourcing costume materials, such as adapting and altering old or already reused costumes and materials. 2.L could attest to this being the

case for many different theatre companies in the UK, having worked for a significant number of them in London and in Yorkshire. She explained her views to me regarding this approach:

> *"I often use techniques such as trimming and adapting fur coats often donated to theatres, and you can cut the fur open using the trimming if you're looking at Tudor Elizabethan for instance. You've got trimmings around the sleeves, and around the collars, all around the hems of arctic garments."* (**2.L**).

10.S, a costume designer, used similar skills and techniques and described the main methods she employed when drawing, cutting, and adapting patterns:

> *"Draw, trim, cut a pattern, cut it out, or you can put the fabric on the dress stand and draw the lines where you want them to be, cut the pattern out and then sew it from there. There is another pattern cut technique I would use instead of just flat pattern cottons. You imagine something, you get your master pattern, and then you alter and adapt patterns. The master pattern is known as a block and then you can change that."* **(10.S).**

Finally, London-based participant 11.A, a costume designer/maker and a costume wardrobe supervisor, described her work in various plays as an area where textile dying techniques are very important when making costumes. This makes reuse the go-to method from the very beginning, casting the approach of 10.S and the other UK-based respondents in a particularly relevant light for this study:

> *"I would say it's essential, in terms of drafting it's very important, cutting patterns. For instance, most of the time my techniques are..., I often dye a reused and recycled fabric in the dye room. It depends on the fabric, obviously I will use the fabrics, then I cut them to build a character costume from those dye fabrics."* **(11.A)**.

My interviews confirmed that all the essential competences of costume design are among the technical costume skills possessed by UK designers, including everything that can help reuse and recycling: drawing, cutting and adapting patterns, stitching, reusing old fabrics in pattern cutting and costume construction, and textile dying techniques. The technical design thinking practices participants use to solve the problem of making a garment by employing sustainable materials and techniques is endorsed in the literature discussed in chapter 1. For instance, according to Dieffenbacher (2013), the relationship between the design thinking process and the manufacturing of sustainable fashion relies on designers being open to all ways of working, including ways to reuse and recycle textile waste (Fletcher, 2008). In addition, the similarities and differences between the two groups of designers are summarised in the next section. These show the technical differences in costume design construction and the significant headway made by UK designers compared to Kuwaiti designers in terms of their technical costume skills in reusing, recycling and otherwise implementing cost- and environment-efficient methods when creating costumes.

5.3.3.1 Similarities and differences between Kuwaiti and UK costumiers in terms of technical skills

Many different perspectives were revealed by the 26 experts in terms of costume design skills and technical

practices. These reflected some clear-cut differences between UK and Kuwaiti designers. For instance, **Kuwaiti** costumiers use virtually no sustainable methods in their costume design techniques. Furthermore, it does not seem to occur to them that such options exist, which meant that some were confused when asked about sustainable methods and their skills (reuse and recycling of textiles) regarding the technical practices they employ when producing the costumes. This is in stark contrast to UK costumiers, virtually all of whom recalled reusing older costumes the first chance they got. Therefore, while the Kuwait-UK overlap in costume creation techniques is considerable (dying, working with directors/actors on stage for design, cutting and sewing), ultimately it is only in the UK that sustainable technical costume skills practices are used. These similarities and differences between the UK and Kuwaiti costumiers were strongly evident in research discussing the role of costumiers in chapter 2. They also complement Anderson and Anderson's (1984) view that any discarded garments or pieces of textiles can provide the outline of the character's personality as scripted. Similarly, in terms of technical skills, Jones et al. (2013) and Lambeth (2017) claimed that, "any garment worn in a production technically classifies as a costume, whether it is from a specific time period or any type of wardrobe including second-hand garments", In the next section I will present the views of Kuwaiti and UK costume designers regarding the supply of costume materials.

5.3.4   Topic 3: Providing costume materials

In this section, I will present the answers provided by the 26 respondents when asked how they procure and provide materials for their costumes. This part of the interview explored not only incidental costume collecting but also deliberate stockpiling. There was particular concern with the idea of building costume collections. If a costume or garment manages to last an entire run of a theatre production, the option exists to store it and use it later in another show (Stone, 2009). The research literature, however, has indicated that such practices might not be uniform or even practiced at all, either in the UK or, especially, in Kuwait. Therefore, leading questions were avoided and instead the participants were asked to talk about how they provide/procure costume materials. This facet of costume design is, in my view, the one that can be leveraged most effectively to implement a pre-planned and proactive practice of reducing or avoiding textile waste, which is ultimately the main aim of this PhD. The accounts of individual interviewees from both countries will now be presented in sequence, first those from Kuwait and then those from the UK costumiers. In the next section, I will present key themes arising from Kuwaiti costume designers' perspectives on their practices regarding the supply of costume and textile materials for costume making.

Focus on purchasing new materials – Kuwaiti Practices

I found at an early stage of the interviews that the Kuwaiti participants were only able to describe a sector that is the opposite of sustainable**,** with new textiles used universally across the country and bought mainly from large Kuwait textiles markets. They cite freshness of fabric and colour as the main reason for buying new fabrics.

What immediately stood out when interviewing Kuwaiti costumier **4.R**, and was then subsequently confirmed by other Kuwaiti designers, was that new textiles are used universally across the country. . As **4.R** stated:

> *"All the (materials) fabrics, they are new for any play that I want to establish a new costume*

collection for, most of the materials are bought from the fabrics market in Kuwait. Approximately all the fabrics with some costume accessories, for any play that I have made costumes for, costs me in Kuwaiti currency around 1.700 Kuwaiti dinar (around £4000 in UK currency.)" (**4.R**).

Costume designer **2.B** expressed views similar to **4.R** in that he purchased new fabrics from the Kuwait textiles market. He said his ultimate goal was to show off the best and most vibrant costumes possible on the stage. The aim was to dazzle the audience when they see the actors wearing the glimmering costumes (textiles). This view was shared by participant **13.S,** who said:

> *"I always purchase new fabrics (materials) and some costume accessories from Lebanon, where they have a luxury textiles market (because they have the unique fabrics) and, especially, I am very concerned to show and contribute to the richness of textures for each costume for the character on the stage. And in Lebanon they have good quality fabric at affordable prices."* **(13.S).**

Any variety in the approach to providing costume materials seems to be limited to choosing which delegates to purchase new textiles from. This became apparent during my interview with Kuwaiti costume designers 5.M, 8.Z and 9. K. For example, **5.M** explained that:

> *"I purchase all the textiles (costume materials) from textiles exhibitions in Kuwait and outside Kuwait such as in the (Sharq) textiles market in Kuwait, because I deal with some textiles delegates in this market."* **(5.M).**

8.Z, a costume designer at Al-Bwadi Theatre Company, offered a similar view**:**

> *"We have produced costumes for many plays over the past 10 years, so I always work with a textiles delegate who provides me with the textiles I need for any costume for the theatre production. In addtion he provides textiles from a variety of countries such as India and France at a good price for our theatre company."* **(8.Z).**

Participant **9.K** also uses a textiles delegate, stating that:

> "*In my company we have 4 textiles delegates from different countries. We contact them for 6 months to provide textile materials, so I select the textiles materials from them because it's a cheap price with quality textures and materials for any play production."* (**9.K**).

Conversely, two of the Kuwaiti costumiers, **3.N** and **11.A,** ordered textile materials from different places. For example, **3.N**, explained that:

> *"I try to purchase new textile materials every time from the Kuwait textiles market but found it's too expensive. Therefore, I always purchase the textiles from tailors that will sew all my costumes,*

so I have a deal with one tailor in Kuwait; he provides me with a variety of textiles at a cheap price, so I select the textiles and fabrics from him, and he sews the costume directly. This really saves me money and time as well." **(3.N).**

In contrast, **11.A**, a freelance set and costume designer, ordered textiles from an online shop, stating that:

"Kuwait has a variety of high and cheap quality textiles, so I don't face any challenges when I want to provide costume materials for any costumes that I want to make, but sometimes I order fabrics online from some popular textiles websites from countries such as China and Korea. They have cheap prices for fabrics (textiles) and it's good quality at the same time." **(11.A).**

Finally, the other five Kuwaiti costumiers (**12.G, 1.H, 6.A, 7.I** and **10.R)** said they buy all-new materials from textiles markets in Kuwait. For example, the freelance set and costume designer **12.G** has used this modus operandi for all the different plays he has worked on in the past 6 years, and purchases his materials primarily from the Kuwait Block textiles market. **1.H** has also done this for all the costumes has has designed for plays in Kuwait and the Middle East, stating that:

"Mostly I buy the costume textiles from the (Kuwait Block textiles market). I am an old customer there and I always have a big discount at their textiles store." (**1.H**).

Participant **7.I**, an academic costume designer with experience working on a variety of academic plays in Kuwait, also works with all-new materials*:*

"Mostly I bought all the costume materials from a textiles market in Kuwait, as you know it's a big and huge market in Kuwait, they have a variety of textiles, I can select them for any costume for any character and also there is a shop where they sell all the fashion accessories (materials)." **(7.I).**

Respondent **10.R,** acostume designer and supervisor at the Back-Stage Theatre Company, specified Al - Fahaheel Textiles Market as his favoured venue for purchasing fabrics. Participant **6.A,** a theatrical costume designer who specialises in theatre academics, uses a similar source.

The key issue that emerged from the interviews with Kuwaiti costumiers was a lack of practical awareness regarding the skills and knowledge needed to provide and implement sustainable reuse and recycling practices. Kuwaiti participants agreed that they always purchase the new textiles from the Kuwait market. For example, **13.S** argued strongly that her reason for purchasing new textiles was to dazzle the audience when they see the actors wearing glimmering costumes (textiles). These findings illuminate the views presented in the literature on the problem of textile waste in kuwait. According to Al-Shatti (2016), more than 5,000 textile industries produce 47,169 tonnes of waste a year in Kuwait, with research from 2016 indicating that the volume of waste has increased by more than 50%. The reason for this is that, for every new costume production, new textiles are purchased, worn, and then thrown into the landfill. This is reflected in the fact that the Kuwaiti costumiers have been in their jobs for many years without becoming aware of any alternative and sustainable resources they can use to provide materials and costumes for plays. In the next section, I will present the UK costumiers' practices regarding the provision of costume materials.

Focus on reusing and recycling old materials – UK Practices

The respondents from the UK presented a picture that was almost entirely antithetical to that of Kuwait, with sustainability methods being the first choice for practically all costume designers regardless of place of origin. For example, costume designer **6.B** explained that going into the stockpile in the theatre and looking through existing costumes for reuse/recycling possibilities is the first thing she does at the costume production stage. She stated that:

> *"Well, in general, it's textiles and costumes materials provided from store (costume wardrobe.) This is the first place I will look in any theatre that I am working with to provide some costume materials (reused costumes, textiles leftovers), to find something that might be reused such as looking for a well-worn jacket or something, or a reused dress for some period (it depends on the character in the script). It's part of my sustainable practices."* **(6.B).**

Throughout the interviews, I was keen to learn more about UK costumiers' practices when making costumes, regardless of whether they buy, hire, or use reusing and recycling materials from somewhere else. For example, London-based costume designer 1.Y expressed a view similar to 6.B when she explained that:

> *"It comes from the demands of the play or the way you want to do the text, I often look at what fabrics I have left, or I use old (recycled) materials (textiles) to make from a second-hand shop, and theatres are always an opportunity to use natural resources. For example, if you decide to make clothes (costumes) which are made of bean bags or bottles, you'll find a way to make this happen."* **(1.Y).**

Similarly, in terms of the provision of leftover textile materials, costume designer and theatre wardrobe assistant **3.S** explained that:

> *"Well, we have a small kind of fabric store here at the Crucible Theatre from which we try and reuse or recycle, so if we have any off-cuts left, we can sometimes make a little waistcoat. As a Crucible Theatre concerned about sustainability, we really try and encourage designers to try and see if we've got anything in our own small fabric store, they can reuse and recycle."* **(3.S)**.

Costume designer and maker 12.L, who works in Liverpool at the Art Space Studio, stated that her experience consisted of pattern cutting and construction alongside design. Her focus was on ensuring the sustainable provision of costume materials. She even placed a special emphasis on organic materials, arguing that:

> *"A lot of the natural materials I make and provide generally are more sustainable recycling materials made by myself, just because I think it is more sustaining for the environment; I think this is quite important. You've got to be mindful of whatever you do as costume designer."* **(12.L)**.

Similarly, the **UK** practitioners all employed sustainable approaches such as looking through the wardrobe department and prioritising the reuse of older costumes or hiring them from elsewhere if that fails. They gave natural, creative, and even economic reasons for this, as used costumes were a prime source for organic natural fibre according to designers like **9.Z**, a respondent from Ashford. She also expressed an interest in reusing and

recycling costume materials, especially organic natural fibres, claiming that:

> "I often try to avoid synthetic fabrics; they do tend to stand out. I prefer to provide sustainable (reuse and recycling) natural fibres, usually because they dye better and because they're easier to mix with. If you've got lots of natural mix fabrics from different sources, they just seem to be a bit softer than a lot of synthetic fabrics. For example, I tend to look for linen bedding or large sheets of jumbo fabric from charity shops." **(9.Z)**.

Overall, cutting, stitching and otherwise recycling older costumes, clothes, fabrics, and so on is a central part of UK costume design. This is not to say that all designers think the same. Leicester-based costume designer **4.M**, for instance, although certainly in favour of reuse and recycling, told me she is not particularly green-minded but still prefers to reuse raw materials (such as plastic, wires, fibre and paper) due to the financial savings and convenience. For instance, she explained that:

> "I use all sorts of different second-hand raw Rage and Solid materials for making costumes. From a variety of cheap seconds, the marketplace has loads of raw recyclable sustainable stuff in Leicester. For example, recently I made a shield from rubber materials, it's sort of a mixture of solid soft fibres, it's more construction and structural materials. So, any reused materials can be used to make a costume." **(4.M)**.

During the interviews, six of the UK costumiers stated they go to charity and second-hand shops. For example, London-based costume designer and maker **7.A** is, like her peers, sustainability-minded and tries to find reusable and recyclable materials when the theatre he is working in does not have a store of old costumes available for him to look through. Charity and second-hand shops are the first destination in such situations, as 7. A explains:

> "I am always concerned about sustainability, so I often procure materials from the charity shop to reuse and recycle garments and fabric materials. It often happens working on a low budget, I have to source the costumes. You need to push yourself, push your boundaries, push your creativity to do something because, at the end of the day, your job is creating a personality." **(7.A)**.

Participant **13.C** employed similar methods and explained that she even went to charity shops to get the cheapest fabrics for high-budget productions, stating that:

> "I try often to provide sustainable recycling materials for costume production, to source all my fabrics which often means that I'm getting the ends of rows from factories, the ends of a row which they won't ever be able to use, or from charity shops, which is the second choice; again, I'll be reusing and essentially recycling." **(13.C)**.

London-based costume designer **8.R** also mentioned using charity shops during the interview, stating:

> "Where I would go first, as it were, is to charity shops and like vintage shops, same as going to the charity shop and someone is selling curtains you think, well, I've got three metres of amazing fabric for four pounds, to reuse and recycle them as a part of the sustainability practices I use in my process of making costumes ." **(8.R)**.

In Liverpool, costume designer and maker **5.P** spoke of her subsatntial experience in cutting, making, and supervising costumes for theatre and employed reuse and recycling strategies that were similar to those of the other UK respondents. She described these thus:

> "*Mostly I find all the textile materials and second-hand costumes from the charity shops, trying to find sustainable second-hand costumes and textiles often requires many visits to clothes factories in the UK, getting leftover textiles or raw materials to reuse and essentially recycle those leftovers to source things as cheaply as possible.*" **(5.P)**.

Respondents **2.L** and **10.S** from Sheffield have a similar modus operandi. They also approach a variety of charity and second-hand shops before going anywhere else. **2.L** stated that:

> "*I go to the charity shop or vintage antique second-hand shops. There are some, I mean, you can in somewhere like Sheffield, you know, a big city like London. They all have like a fairly good range of costume materials, of second-hand shops, but there are more kinds of special things.*" **(2.L)**.

Respondent **10.S** elaborated further, commenting:

> "*The fabric materials come from various second hand and charity shops around Sheffield and the nearest city. There's a really great second-hand store in Gold Thorpe, such as a dance wear specialist. The shops there are the reason I have so much fabric in my costume room.*" **(10.S)**.

In London, the Italian costume maker and designer **11.A** recalled taking apart props and pieces of furniture during her 7 years working for a variety of plays in the UK. She explained that :

> "*I reuse and provide a variety of sustainable reused and recycled furniture textile materials and any textiles left in the theatre such as carpets or a sofa cover. Those textiles are amazing, because when you want to make a historical costume you will find masses of textiles from the furniture in the theatre, and it's a great size and good quality.*" (**11.A**).

Overall, the practices employed by UK costumiers are clearly focused on sustainability as they extensively reuse and recycle materials when creating costumes for new productions. These materials are, almost without exception, obtained from a variety of alternative and sustainable sources such as second-hand stores, charity shops, and used costumes stored in theatres. This finding complements the literature discussed earlier regarding waste management systems. Several research studies have shown that UK garment and costume designers benefit from waste management outsourcing services when discarding any sort of garment. To achieve this, there are several options available: dispose, sell, or donate discarded garments / textiles and independently explore all reuse, recycling, and recovering options available in the industry (Veolia UK, 2018). Most of the UK costumeries first go to charity shops to purchase second-hand garments, such as those organised by the Haringey Council Service, and textile banks run by Oxfam. Reclaim also send textiles to the recycling company Cohens where they are distributed throughout the UK and Eastern Europe (Haringey, 2019). This raises awareness among citizens, especially costumiers, that there are alternative options for reusing and recycling

textiles and garments rather than simply sending them to the landfill (Daven and Klein, 2008). In the next section, I present a synthesis of the similarities and differences in the way Kuwait/UK costume designers and makers provide costume materials.

5.3.4.1 Similarities and differences between Kuwaiti and UK costumiers

I found virtually no common ground between the UK and Kuwaiti costumiers regarding where and what materials are provided for costume production. While **Kuwaiti-based** costumiers buy all-new fabrics (whether from markets or online), **UK-based** costumiers look to reuse and recycle as many materials as they can before deciding to buy any new textile materials. Moreover, it does not even occur to Kuwaiti costume makers to reuse and recycle older costumes. In contrast, rather than use all-new fabrics, UK-based designers have learnt how to recycle furniture textiles and obtain even greater use from them. The only common ground between the two sets of practices, albeit tenuous, is that costume makers in both countries tend to utilise textile markets. However, while Kuwaiti respondents named this as their first option, UK respondents saw it as the last resort and, even then, second-hand products were preferred. These findings from UK and Kuwaiti costumiers strongly illustrate differences in design thinking practices regarding the positive impact such practises have on how costumes are made. This accords with the literature discussed in chapter 1. For example, Lawson (2006) states that design thinking thrives on generating new meanings and activating diverse cognitive elements as well as emotional and sensory elements that combine to deliver a positive impact on the garment design industry (Fletcher, 2008; Cross, 2011; Vianna, et al., 2011). In the next section I will present the practices employed by Kuwaiti and UK costumiers regarding the second life of costumes and materials (reusing and recycling).

5.3.5   Topic 4: The second life of costumes and materials (reusing and recycling)

This section addresses one of the main goals of the thesis, which is to investigate the current design practices as well as the production processes currently used by UK and Kuwaiti costumiers. In this section, I will address the following research question: How can costume designers contribute to the development and implementation of a practice focused on reducing or avoiding textile waste? Following on from questions about their design philosophy, costume design practices, and material supply and procurement, I asked respondents to describe what happens to the costumes they make once the theatre production has run its course. After the earlier confusion regarding sustainability, I decided to be more specific in relation to this topic. I achieved this by asking the Kuwaiti and the UK respondents about the second life of costumes, which Eagan (2017) describes as resurrecting the costume in theatre stage production using various sustainable strategies (i.e. reuse, recycling).

It is not uncommon for theatres to preserve costumes with the intention of recreating past performances at a later stage (Eagan, 2017). However, as shown previously, this makes it easy and convenient for costume designers and makers to reuse and recycle costumes, or more specifically the materials they are made of, for use in new plays and performances. Thus, the notion of theatre costumes having a second life was explored when I asked the UK and Kuwaiti costume designers about the fate of their costumes once a production run has concluded. This section presents a detailed account of their answers, and once again there is a demonstrably sharp divide between Kuwaiti and UK attitudes and practices. During the interviews, the vision of each Kuwaiti and

UK costumier on the subject was explored when describing the practice of reusing and recycling costumes. In addition to the important revelations in previous sections, in the next section I will present key themes arising from Kuwaiti costumiers' perspectives on their practices and skills in reusing and recycling costumes and materials.

Lack of skills and knowledge about reusing and recycling – Kuwaiti practices

In fact, the Kuwaiti costumiers lacked any concept of a "second life" for costumes. Some Kuwaiti designers even felt that it was difficult to reuse and recycle costumes and thus provide a second life for textiles. They stated that there are no shops which rent costumes and expressed their view that the skills involved in reusing costumes in other productions are generally lacking in the Kuwaiti theatre market. Attitudes towards the subject therefore mainly consisted of confusion, and their attempts to clarify its meaning and scope only further revealed the extent to which they did not understand terms such as reuse and recycling. Aside from the perceived harm to their reputation and creativity, Kuwaiti costumiers also seem to be opposed to the idea of storing costumes, or any other way of giving them a second or third life, due to the difficulties expected were such an event to occur. *"Why should we recycle or reuse costumes?"* **(2.B).** *"What do you mean by recycling' 'or how can we recycle?"* **(4R)** However, not all the Kuwaiti respondents lacked experience in the reuse and recycling of full costumes.

For instance, Participant **6.A** stated that recycling and reuse are completely absent from his experiences in theatre costume production, but expressed interest and even intrigue about the concept once it was introduced, stating:

> *"The Kuwait textiles market has enough textiles to source new costumes. I have never thought to reuse and recycle costumes in other productions, maybe I will try."* (**6.A).**

In general, Kuwaiti interviewees believed that reusing and recycling were not creative strategies. For instance, Respondent **1.H**, a Kuwaiti costume designer, responded in the following way to questions regarding reusing and recycling costumes/materials to give them a second or third life:

> *"No, I do not reuse any costume from any previous show to another show, because I do not like people saying about me that this designer has only got one idea and he cannot diversify, or he is stuck on a particular idea. I like every design to be different from the other."* (**1.H**)

Most Kuwaiti costume designers were equally as surprised when hearing the words 'reuse' and 'recycle' in relation to the production of theatre. They often felt that reusing costumes would infringe on their reputation and perceived creativity. To a certain extent, the answer given by 2.B encapsulates this mindset in that using completely new costumes and materials is seen as necessary for each new production:

> *"No, I did not use this method before [reusing or recycling], I understand the meaning of reusing, but I am not sure about the way to recycle costumes. However, as a costume designer I need to renew my ideas and design for each play. It's impossible to reuse the old costumes for another show, it's similar to a lack of costume design creativity as opposed to designing a new costume."* (**2.B**).

3.N dismissed this notion outright, feeling that it would be unacceptable to reuse costumes as reused and recycled materials were impossible for characters to wear on-stage, stating that:

> "Since 1990 and up until now I have worked on many plays in Kuwait theatre. I therefore know from my experience that when you reuse a costume for a comedy or for a modern play the audience will recognise it. They are smart, and they will see that it is not a new costume but an old one. If I reuse costumes, that means that I am not creative, I do not have new ideas to design new costumes. So, even if I have an old costume, I do not use it again because I have presented it once and will not repeat it. Most of my old colleagues have never used this method before." (**3.N**).

Respondents **5.M** and **8.Z** also felt that it was difficult for costume designers to reuse and recycle costumes and thus provide a second life for the textiles. They stated that there are no shops which rent costumes and expressed their view that the skills involved in reusing costumes in other productions are generally lacking in the Kuwaiti theatre market.

Participant **7.I** went even further by claiming that reused and recycled materials were impossible for characters to wear on-stage. She argued that:

> "Reused costumes or textile materials are impossible to be worn by characters on stage, even though the materials and costumes are good. I have to follow a specific line that I have drawn for myself, so I cannot reuse costumes after the show for any play production." (**7.I**).

This view seems to be shared by costume designer **11.A,** whose perspective on a second life for costumes after a show is that it would be impossible as the likelihood of the same actress playing the same role is extremely low. This is a view shared by Participant **12.G** who claimed that:

> "Reusing or recycling are similar words that have the same definition, namely that the same costume will be reused for another play. And even if the same play is brought to stage again, it's possible the actress may change. It would then be impossible to use the same design for a new actress, as they have different bodies and the original design was meant to fit the first actress. Therefore, the costume will need to be redesigned from scratch: this would make it difficult for me to recycle. Also, if I reuse a piece, the audience will know it had already been used in a previous play." (**12.G**).

4.R (a costume designer and stenographic and theatrical author who has worked in many different plays in the gulf) admitted he tried reusing a garment once and incurred a serious monetary loss as a result:

> "I tried one time to give a costume a second chance (life) by reusing one garment, but it cost me a lot of money to buy the accessories for the costume to transfer it to another character's look. I prefer to sew a new costume rather than use an old one." (**4.R**).

Ultimately, using completely new costumes and materials is seen in Kuwait as necessary for each new produc-

tion. Reuse/recycling being would therefore be unacceptable as it would ruin their reputation by making them seem unoriginal. This marked the point where the need for designers to make their own costumes began to seem an insurmountable barrier to change in Kuwait. However, my discussions with other designers provided some perspective. Importantly, **9.K** observed that:

> "*I did not find creative tailors in Kuwait who understand this method very well when I explain it to them. To give them the previous costume (reused costume) will be too high a risk and I don't have much experience transferring them to another character in a new play. In addition, I really don't have any costumes to reuse for other project productions or to give them a second life.*" (**9.K**).

Finally, Kuwaiti costume designers 10.R and 13.S consider the whole idea of second/third costume life, or any form of reuse and recycling, to be a waste of time, at least for the tailors. 13.S, a costumier interested in designing costumes for any traditional play in the theatre, re-stated a preference for all-new fabrics and costume design when asked about second/third costume life and reuse/recycling. Participant 10.R, a costume designer and supervisor at the Back-Stage Theatre Company, responded that:

> "*I don't think so. It's an unsuccessful method to reuse the costume again for another production because it's wasting the time and efforts of the tailors when they design the costume again.*" (**10.R**).

Respondent **13.S** also stated that :

> "*I prefer to purchase new textiles and have the costume sewn by tailors, because if I use the traditional costume again for another production it will cost a lot of money. It will take time to resize and fit the costume to the new actress, so I prefer to purchase new pieces of costume rather than pay a lot of money to the tailors to change the old costume sizes.*"(**13.S**).

However, the mindset of tailors and designers alike will need to undergo a change, as there was not only passive but also outright opposition to the idea of preserving costumes and giving them a second life. This demonstrates yet again that current design thinking in Kuwait is opposed to anything resembling sustainability (Niinimaki, 2013). Most of the practices employed by Kuwaiti costumiers show they are worried about reusing garments for a second time for the following reasons. **1)** There are no shops which rent costumes and they felt that the skills involved in reusing costumes for other productions are generally lacking in the Kuwaiti theatre market. **2)** The audience will see that it is not a new costume, but an old one. They therefore worry that they would be seen as uncreative. **3)** Reuse/recycling would be unacceptable as it would ruin their reputation by making them seem unoriginal. These issues were reflected in the earlier discussion in chapter 2 regarding kuwaiti costumiers practices and atttudes prior to the the Iragi war in 1991. Following the discovery of oil in the 1960s, increased wealth in Kuwait led to a flourishing theatrical movement (Alabdaljalil, 2004) and the expansion of existing wardrobe collections (Al-Salal, 1996). Older generations of kuwaiti costumiers therefore reused and recycled costumes. However, after the 1991 post-liberation war, important theatres, studios, and their resources were all destroyed, including the largest costume wardrobe in Kuwait (Al-Ghareb, 1988). This meant   new generations of Kuwaiti costumiers had little awareness of the possibilities available to reuse and recycle costumes for another show. With access to established costume wardrobes now gone, Kuwaiti theatres

lost their ability to reuse existing garments and switched entirely to the development of new pieces (ibid). In the next section I will present the responses from the UK costumiers.

Skills and knowledge in reusing and recycling – UK practices

Consistent with their answers to previous questions regarding costume design, the UK-based participants unanimously reported that the costumes they make for any production almost always see a second or third life (and sometimes more). This means that the costumiers often reused for another production or, alternatively, the materials are recycled. This view seemed to be universal across all cities of the UK. In addition, I found from UK costumiers that, in the UK, the costumes always have a second life or more, with designers readily speaking in favour of the benefits of storing costumes so that they are ready for reuse or recycling in other productions.

For example, participant **8.R**, a UK designer, spoke of the benefits of storing costumes for reuse or recycling in other productions, commenting that:

> *"Yes, I do reuse and recycle for other productions, but I make sure that it looks different. If I have made something really distinctive for one show, I will try to make sure that I will not use the same costume. I try to change it stitch by stitch, so it is a bit different. I reuse costumes for different productions. I take them apart or I change the sleeves and use them for another show. I also reuse because it is so much more convenient. I have a lot of costumes to draw on and it makes my life easier; it is difficult to go back to square one each time."* (**8.R**).

Strikingly, as had been alluded to during earlier questioning, most the UK respondents considered costume reuse to be a hallmark of creativity rather than an impediment. They felt that giving costumes a second life allowed them to transform the designs in ways they would otherwise not have managed. The respondents cited time saved as the main advantage of ensuring costumes have a second or third life, in whatever form. For example, Sheffield costume designer **2.L**, whose areas of interest extend from costume design and execution to R&D, installation, and live art, spoke with authority on this matter. She argued that the reuse and recycling of costumes for other productions presents opportunities for designers to extend their creative skills and demonstrate their ability to work with any costume. London participant **7.A** expressed a similar view, which he summarised as follows:

> *"Yes, I do that often. Hire costumes are often reused by different companies for various productions. I don't see a problem with them being reused. You can select different pieces to create a new costume, or you can recycle costumes to adapt them to a new context so that everything looks different. The context in which you use them is also important. It makes you think about how you can reuse them to make them new again, to bring them back to life in a different way."* (**7.A**).

Costume designer **1.Y** recalled how he used his experience to craft a case-specific process that enabled him to fulfil his vision of giving costumes a second life in another performance:

> *"It's like you can do a black jacket for a businessman, you can reuse this black jacket for a*

contemporary dance. You can reuse or even recycle black trousers like those you have in your wardrobe, how many times do you use your pair of jeans with different combinations? It's the same as costumes. What I mean is that it is important to reuse and recycle but in a clever and creative way. Such as mixing them up or maybe complementing, adding." (**1.Y**).

A similar point was made by the founder of the Sabotage Theatre**, 9.Z**, when I met her in Ashford:

"Almost everything can be reused and recycled in the Sabotage Theatre Company, we are always avoiding waste because we like to use materials that have had a bit of life, to reuse and recycle them for another purpose shows additional artistry, it's an interesting process and a way to save money as well." (**9.Z**).

Other UK costumiers described how giving costumes a second life through reuse and recycling enabled them to transform designs in ways they would otherwise not have envisioned. For example, when I travelled to York and interviewed designer **5.P**, I noticed several costumes in the studios that were not yet ready to wear as well as textile leftovers, all of which were on their second, third, or more lives. This illustrates how deeply rooted sustainability has become in UK design thinking. **5.P** himself stated that:

"We reuse and recycle a lot of costumes in other productions. For example, if you have a whole box of shirts that you've bought and used in different productions and then you get another shirt you'll have pairs. You are constantly reusing." (**5.P**)

Another perspective was provided by respondent **6.B**. While I was in her studio I noticed several costumes that were not yet ready to wear, as well as textile leftovers. When questioned about them, **6.B** explained:

"Generally, I tend to keep amounts of fabric that are neat or left over, then if somebody needs a waistcoat, or a lining, or even possibly a pair of trousers or something like that, you can get that out of what you've already got, or you can use them for other costumes or for other production shows. But there are other things that are more generic, more day-to-day clothing that can be reused over and over." (**6.B**).

A similar point was made by London-based **11.A**, who was particularly effusive about the benefits of having vast stores of old costumes to reuse and recycle for new plays. She developed this opinion as a result of her experience working on various plays such as Peter Pan*,* Squad Goals, and Pop Xmas Shout Out. She also provides wardrobe assistance for Qdos entertainment. She explained to me her successful production of plays where all the costumes are reused and recycled:

"Regarding recycling, I did one show, one play, where we've recycled all the costumes from the wardrobe. It was so crazy, because I had maybe one month of plays, without spending money, and the main theme of that show was the second life of people when they finish their normal life. So, we recycled all the costumes and materials. We worked especially on recycling different coats (jackets) for different characters on the stage." (**11.A**).

The remaining interviewees from the UK also spoke of similar costume storage policies, giving all costumes at least a second life through reuse and recycling for other productions. However, rather than reusing costumes in full, participants 3.S and 10.S primarily saw greater worth in the availability of ready fabric supplies and the use of individual or partial garments. When I interviewed 3.S, a costume designer with experience in wardrobe creation, in Sheffield she described how adding materials to other costumes for different shows was part of her reuse and recycling strategy:

> *"Definitely, I reused and recycled more everyday garments as well for another or later production because there's just so much beautiful fabric that can work for another costume. If the fabric is still nice and looks good, I will incorporate it into a new costume or save it in case I can add things, add collars, cuffs, some of those saved buttons from another costume onto that one."* (**3.S**).

Respondent **10. S**, also from Sheffield, felt that some costumes were simply not suitable for different types of production (such as circus costumes). At best, she considered using sources of ready fabric rather than anything else. However, some of her argument was based on her specialty as a circus designer:

> *"Definitely. I tend to keep all my circus stuff for circus stuff, I would recycle costumes and use them for another project (show). Well, as costume designer you should make something that could be used for lots of different purposes really. Things that go with various other costumes."* (**10.S**).

The final three UK-based respondents described reusing and recycling costumes and giving them second, third, or more lives as standard policy for large theatre institutions. For instance, participant **4.M** stated that:

> *"When I was working with the National Theatre, they often reuse and recycle costumes for another show. When the costume supervisor gives us designs for a production that we are working on, we go down directly to the store and look and see whether there's any costumes in the store that they can reuse for this new play, or whether there is any fabric that they can use. We cut and alter some costumes to remake something from existing stock."* (**4.M**).

Liverpool-based freelance costume designer, costume maker, and dresser **12.L** told me of similar practices during her many years of experience in pattern cutting, construction, and design:

> *"It's normal to reuse and recycle costumes rather than just get rid of them, I'll store them and hopefully reuse and recycle them at some other point. I was actually just working on some students' show and was making fabric by weaving plastic bags. They were doing a whole project about recycling in the theatres using many previous materials from previous plays."* (**12.L**).

Finally, participant **13.C** shared some equally successful examples with me, relating how costumes were stored and used for another production by reusing and recycling them or their materials, thereby giving new life to old costumes. She explained that:

> *"I have worked in other productions where I did pantomimes, for example. There I was working with the costumes, I was wardrobe supervisor, so I altered a lot of them and changed a lot of*

them. They all then got sent back to the main storage facility for Imagine Productions. Then it was another costume designer that took my old work costumes from last year and altered them and undid my alterations and then reused them in a different production next year." (**13.C**).

Overall, UK designers universally spoke in favour of giving costumes a second life, or at least their component parts and fabrics. However, this seems tightly connected to (and even reliant on) the designers' own skill in making, deconstructing, and reconstructing garments. Such skills and practices were considered earlier in chapter 1 in relation to garment life cycle stages. Essentially, LCA provides a tool with which to evaluate the environmental impact of a product throughout its life based on its functionality at all stages (Muthu, 2018). This, of course, requires a specific understanding of those impacts at each stage. In the garment life cycle, the practices of UK costumiers are re successful in stage 4) Textile Production and stage 9) Reuse and Recycling (designer responsibility). Thus shows that UK costumiers understand their responsibilities regarding reusing and recycling costumes and materials to give them a second life in another production. This accords with Mitsutaka et al.'s (2017) views on life cycle strategies for reusing and recycling garments, where they stated that, "*The reuse and recycling process minimises the environmental impact of products through the employment of sustainable production, operation, and disposal practices"*. This means designers consider the disposal phase of the lifecycle by constructing garments that can later be disassembled or recycled. In the next section I present a synthesis of the similarities and differences between Kuwaiti and UK costume designer practices regarding the fate of costumes and materials at the end of a theatrical production.

Similarities and differences – Kuwait vs. UK.

The situation for Kuwaiti and UK costumiers therefore appears to be diametrically opposed. Kuwaiti costumiers were simply confused as to why they should ever save costumes. Moreover, the two respondents (out of 13) who did offer some understanding of the need to deliberately facilitate a costume's second/third life spoke of severe financial, time, and practical constraints. One Kuwaiti costume designer tried to save costumes for later reuse only to incur a significant personal monetary loss. Another Kuwaiti respondent argued that reuse/recycling would be a waste of time and that any attempt to explain the process to tailors would only end in confusion or a failure to put the process into practice. In general, Kuwaiti costumiers felt reuse/recycling was either a poor use of time or that it would directly infringe on their (perceived) creativity and originality. This is totally different from attitudes and practice in the **UK**, where theatres and similar institutions have well-established processes and some even have storage facilities specifically assigned for the long-term storage of used costumes. Moreover, storing costumes for second, third or more uses, or for recycling, is considered natural by designers, while the reverse situation is seen as equally true. Thus, when a new production is being prepared, going to the theatre stores to check available costumes/materials is one of the first things designers do. Moreover, the issue of cost never arises as reuse/recycling is hailed as a great money and time saver as well as a way to showcase creativity. This is the opposite of the views put forward by the Kuwaiti respondents. These findings clearly link and align with the different cultural attitudes and practices discussed earlier in chapter 2 (Costume Design and Theatre in Kuwait), where the differences betweee Kuwaiti and western costumiers regarding the processes of designing and making costumes were clearly illustrated. Thus, hiring, restoring, reusing and recycling costumes after a show takes place in western countries, but does not occur at all in Kuwaiti theatre. In the next section I will present the practices of Kuwaiti and UK costume designers regarding the discarding of costumes and textiles materials.

5.3.6   Topic 5: Discarding costume materials

By the time I had reached this point in my interviews, the disparity between Kuwaiti and UK practices with regard to sustainable costume design, creation, and storage processes had already become clear. Nonetheless, I continued with my questions even though there is no concept of reuse and recycling among Kuwaiti designers at present. I did so because the issue of *motive* was still unclear: was it due to costs alone, as previous responses had suggested, or were there environmental concerns at play? In terms of existing scholarly research, I have found that sustainability in theatre wardrobe or the disposal of garments (costumes) tends to be subsumed by broader eco-considerations as part of an overall "setting the stage for greener production" (Jones et al., 2013). For theatre generally, and Kuwaiti theatre specifically, this invites the possibility that inherent friction may exist between sustainability and established production paradigms. Thus, while "the theatre is intensely frugal in the acquisition and use of resources" it is also "wildly profligate in relation to their disposal" (Jones, Selby and Sterling, 2010). In the next section, I will present key themes arising from Kuwaiti costumiers' perspectives on their practices regarding the destiny of costumes and the sustainability practices (reusing and recycling) in the Kuwaiti theatre costume productions

Storing and Reusing requires costume making skills - Kuwaiti practices

My interviews with Kuwaiti costumiers clearly showed that there are areas where no established sustainability practices exist. Instead, Kuwaiti costumiers and theatres generally dispose of costumes once a theatre production has run its course. Following the confusion generated by earlier questions, I did my best to be specific and ask questions such as "What happens to old or used costumes in your company? "What is the destiny for all these old costumes?" or "What happens to them after the show, are they stored or saved for later?", and "Are there any stores for those costumes after the shows is finished?" Thus, my final questions dealt with costume designers' experiences and their views on post-production storage and the disposal of costumes, and why their practices are what they are.

Kuwaiti costumiers floundered during this final part of the semi-structured interview. Respondent **3.N**, for example, whose experience stretches back to the earliest days of costume design after the Iraq invasion in 1991, said that all costumes are disposed of immediately once a production is finished. However, **3.N** mentioned during the interview that, before the invasion of 1991, there were storage areas and procedures in place for storing costumes, but this changed the following year. **3.N** even told me that he had attempted to save some costumes on a few occasions by taking them home, but ultimately this proved unsustainable. Therefore as **3.N** states below, the costumes are now always destroyed after a show:

> "Before the Iraqi invasion we had storage to keep all the costumes, and after 1991, after liberation, all wordrobe storage was destroyed until nowadays, there are no longer any real answers about the destiny of the costumes, I tried to save the costumes at my home, but I can't save them all after the shows." (**3.N**).

Costume designer **12.G** (specialising in children's plays and costume design), told me he did not know what happened to costumes after a show, citing a division of responsibilities in that his responsibility is simply to design and make the costume. He then gives the costumes to the production team (tailors) and does not know exactly what happens to old costumes once the show is finished.

A similar argument was made by interviewee **1.H,** although he was fully aware that all costumes were disposed of after production:

> "*My responsibility is to design and make the costume ready to wear for the actress on the stage, and I always see all my costumes disposed of after the show. I cannot take them because the theatre company and the producer are responsible for the costumes and they don't have a big wardrobe in which to save a thousand costumes.*" **(1.H).**

Participant **7.I,** on the other hand, told me that he does not know the ultimate fate of the costumes, but he is sure it involves some form of disposal. He stressed that there is no reason to reuse costumes, thus reinforcing his earlier view. For instance, he commented that:

> "*In fact, and it's a really sad thing, after the end of the play, the theatre company often put all the costumes in bags to keep them and throw them after a period of time, because we have in Kuwait a new play and character for every season, so theatres have no reason to reuse costumes again.*" (**7.I**).

A similar view was expressed by the costume and prop maker **9.K,** although he said that he actually preferred disposing of costumes and making new ones every time, stating:

> "*Personally, I do not save a costume after any show because it requires maybe much work and skills to renew the costumes for a new play, but there are some actresses who keep their costumes for the anniversary and memory.*" (**9.K**).

The only thing that comes remotely close to preserving a costume in Kuwait seems to be when a designer decides to save certain, unique pieces for sentimental reasons. Kuwaiti costume designer 5.M told me he had done this on several occasions with the costumes he made for children's and adult theatre over the years, stating:

> "*For most of the costumes after the show finishes, they are disposed of, and sometimes if they are unique pieces of costume that I designed for some specific character, I will acquire them from the theatre producer of the show, taking one piece of costume just to add them to my portfolio collection. But in general, all the costumes, after a while, are thrown by the theatre company into landfill.*" (**5.M**).

Interview participant **2.B** stated that it is difficult to store costumes for the duration of a play's runtime, which he sees as another reason why storing costumes for later use is a doomed venture. He explained that:

> "*Sometimes some of the costumes are stored for a period in case of the continuity of the play, and the destruction of these costumes happens directly after the show. This is because in Kuwait most of the theatres do not have special costume wardrobe storage to save the costumes.*" (**2.B**).

Interview costumier 4.R told me he found old costumes he tried to reuse rather than dispose of after the show. Unfortunately, not only did that fail, it cost him money. Apart from this very limited form of long-term costume

storage, no tangible options appear to exist in Kuwait. Some costume designers might save some items by storing them at home. For instance, **4.R** explained that:

> *"I remember I found an old one stored in a Kuwait theatre in Salmyia city while I was looking for some props and accessories in the roof on the second floor, and I found some of my old costumes that I designed 5 years ago in a damaged condition. This is what happens after the show sometimes, throwing the costume somewhere or finding them like that."* **(4.R).**

As expected, a lack of theatre space and a policy for saving and storing costumes are issues that recurred throughout the interviews with Kuwaiti designers, especially participant **13.S**, a costume designer specialising in designing traditional costumes for the theatre. Like other participants, he also stated there was no space for storage, saying:

> *"To be honest, in most Kuwait theatre companies they are not interested in saving or reusing all the old costumes after the show, because when the play is finished a new play or project will start, that means we don't reuse old costumes because there is no space to store them all, and if we do that it will require hiring a huge of tailors to renew all those past costumes and that's why they throw all the costumes into the landfill. "* **(13.S)**.

Participant **11.A** spoke of a different experience during his career as a freelance costumier. He stated that he always saw costumes being put in bin bags for later disposal. He told me that, like the other Kuwaiti respondents, this situation is common in theatres in Kuwait, especially in the period festivals. He also said that such costumes often get left in bin bags for 2 years or more at a time. I decided to ask why all or most of the costumes are put in bin bags rather than in costume storage and wardrobe. He responded that:

> "*We don't have costume storage or a wardrobe to save the costumes when the plays are finished, some of the cheap quality costumes we just keep them for no reason then we send them to the landfill."* **(11.A)**.

This suggests that some notion of keeping costumes for reuse does exist in Kuwait, but this is prior to preparing them to be sent to landfill at the end, something which was apparently borne out in my interview with costume designer and maker 8.Z who commented that:

> *"I remember I asked to see some of the theatre storage to transfer all the costumes to the storage after the end of the show, but staff production told me to put all the costumes in bin bags and I don't know what happened to the costumes. It always happens; in addition the bin bag will damage the costumes, especially if the costumes have thick accessories."* **(8.Z)**.

I also found that travel bags are sometimes used for storing costumes once theatre productions are over. Costume designer **6.A**, the specialist in theatre academics, explained this procedure:

> *"Because they are old costumes, the production company will send them to landfill because they are getting old and dirty or sandy, and all the costumes after the show, some of the theatre*

productions will put them in travel bags for a long time, with no sense of reusing them again because they get old, to be honest it will require much work if as an example I renew all of them for, lets say, other characters and I don't have the skills to do that ." (**6.A).**

Apart from this very limited form of long-term costume storage, no real options appear to exist in Kuwait. Some costume designers might manage to save some items personally by storing them at home, as previous responses have implied. However, the costumier 10.R told me that there are rules in place to prevent this and these form part of the contract between costume designers/makers and the theatres they work for. For instance, he stated that:

"*Most of the theatre company productions do not allow us as costume designers to keep the costumes that are produced by the company because this is in the contract between us or me with the theatre company, because they paid to have all the costumes made at the tailors. And, in fact, I do not like to keep all the costumes after the end of any show because I do not have the space to store this quantity of costumes and I as a designer do not like the repetition of theatrical drama in any new show.*" (**10.R**).

This final question for Kuwaiti respondents proved as relevant as the previous two in terms of the primary goal of this PhD, which is to investigate current design practices as well as the production processes currently being employed by UK and Kuwaiti costumiers. Part of this primary goal involved probing their attitudes and perceptions regarding reusing and recycling as ways of reducing textile waste. However, all the findings from the Kuwaiti costumiers regarding the discarding of costumes has shown that there are clear barriers preventing Kuwaiti costumiers from reusing and recycling costumes. For instance, insufficient costume storage in Kuwait theatres, complicated contracts from each theatre production, and the fact that at the end of most shows all the costumes are put in bin bags and sent to the landfill. These findings resonate with the issues discussed earlier in chapter 1 in relation to the lifecycle stages of garments (LCA) (see Figure 4 in page 22 and Table 1 in Stages 8 and 9: Grave, Reuse, and Recycling). These showed that, using innovative design approaches, there are opportunities for garments (costumes) to be reused and recycled rather than closing the loop with the Grave stage. This will give used textiles both a new life and added value (Brown and Steele, 2010. Scholars such as Grassian (2008) and Connemann et al., (2018) agreed that the LCA can be used to improve an existing product or guide the decision-making process in the creation of new products (Jones et al., 2013). In the next section, I will rely entirely on UK respondents' answers to consider how costume designers can contribute to the development and implementation of a practice focused on reducing or avoiding textile waste in Kuwait.

Long-term storage techniques for costume and materials– UK practices

The costumiers I interviewed from the UK all told me that costumes are universally stored long term, as has been both implied and explicitly stated during their answers to my other questions. In fact, nothing is thrown away except when there is no room left in the stores and, in such cases, it is the oldest costumes that get disposed of and shipped to landfill rather than the newest ones.

For example, interviewee 2.L, from Sheffield told me that whole costumes as well as fabrics and materials are

stored on racks or in boxes as a matter of course, and all are immediately available when they are given the job to design costumes for a new performance. For instance, he stated that:

> *"Most of the theatre company productions tend to hold the costumes after the show, there's always a chance to reuse all the costumes that they hold after finishing any session or shows, to reuse and recycle them (hiring) for any new project. In addition, I've always used bits of costume that they already have from previous projects in any theatre company, and never ever have I seen any theatre company throw costumes away."* **(2.L).**

During my interview with designer 13.C in York, it became clear a large part of her experience in hand sewing, alterations, fittings, and pattern drafting came from the very costumes that were always kept and stored long-term by theatres in the UK. 13.C agrees with 2.L in claiming that nothing is thrown away after a show finishes, stating:

> *"The costume doesn't just get thrown away or put into landfill. Mostly, they get put in the store. Most theatres have a costume store and it's usually not in the theatre. It's usually a warehouse in an industrial unit or something. Usually, they are then rented out, the costumes are rented out to other theatres, they are reused in that people hire the costumes. People come from other theatre companies and hire the costumes."* (**13.C).**

Two of the other costumiers I interviewed, 8.R (designer of multiple types of costumes) and 9.Z (costume designer, creator and modifier for the Sabotage Theatre Company) stated that they have never heard of a costume designer who throws costumes and accessories away after just one use. 8.R, for instance, stated that:

> *"I have never met a costume designer who throws things/costumes out after any show or performance, I just keep everything to reuse or adapt again, because I will reuse and recycle some of this costume again if they're still good quality. It's easier for me to reuse and recycle them rather than make costumes from the beginning and just buying new materials all the time."* (**8.R**).

Similarly**, 9.Z** commented:

> *"At the Sabotage Theatre we usually store all the costumes after finishing any show. Then we adapt them for shows that are coming, I remember I had to work on a project, and I returned to see that we have a bit of a wardrobe to reuse or recycle. It's nice to keep and save the costumes, and not throw them away, as this would increase pollution and damage causing climate change in the world."* (**9.Z**).

Similar views were expressed by Liverpool-based designer 12.L who referred to standard reuse and recycling practices, although she also said that sometimes costumes are worn out entirely, even during a single production if the play runs for long enough. However, this is only looked upon as providing even more of an incentive to hold and maintain reuse/storage facilities and practices. She stated that:

> *"Wherever possible, they're usually just kept and reused. A lot of the shows that I have done are toured so they keep the costumes after they've done the initial run and they will keep the costumes.*

They'll keep them because they'll continuously tour that show until they pretty much completely wear them out. Which is quite nice, so they don't really get thrown away or anything or just scrapped. They do still exist. **(12.L).**

4.M also commented on this standard procedure, claiming that the long-term storage of used costumes is the natural prerogative of theatres as they are the ones paying for the materials and the work of the designers:

"If I'm being paid to make a costume by the theatre company then it belongs to them at the end, but usually all the theatre companies that I have worked with either keep the costumes or give them to another amateur company. to reuse and recycle them into other things, for another show. And the reuse and recycling costume process after the show happens many times in different theatre companies in the UK." (**4.M**).

The costumiers I interviewed in Sheffield at the Yorkshire Art Space Exchange Place Studios, **6.B** and **11.A,** endorsed these views. They both told me that all the costumes they make are returned directly to the costume wardrobe after every show so that they can be reused or recycled or even donated to other theatres. For instance, **11.A** commented that:

"*In our industry, when I'm working for a theatre, once the production is finished the costume supervisor or the wardrobe mistress brings back the costumes to the costume store. It really depends on the production because sometimes you hire your costumes, sometimes you create costumes, and you create them but normally you usually bring back the costume to the costume store or you bring back the costume to the hire store where you hired the costume."* **(11.A)**.

London-based designer **1.Y** and Sheffield-based respondent **3.S** added their voices to the above, which I had come to expect by this stage. When I asked **1.Y** about the destiny of costumes after the show, he responded:

"The costumes are never thrown away. Normally, the theatre companies hold all the costumes, because if they are a repertoire company, that means they have the rights to the show for four years, three years so they can bring it back at any point, and those garments are always reused and stored." (**1.Y**).

3.S expressed a similar view, stating:

"So, what happens to old used costumes? In this particular building, Sheffield Theatres Trust, we're very lucky to have a back store. So, we've got two huge rooms that provide storage space for costumes so most of them predominantly get saved and allocated into the periods of time they're supposed to be for, so it goes from the 16th century right through to modern day contemporary stuff" **(3.S).**

Participant **10. S** in Sheffield also confrmed that nothing is thrown away once a show is finished:

"They return back to costume storage, and usually get used until they probably can't be repaired

anymore because it does take so long to make one costume. It can take a whole week to make a costume and costs about 300 quid in fabrics. I can repair a stilt costume like a male-female stilt costume. They will last for a good five or 10 years depending on how often they are used." (**10.S**)

Finally, participant **5.P** provided possibly the most telling piece of information regarding the duration of storage for costumes. There are costumes which, according to **5.P** (who has worked in theatre for the past 20 years), have been in storage for up to 60 years and nothing is ever thrown away. She stated that:

"I worked in the Opera House where they keep all their costumes in storage, sometimes for up to 60 years. They've still got things going that were used in like the 1940s. And they are still reusing those costumes because the character and costumes stayed the same, maybe they will sometimes adapt the sizes for the actress. Because the production stays the same, you have to reuse that costume because the production has got to look exactly the way that it did when it was first created. Essentially, parts of those costumes are therefore the original ones made for the very first production." (**5.P**).

All the interviews with UK costumiers provided insights into how a costume designer gains their experience and skills. Although differences exist due to their work in different theatre companies, the views of respondents overlapped regarding the opportunities theatres provide for reusing and recycling costumes and materials after a production. These findings align with the discussion presented in chapter 2 on the role of the costumiers. In general, the normal attitudes and design practices of costumiers in the western countries are geared towards demonstrating their creativity. UK costumiers are also more concerned about reusing and recycling their costumes (see Figure 15: Example of apparel ready to be reused to fit any actors or actress on any production) (Argentina, 2015). This is looked upon as providing even more of an incentive to hold and maintain reuse/storage facilities and practices: nothing that can be salvaged is wasted, which is effectively the ideal situation according to expert opinion (Jones et al., 2013; Niinimaki,2013). It clearly shows that the stance on reusing and recycling costumes in the UK is 100% in favour, as opposed to 100% against in Kuwait -as I will summarise in the next section.

5.3.6.1 Similarities and differences– Kuwait vs. UK

Overall, the interviews in Kuwait demonstrated that these costumiers generally see no reason to store costumes once a show is over or no longer on tour. One respondent did state that things were different before the Iraq invasion of 1991, but the universal practice since then has been to bin or otherwise dispose of costumes. Only 2 of the 11 respondents referred to costumes being stashed in bin bags or travel bags for any length of time; even then, this was for no longer than 2 years. This is not just because the idea of long-term storage has never been considered by designers, it is also because theatres do not have sufficient space allocated and renewing (reusing and recycling) costumes requires substantial tailoring skills and techniques by the Kuwaiti costumiers themselves. However, they readily state that they lack the skills to do this job, and also lack the storage spaces and facilities to save all the costumes after shows have finished. Moreover, because Kuwaiti theatres own the costumes made by designers, the latter are not allowed to take them home and store them long-term. The only exceptions are the occasional costume component that has sentimental value.

In contrast, costumes in the UK are always stored long-term, with none of the respondents having worked on a production where the costumes were not placed in long-term storage afterwards. The only exception was when they became worn to the point of being unusable, for example during a particularly lengthy tour of the same performance. Even then, the fabrics were kept in boxes for later reuse/recycling. Thus shows clearly why textile waste is increasing in Kuwait as all the costumes are sent to landfill after the show and these are constructed out of materials such as plastic, carton and scrap textiles. According to State of Kuwait Statistics, published by the Kuwait Central Statistical Bureau, quantities of solid waste such as paper, cardboard, and textiles have increased annually in Kuwait (Alhumoud and Al-Kandari, 2008; Al-Otaibi et al., 2012; Al-Shatti, 2016). In addition to these findings, it is important to take note of the literature discussed in chapter 1 regarding the positive impact of the 3Rs of Sustainable Garment Waste Management Strategies: Reduce, Reuse, Recycle. Both Blackburne (2009) and Fletcher (2008) characterise sustainable waste management strategies as both a system and solution for reducing, reusing, recycling, and otherwise preventing the waste of garments and fabrics, as well as offsetting the negative environmental impact of waste generation (Daven and Klein, 2008). This is largely because the theatres themselves own the costumes the designers make as they are the ones who pay for them. Figures 31 and 32 summarise the different practices employed by Kuwait and UK costumiers, respectively, when creating costumes as part of the overall design process. In the next section, I will present the views of Kuwaiti and UK costumiers regarding their knowledge and understanding of sustainability.
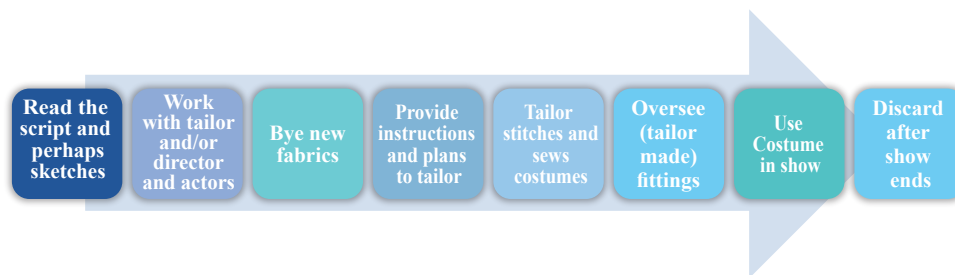
Figure 31: Kuwait Costume Design Process
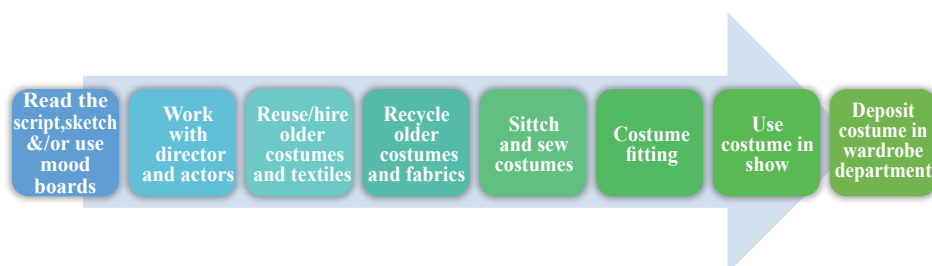
Figure 32: UK Costume Design Process

5.3.7   Topic 6: Understanding of sustainability

During my interviews with the costumiers from Kuwait, I noticed that none defined recycling and reuse in the same way, and the same was true for sustainability. This led to an abundance of misinterpretations, which is why I decided to ask the interviewees to describe what the term "sustainability" meant to them. More specifically, I asked what sustainability would imply in the context of costume design, and what measures would

need to be taken to achieve it.

Therefore, in this section I will present the interview findings regarding the question: "What does sustainability mean to you?" A seemingly simple question on the surface, it is the issue that lies at the heart of this PhD and therefore needed to be addressed to inform and support the aims and objectives of my interviews. A clear insight into respondents' understanding of sustainability was thus required to provide data that constitutes evidence as to how Kuwaiti costume designers construe the application of sustainability methods (reuse and recycling) in Kuwait theatre. To further support my research, I asked interviewees to elaborate on how they thought costume designers could contribute to the development and implementation of a practice focused on reducing or avoiding textile waste. I shall now present the themes that emerged from the interviews with Kuwait costume designers.

Failure to grasp sustainability - Kuwaiti views

This was one of the issues most critical to my research and this section of the interview produced the most uniform data of all my primary research. Kuwaiti costumiers are almost universally unfamiliar with the concept of sustainability, having never heard of it in relation to anything outside the construction industry. When interviewed, most of the Kuwaiti costume designers expressed surprise when asked, "What is sustainability?" Three participants, **1.H, 10.R** and **13.S**, all told me they had never heard the word before, although they had seen the green logo for recycling on supermarket bags in the past.

This also held true for some of the other costumiers, most notably freelance and academic costume designers **2.B** and **7.I**, although their answers pointed to a different understanding of the term:

> "*I do not know, maybe some areas regarding plastic waste or raw waste, this is the first time I have heard this word.*" **(2.B).**

> "*I expect it's something related to recycling of chemicals, solid materials in the landfill such as plastic, recyclable soft drinks or materials waste.*" **(7.I).**

Another respondent, freelance kuwaiti costume designer **11.A**, told me that sustainability in his mind equates to a solution for house electricity, commenting that :

> "I am not sure what this word means exactly, but mostly I hear about this word, it's an energy for something, related to producing energy, rather than using electricity for buildings and houses as solar power energy. So, to take power from the sun rather than use an electricity engine." **(11.A)**.

Most of the remaining costumiers considered sustainability to be something related to the environment, with two specifically equating it to shopping mall economy, or alternatively to general global waste and water purity. These were costume designer 4.R (a stenographic and theatrical author and costume designer) and 5.M (a costume designer for more than 12 theatrical works).

> "*It's part of a green economic cycle for the shopping mall, to produce a healthy environment.*

When they provide different bins to throw the trash, you can see they have a green logo which is to recycle the waste." **(4.R).**

"It's some things which are related to global waste, or some things which are related to the financial economic water cycle." **(5.M).**

Of the remaining Kuwaiti costume designers, three were of the opinion that sustainability was only a term that existed in the building industry, participant 3.N in particular. Participant 8.Z, on the other hand, told me that they had only ever heard this term associated with environment or engineering issues. Considering their long-term experience in costume design at Al-Bwadi Theatre Company, the fact that the term never came up in their lives is quite telling. Furthermore, respondent 9.K, costume designer and owner of the Mudian Moda company, told me that, other than for factory work, sustainability was not a term they had seen outside the construction industry.

"I read this word in the newspaper before, that's related to designing buildings and constructions, the building materials." **(3.N).**

"I think I heard this word before, maybe it's related to environment issues , or it's related to engineering work, to applying the new standard design for houses and buildings, etc." **(8.Z).**

"I am not sure, but maybe it's something related to the building (factories) industry, I am really not sure" **(9.K).**

Ultimately, only two Kuwaiti costumiers showed they understood aspects of sustainability in the context of costume design. During the interview, they gave similar and related answers when expressing their views. These respondents were participant **6.A**, a theatrical costume designer, and participant **12.G**, a costume designer specialising in children's plays. Their views converged on the idea that sustainability is about reusing strategies:

"Sustainability: it's to re-use the pieces of objects and materials more than once." **(6.A).**

"In general, it's a new and real strategy and method in the world for reusing materials, especially for the theatre (stage wood materials), or [to reuse] objects for work and modify them again." **(12.G).**

Unexpectedly, the Kuwaiti costumiers were more specific than the UK costumiers in terms of the meaning of sustainability, at least in those few cases where the interviewees were familiar with the concept. One Kuwaiti costumier believed it was limited to shopping mall policies, while three others linked sustainability with environmental friendliness and efficiency in the construction industry. Only two of the 11 Kuwaiti respondents considered reuse and recycling to be part of sustainability in their work as costume designers but, even then, they did so only tentatively. Furthermore, two others linked it to raw material waste (plastic, oil, etc.). In the next section, I will present UK costume designers' understanding of sustainability.

A deep understanding of sustainability: UK views

As I had come to expect by this point, the views expressed by the UK costumiers were the opposite of those in Kuwait, regardless of the different cities in which they lived and the work positions they held. When interviewed, UK costumiers displayed strong knowledge and a high skillset in relation to the knowledge and practice of sustainability. They understood that sustainability is a practice that can be applied across industries. In relation to the theatre industry, they provided me with different views and perspectives on sustainability.

For example**, 4.M**, a costume designer specialising in children's plays, construed the term as applying to any context where a recycling process can be established, the ultimate goal being to minimise the negative impact on the environment and the planet.

> "*A sustainability case means to use sustainable practices, which means you need to reuse and recycle what you've got, so we're going to have sustainable clothing that needs to be made using sustainable methods that don't damage the environment, it doesn't mean that we can't keep growing those crops and making those clothes.*" **(4. M).**

Freelance costume designer and maker **12.L**, who is based in Liverpool, had this to add:

> "S*ustainability means you're just being really mindful of what you are making and producing and making sure that that doesn't have a negative effect on the planet.*" **(12.L).**

The two costume designers I interviewed in London (**1.Y**) and in York city **(13.C)** perceived sustainability as related to the reduction of waste. For instance, **1.Y** considered sustainability to be a means of keeping the planet healthy by reducing waste and pollution, stating that :

> "*Well, I think, just, it's come from sustain hasn't it? To sustain the environment, to keep our planet more sustainable and greener to reduce the waste and pollution,*" **(1.Y).**

Although she agreed with **1.Y,** freelance costume designer and clothes maker (13.C) was more specific, placing the above view in the context of her job as costume designer. She had plenty of time to consider this in the years she had spent working on hand sewing, alterations, fittings, pattern drafting, weaving, budgeting, sourcing fabric, and dressing:

> "*As a costume designer, sustainability means to use practices that reduce waste, to try and make sure that we don't waste fabric and materials when they're cutting out the pattern. Because the fabric pattern, they've got a small seam allowance, and to try to fit the pattern to raise more space is preferable to purchasing a new fabric.*" **(13.C).**

The costume designer/collaborator, **2.L**, interviewed in Sheffield, explained her understanding of the term sustainability in terms of the long-term effect on products and whether they could be adapted or modified for other uses:

> "*Sustainability is to make sure you have created some things, sustainability is looking in the long term: how can you contribute something that's going to last well, that's adaptable but can be reused? That is adaptable and reusable, that isn't wasteful and knowing that you've kind of contributed in some way to your social obligation to recycle and reuse?*" **(2. L).**

Another different perspective on sustainability emerged during my interviews with costumiers **11.A** and 3.S. They felt that sustainability is part of the climate change problem, although they also consider it an element of success in terms of ethics and financial outcomes. For instance, 3.S, , stated:

> *"Sustainability, it is it's all about finances but ethically as well, so in that world climate now I think more people may be thinking more about sustainability as part of an ethical world consideration."* **(3.S).**

Costume designer/maker **11.A,** interviewed in London, was even more specific about the way in which costume design practices can promote sustainability in relation to nature and the climate:

> *"I would say sustainability, it's something that can last for forever and for a longer period. It's about material that you're reusing and recycling obviously, for example if you're using dye techniques in the process of making costumes then it can lessen the impact of climate change."* **(11.A**).

In London, costume designer/maker and set designer **7.A** again equated sustainability with living in a healthy world, although her answer did not address what the term means in the context of her work:

> *"Sustainability is a quality of living in a clean world, to save the planet's ambience, and people's practices. I mean, when the people are responsible, to live on a clean and safe planet. It's more important for people to think what materials they are using."* **(7.A).**

Two other UK costumiers**, 10.S** and **9.Z**, provided answers which implied significant similarities regarding their understanding of sustainability. For example, when interviewed in Ashford city, **9.Z** stated that:

> *"Sustainability, it's all about the economic, artistic and environmental practices. It's about environmental sustainability, having an ethos that's sustainable and a sort of identity that exists. Something being sustainable financially, it has to stay afloat, so it helps for us to reuse, recycle more materials like stuff (costumes) like just donating them and trying not to add a whole load of extra clothes to go to landfill"* **(9.Z).**

10.S, a costumier for a variety of plays in Sheffield, similarly commented that:

> *"It's all a make amends philosophy, this sort of thing. I think sustainability, it means not being wasteful with your resources and really looking after what you have and not over buying too much and creating a demand that isn't necessary."* **(10.S).**

Costume designers **5.P** and **8.R** were the most specific when they spoke about sustainability, relating it squarely to their jobs. For instance, **5.P** commented:

> *"I suppose sustainability is something, it's massively important. For things to be sustainable for me I suppose it's to remake, to reuse, and to fulfil something's potential. If a bolt of cloth has been used to its full potential, then there's no cloth left. It's all in the production, you've used every single scratch of that cloth. I think that's in part sustainability, something for its entire lifespan"* **(5.P).**

8.R, who I interviewed in London, said something similar based on his experiences with costume design and illustration:

> *"Sustainability, it is creating a costume industry that is sort of about [not wasting anything].*
> *[Don't be] unsustainable, like, you're not making 20 costumes for a play and then getting*
> *rid of them and never seeing them again. It's all about keeping your practices in the same*
> *sustainable life cycle, reusing and recycling things again and again in the same cycle"* **(8.R).**

The final respondent, 6.B, who I interviewed in Sheffield, was a costume maker and tailor for both theatre and film. During our talk at her Yorkshire Art Space Exchange Place Studio, she explained that her vision of sustainability was based on 20 years of experience spent cutting and constructing men and women's period costumes.

> *"I think sustainability is about being able to maintain a good life or not using up every last*
> *resource we have. Reusing and recycling is a good thing in order to try and slow down the rate*
> *that we're using up resources."* **(6.B).**

All the findings from the Kuwaiti costumiers show a lack of education and awareness regarding sustainability in Kuwait theatre production and other sectors. The literature review in chapters 1 and 2 showed there is a scarcity of literature on sustainability and costumes in Kuwait theatre production, therefore these findings elucidate and contribute to new knowledge and understanding regarding the absence of sustainable design thinking among Kuwaiti costumiers. They also show that students attending academies in Kuwait are not taught about the correlation between sustainable reusing and recycling and design production (Al-Ghareb, 1988; Ismail, 1999; Johnston, 2014. This is reflected in Pikulska (2001) and Alabdaljalil's (2004) observation of "Kuwait's limited experience of theatrical productions''. Recent research shows the current vision in Kuwait regarding the implementation of sustainability in sectors such as education, health, and references Kuwait institutions who should implement sustainability in their sector (kdip,2019). This finding is corroborated by the international conference (New Kuwait vision 2035) on innovative and economic diversification in Kuwait in 2018 which showed that Kuwait will establish Environmental Education as a national commitment and an essential and integral part of the education programme at all levels. The goal is therefore to develop a concern for and awareness of sustainability among students. Kuwait has also implemented many technical and operational measures to overcome obstacles hindering sustainable development (Al_Otaibi, 2018) as well as informing the population about the value of environmental services. The programmes that will be developed also aim to increase an understanding of environmental challenges and enhance a commitment to work individually and collectively towards protection of the environment through a reduction in waste (Al-Joaan , 2018). The literature review in chapter 2 shows that UK costumiers have the requisite skills and understanding of sustainable reusing and recycling through their design production processes. This was reflected in the findings, which clearly showed UK costumiers exhibited a clear understanding of the concept of sustainability and were fully conversant with the practices of reuse and recycling. This was manifested strongly in their knowledge of and attitudes towards costume design in the context of UK theatre. The following section will summarise the key similarities and differences in the views of Kuwaiti and UK costumiers regarding sustainability.

5.3.8 Similarities and differences between Kuwaiti and UK designers regarding their views on sustainability

Unexpectedly, the **Kuwaiti** costumiers ended up being more specific than those in the UK in terms of the meaning of sustainability, at least in those few cases where the interviewees were familiar with the concept. One Kuwaiti costumier considered it to be limited to shopping mall policies, while three others linked sustainability with environmental friendliness and efficiency in the construction industry. Only two of the 11 Kuwaiti respondents considered reuse to be part of sustainability in their work as costumiers and, even then, only tentatively. Furthermore, two others linked it to raw material waste (plastic, oil, and so on). **UK** costumiers, in contrast, viewed sustainability as a broad notion spanning virtually all fields of industry and considered it synonymous with green technology and environmental friendliness. Only seven of the 12 UK respondents described their work as costumiers as falling under this remit in one form or another. They perceived sustainability to be an inherent part of an effective, efficient (cost, time, and so on) and nature-friendly practice, with an emphasis on minimising if not eliminating waste. All the similarities and differences between Kuwaiti and UK costumiers views regarding sustainability were supported in the literature on sustainable garment and design thinking (see chapter 1), which highlighted the shift in sustainable thinking among garment and costume designers (Jones et al., 2013; Dif, 2018) regarding the importance of understanding sustainability and implementing design thinking strategies throughout the design process. This provides an exciting new paradigm for dealing with problems in many professions (Dorst, 2011). This was endorsed by Nikolaidis et al. (2011) who argued that, when making design thinking decisions, a new attitude is needed for contexts which lack sustainable notions, even though this requires a radical change of perception on the part of designers. He sees this as a very useful approach to instigating cultural change and changing behaviours (Chick and Micklethwaite, 2011; Coene, 2019).

Chapter Summary

Having established similarities and differences between UK and Kuwaiti costumiers regarding their practices and opinions on the design process, the focus now turns to the utilisation of sustainable practices (or lack thereof). Kuwaiti and UK costumiers both seem to agree that sustainability is related to environmental concerns, although only UK costumiers viewed it as a full part of the industry (let alone related to issues such as green practices). In the next chapter I will present the findings for Study 2: Analysis of Kuwait Costume Making Workshops.

6 Chapter 6: Study 2 – Analysis of Kuwait Costume Making Workshops

What Kuwaiti costumiers said, did, and produced: issues raised by Kuwaiti costumiers regarding sustainable reuse and recycling practices

6.1   Introduction

In the previous section, the findings from the interviews conducted with Kuwaiti and UK costumiers were reported and analysed. The aim was to investigate and gather evidence regarding how Kuwaiti and UK costumiers perceive the option of using sustainable practices (reuse and recycling) when creating costumes for theatre. In the current chapter, I will present and analyse the findings from costume making workshops conducted with three Kuwaiti costume designers. These workshops comprised three different tasks and consisted of two distinct processes that, together, make up the two primary sections of this chapter. These are:

6.2   Section One: The costume concept and design process during the workshop

6.3   Section Two: Costume production during the workshop

In those two sections, I will discuss the main issues that emerged from analysing the data regarding the designated topics. These two sections will be further subdivided to enable me to achieve the workshops 'research aims and objectives. These are:

1. To investigate, evaluate, and draw conclusions regarding Kuwaiti costume designers' activities during the workshop

2. To indicate whether any sustainable practices (reusing and recycling), techniques and skills were demonstrated during the completion of the three tasks included in the workshop.

3. To explain the methodological approach underpinning this investigation.

I will now present and illustrate the findings for each Workshop, starting with **Workshop 1** which deals with **Level 1** of sustainable costume design: **redesign of existing garments.**

6.4   Task 1: Level 1: Redesign (minimal intervention) - working with one used garment

Level 1 / Participant: 1. H
Character Name: Amena
Play Style: Kuwaiti traditional style

6.4.1   Section One: The costume concept and design process during the workshop

Brainstorming: Thinking about how sustainable practices (reusing and recycling) could be applied

The participant (1.H) spent at least 10 minutes simply brainstorming and thinking about her approaches to the design. During this time, she read the script of a Kuwaiti traditional play, as the aim was to redesign the garment on the mannequin to convincingly present the chosen character, Amena (Figure 33). During the brainstorming process, as she was looking at the mannequin and reading the script, she expressed insecurity and indicated that she had only minimal experience in the practice of reconstruction (redesigning). The following is a representation of her words. "I remember that I have worked before on a traditional Kuwaiti play, but at that time we purchased all the traditional costumes from traditional Kuwaiti markets." (1.H).

Figure 33: A second-hand garment that had to be restyled by participant 1.H (photograph by author).

No perceived need to research the character

Figure 34: Sketching the character of Amena (photograph by author)

Figure 35: Final sketches for the character of Amena (photograph by author)

Figure 36: 1.H conducting research on YouTube to find examples of hand stitch techniques (photograph by author)

Despite this initial concern, I noticed that the participant **(1.H)** began to draw sketches (see Figures 34 and 35) for the character (Amena) with the aim of using the look rendered in her sketches to redesign the garments on the mannequin. During our informal conversation and whilst she was sketching, I also asked **1.H** whether she had conducted any research into the character or if she had used any references to help her envision and then design the costume prior to making it. In response, she stated:

> *"Actually, I did not do any particular research for this play because I have seen a traditional representation of the play before and, therefore, I know what the character's costume will look like. I used my imagination and my experience to design the costume"* (**1.H**).

Using YouTube as a resource to observe costume recycling techniques and garment reconstruction skills

Participant **1.H** spent 15 minutes on day one sketching the design. Afterwards she proceeded to work on the mannequin to transfer her conceptual design to the actual garments. While she was preparing to work on the garments and was selecting her tools, I approached her and asked about her technical skills. I wanted to know about her ideas for redesigning the piece of garment she was working on. Her response was as follows:

> *"I looked for some examples on YouTube (*see Figure 36*) just to get an idea and increase my knowledge about the best solution to redesign (reconstruct) the garment. I sometimes used this technique with my own clothes but rarely for the theatre costumes, because most of the Kuwait theatre productions that I have worked with require you to produce new costume from scratch and new materials"* (**1.H**). After the research process she moved on making costume.

6.4.2   Section two: Costume production during the workshop

Redesigning the garment using a glue gun to bind fabrics together

Participant **(1.H)** began redesigning the garments by cutting the fabric at the back and front of the garment using scissors (see Figure 37). However, while she was working on her garments, I noticed she was attempting to close the area she had cut at the front of the garments by attaching the fabrics with a glue gun, (see Figure 38). I asked her why she had chosen to use a glue gun instead of stitching and she responded: **"***Because I know the glue gun can be used to close the fabrics together and I considered that maybe it works similar to hand stitching, and I believe that the glue gun is much stronger than the hand stitching technique.***" (1.H)**. **Note:** The participant knew the costume was required to be redesigned in such a way as to last for many performances.

Figure 37: Working from the back to cut the fabric (photograph by author)

Figure 38: The designer worked from the front to close the fabric using a glue gun. (photograph by author)

Figure 39: 1.H tried to construct the area between the legs by using free hand stitching and a glue gun (photograph by author).

Figure 40: Participant 1.H trying to fasten the rope accessory on the fabric using a glue gun (photograph by author).

Tried to apply recycling techniques

The participant **(1.H)** asked me what she could do to close the fabrics in between the legs of the mannequin (see Figure 39). She tried to close the fabrics together, using her free hand to stitch them. When I asked about this at the end of her process, **1.H** stated: "*I think it works, now the fabrics close very well together, because I think experience in cutting and stitching the fabric helped me to stitch the fabrics to gather, I am not sure whether I have applied any recycling skills in this Level 1 or not or if what I am doing now is called recycling ?"* (**1.H**).

Attempted to work with the costume and recycled the materials

As **1.H** was working on the final touches of her minimal intervention project, I noticed she was struggling to bind the fabric together and add some accessories to the costume she had designed (see Figure 40). I asked her why she had decided to insert the accessories as a final addition to her costume. She explained:

"*I discovered some areas which need to be covered. Even an ordinary person could see that there are areas on the costume where the cutting was not done by a professional. I tried to cover those areas, around the neck and the waist by using accessories like leftover rope, but I think now I applied recycling techniques when I redesigned the leftover rope to make accessories.*" **(1.H).**

Table 11 (findings from the photo shoot) and Figures 41-44 show the final version of the costume produced by **1.H** for Amena at the end of Task 1.

6.4.3 Photo session Level 1: Final version of the costume redesigned for the character of Amena

Figure 41: The final look for the character Amena (photograph by author)

Figure 42: Damaged and shredded fabrics for the final version of the Amena costume (photograph by author)

Figure 43: Attempting to redecorate the neckline (photograph by author)

Figure 44 :Attempting to recycle the rope and redecorate shells (photograph by author)

Table 11: Findings from the photo shoot session

1. During the photoshoot I found that the outlined character Amena looked great from a broad perspective, showing that the participant **1.H** had a degree of experience with redesigning garments that somewhat offset her limited experience in constructing them (See Figure **41**).
2. However, the photo shoot also showed that, in some areas of the costume, the fabric was damaged and shredded due to the use of the glue gun (See Figure **42**).
3. Figure **43** shows the consequences of participant 1.H attempting to redecorate the neckline by using materials such as rope and lace.
4. I found that participant 1.H painted the shells (see Figure **44**) glued on to the rope using gold glitter glue. She felt that this, as well as painting the shells, was a technique that fell under the category of recycling. It is important to mention that this glue is typically used for sketches drawn on paper and is not appropriate for use on other objects and materials.

6.4.4   Summary

All the evidence presented above shows that the participant **(1.H)** working on the Amena costume had only a little experience in garment construction. **1.H** also gained a little knowledge of how to reuse and recycle garments (cutting and constructing the second-hand garment and recycled fabrics) when viewing explanatory videos on YouTube on the first day of the workshop. However, she did not understand how to use recycled materials in some areas when she redesigned the costume. Furthermore, she tried to supplement her experiences of hand stitching with a glue gun. Additionally, she had to repeatedly make quick fixes to ensure the costume could be used during the short photo shooting session. In the following section, I will present the findings regarding the performance of the second participant **(2.A)** on the same task.

6.4.5   Section One: The costume concept and design process during the workshop

No sketches to produce her vision

Participant (2.A) began by reading the script for Cleopatra. Once she was acquainted with the play, she proceeded to work directly on the mannequin. However, she did not draw any sketches for her character's costume (see Figure 45) which would have provided her with an overall vision as to what the redesigned costume should eventually look like. While she was working on the costume, I asked her several questions about her technique and her decision to skip the stage of sketching, which would have illustrated how she envisioned the character. To these queries she answered:

"Actually, I am not a professional in sketching and drawing, I always go directly to the tailors and he/ she will draw a quick sketch and discuss what design I expect for each character, what I would like them to look like on stage. This has been my process for a long time" **(2.A).**

Figure 45: The garment provided for participant (2.A), which she had to redesign to fit the Cleopatra character (Photograph by author).

Figure 47: 2.A tries to redesign and construct the sleeve. (photograph by author)

Figure 46: Participant 2.A cutting the sleeve from an existing garment. (photograph by author)

Costume recycling rarely worked upon

Participant 2.A attempted to redesign the costume by first cutting off the sleeves of the golden dress (see Figure 46). At this point she commented that "*I rarely work with costumes and recycled fabric rather than new fabric to produce a costume for a production, but I can cut the sleeve for one t-shirt and make it in a short sleeve, using the scissors to cut the sleeve, but I did not know if I was recycling the t-shirt or not, though I think maybe yes I recycled" (1.H).*

An ability to understand the concept of "redecorated costume", but less understanding of how "recycled" and "up-cycled costumes" differ in meaning

As she continued to redesign the costume, **2.A** worked fast, cutting many pieces of the original garment. This caused me to ask whether she understood the skills she now used, making a point of mentioning the terms "recycling" and "up-cycling." In response, **2.A** answered: "*I feel like what I am doing now is redecorating the costume.*" I found her answer to be very interesting and therefore, as she was working on the mannequin, I further inquired as to whether she knew any techniques for up-cycling costumes (garments). Her answer was *"I am not sure what that means, 'up-cycling or recycling garments."* (2.A).

Making the costume without a clear concept of the final look

After cutting the sleeves from the gold dress, I noticed that the participant **(2.A)** was experimenting with the remaining parts, trying to hide or cover the sleeves (see Figure 47). The participant had no reason for any of her choices, as she further explained: *"I am trying to find a solution, to produce a reflection of the image I have in my mind about Cleopatra."* (2.A).

Figure 48: The participant (2.A) tries many times to gather and stitch the accessories and fabric together on the shoulders of the mannequin (photograph by author)

Challenges faced by the costume designer

The participant (2.A) encountered some challenges when she tried to pin the accessories to the fabric of the garment. She tried many times to pin all the shoulder accessories and fabrics together (see Figure 48), but in the end resorted to using the glue gun and her free hand to stick the accessories on to the fabric. She commented: "*I tried to use hand stitching to stitch the accessories to the fabric, but I found the glue gun was the best solution to stick the accessories to the fabric*" (2.A). She mentioned that, throughout her experience working on 10 plays, she did not usually have to use hand skills such as reconstructing, or otherwise using second-hand costumes, as tailors will ultimately complete the costumes.

Table 12 (findings from the photo shoot) and Figures 49-51 show the final version of the costume produced by **2.A** for Cleopatra at the end of Task 1**.**

Photo session

6.4.7   Level 1: Final version of the costume restyled for the character of Cleopatra

Figure 49: The final version of the redesigned costume made by 2.A

Figure 50: The long scarf is pinned to the costume and then flows from the back (photograph by author).

Figure 51: Attempting to apply some recycling techniques to create accessories (photograph by author).

Table 12: Findings from the photo shoot session

1. **Figure 49** shows that the participant 2.A tried to apply recycling techniques, specifically by using a free hand stitch, but had little experience in skills of construction. However, the finished costume was not professional due to the fragility and damage caused by using a glue gun to stitch some of the fabrics together.
2. The model explained that she was feeling comfortable in the costume (Figure 49). However, because she had to adopt different poses in order to be photographed from different angles, she stated that it was difficult for her to move freely because of pins inserted in the neck and shoulder areas (See Figure 50).
3. Figure 51 shows participant 2.A attempting to recycle some parts of the costume to produce accessories that would reflect the character's personality, such as trying to make a necklace with the long scarf.

6.4.8 Summary

As indicated throughout this section, participant **(2.A)** had a small amount of experience in redesigning and reconstructing costumes, but in general did not appreciably understand the nature of reusing, recycling, and upcycling techniques, although she mentioned having redecorated costumes on multiple occasions. **2.A** first created some quick sketches for her design while she was in the tailor store, which she told me would normally be used by the tailor as a basis for actually making the costume, although this would be based on a discussion between the two of them. Furthermore, the participant believed there was a difference in the skills needed by costume designers and tailors. In her opinion, costume designers do not often need to possess cutting and stitching skills, as they can always ask tailors to complete such tasks. Nevertheless, by the end of this task she was shown (to her own surprise) to have some skill in applying recycling and reconstructing principles, having used second-hand garments to make the Cleopatra costume. In the following section, I will present the findings regarding the performance of the third participant **(3.M)** on the same task.

Level 1 / Participant: 3.M
Character Name: Alice in Wonderland
Play Style: Western Play

6.4.9   Section One: The costume concept and design process workshop

Figure 52: The second-hand servant costume, selected by participant 3.M to be redesigned for the character Alice in Wonderland (Photograph by author).

Showed some experience in recycling garments

3.M began directly with the scissors, cutting pieces from the garment on the mannequin (see Figure 52). As she was cutting the pieces, I asked her if she had drawn a sketch of the costume she wished to produce, or if she had done any research to gain a clearer image as to what she was aiming for with the redesigned costume. She answered:

''It is rare that I draw I a sketch for a costume, I always use some of my imagination or let's say a quick sketch as a direction for the tailor. As I have attended the play Alice in Wonderland before, I already have a clear image of what the character should look like in the end.'' **(3.M).** *After the research process she moved on to making the costume.*

6.4.10 Section Two: The costume production during the workshop

Figure 53: Practical challenges faced by 3.M when trying to patch and stitch her fabrics using some pins to produce and redesign the character's look (photograph by author).

Figure 54: Participant 3.M cutting off the sleeves of the garment to use them as leg accessories for the costume she is preparing for Alice in Wonderland (photograph by author).

Figure 55: Participant 3.M transfers the sleeves of the garment to the mannequin's legs to redesign the original garment so that it fits her chosen character (photograph by author).

Participant refreshed her knowledge of redesign techniques before starting work

As I followed her practical approach to the design process, I observed that 3.M spent at least 10 minutes searching on her mobile for examples presented on the Internet. When I asked her to explain what she was doing, she said: *"I am trying to find an image of Alice in Wonderland as I want to refresh my knowledge on how to reconstruct the garment, because I have not used this method often to make a costume"* (3.M).

3.M has the skills to reconstruct and work with the fabric

After spending one hour cutting and patching some pieces of fabric from the garment she was working on (see Figure 53), I was surprised to see her applying recycling techniques to her garments. I therefore asked her whether she knew precisely what process she was engaging in and if she could identify the skills she was us-

ing. "*I am really not sure if I have recycling techniques or skills, but I have some experience re-cutting fabrics and sometime repairing costumes, because sometimes during the play, the actresses' costumes are damaged, shredded, so I have to try and quickly fix them by using free hand stitching*" (3.M).

Redesigning the costume without knowing what the process entails

Throughout the process I noticed that the participant (3.M) was feeling confused as she used scissors to cut off the garment's sleeves and transform them into leg accessories for the new costume (see Figures 54 and 55). Therefore, during our informal conversation, I asked her why, to which she answered: "*Actually I tried three times to* **reuse** *pieces of fabric (she means recycling), to produce the costume so that it has a great look, to ensure my costume reflects the outline shape for the character Alice in Wonderland*" **(3.M).** This highlights the confusion between reusing garments and recycling textiles that has dominated Kuwaiti design thinking.

Adding accessories to give the character a personality and to style the finished costume

Figure 57: Final touch-ups (photograph by author).

Figure 56: Final touch-ups (photograph by author).

Later, as she was approaching the finishing stages of recycling the servant costume into one that would fit her chosen character (Alice in Wonderland), participant **3.M** started choosing some accessories to add, specifically plastic flowers, as shown in Figures 56 and 57. At that point I asked her what stage of the design process she had reached, and she explained: "*I am at the last stage of the process. I am just trying to give the character more personality by using some flowers as accessories.*" **(3.M).** However, as I was to discover later, the only skill she used at this stage was to glue the flowers to the costume.

Table 13 (findings from the photo shoot) and figures 58-60 show the final version of the costume produced by 3.M for Alice at the end of Task 1.

6.4.11 Task/ Level 1: Final version of the redesigned costume for the character Alice in Wonderland

Figure 59: An attempt to reconstruct the skirt and white ribbon (photograph by author).

Figure 58: The final version of the redesigned costume made by costume designer 3.M (photograph by author).

Figure 60: An attempt to reconstruct the chest area (photograph by author)

Table 13: Findings from the photo shoot session

1. I found that, for the costume for Alice in Wonderland, as shown in Figure 58, the participant 3.M showed that she had some experience in attempting to redesigning costumes and left-over materials. However, the model who tried the costume on said "*I am a little bit comfortable in this costume, but I think there are some pins which touch my skin*" (3.M).
2. Additionally, it was also clear that the participant has some experience with reconstructing skills, learned through her background spent making quick repairs to costumes on stage, and this is shown in Figure 59 where the skirt was reconstructed during the redesigning process with the white ribbon at the edge of the sleeve. However, it was close to falling down because she used pins rather than manual stitching (see Figure 59).
3. Figure 60 shows that 3.M reconstructed the chest area and had tried many times to re-design it by cutting the fabrics into a triangle shape.

6.4.12 Summary

It became evident that participant **3.M** has some knowledge of and experience in recycling and redesigning costumes. However, the costume she created was not of high quality, as seen in the figures displayed previously. Moreover, the model wearing the costume indicated that it was not very comfortable primarily due to the multitude of pins used to attach the accessories and essential pieces of the costume. The designer also showed little understanding as to what recycling a costume entails, and therefore found it particularly challenging to organise the redesigning process. Ultimately, she was unable to state with any certainty whether what she had created was indeed a recycled costume.

6.4.13 Summary of Task/Level 1

As discussed as in the review of scholarly literature, research specifically focusing on costume design in Kuwaiti theatre is scarce. Nevertheless, the findings revealed in the practices of the three participants (**1.H, 2. A, and 3.M**) reflect the views of Najam et al. (1997) who claimed that Kuwaiti costumiers know how to draw costumes and have some skills in constructing (recycling) costumes, even if these are limited.Other research studies have claimed Kuwaiti costumiers have the skills to draw but not make costumes. In this study, the Level 1 task showed that the three Kuwaiti costumiers possessed **reusing and recycling skills** and were capable of reconstructing a single garment based on minimal experience in re-cutting fabrics, manual stitching, and so on. However, they have trouble recognising or understanding those skills, even as they apply them. Manual stitching, besides re-cutting, is the main skill they possess, having gained this through exposure to tailors. This lack of experience explains their difficulties when applying redesign techniques in Task 1, and their inability to rise to the challenges posed by recycling more than two garments to produce a character outfit.

Thus, one of the main research questions has definitely been answered: "Do the Kuwaiti costume designers lack technical skills when making the costumes?" The initial answer is a definite "no" as they have the ability to working with reusing and recycling techniques, albeit with the two exceptions mentioned above. Task/Level 2: Makeover Garments will now set out to definitively answer the second question: "Are there any particular undiscovered issues stopping the Kuwaiti costume designers from reusing and recycling textiles in Kuwaiti theatre production?"

6.5 Level 2: Makeover Garments – selecting used garments, working on additional garments, using additional materials

Level 2 / Participant: 1.H
Character Name: Amena
Play Style: Kuwaiti traditional style

6.5.1 Section One: The costume concept and design process during the workshop

Rarely reused or recycled more than one garment

Figure 61: A dark green second-hand dress (photograph by author).

Figure 62: A second-hand skirt (photograph by author).

Participant **1.H** selected two garments: a dark green dress and a colourful skirt (see Figures 61 and 62). I later found that she had not conducted any research regarding her character (Amena), nor had she drawn any sketches to help her construct a clear and unitary image as to what her character should look like. Despite this, she **(1.H)** spent almost 10 minutes looking through garment options before choosing just two.

When I asked her what she was thinking about, she answered: *"I am thinking about how to complete this task in the right way, because most of the time, in the process of making a costume, if I need to put together two garments I sometimes purchase them (for example a T-shirt and pants) and the actress wears them on stage as a normal costume. As you know, I have some experiences in altering costumes manually due to them sometimes shredding during performances. But it is a really a challenging task, because in Kuwait theatre we rarely use this method and instead create new costumes"* (1.H).

6.5.2 Section Two: Costume production during the workshop

Figure 64: 1.H attempting to recycle fabric for the collar (photograph by author).

Figure 63: One of several attempts to put the fabrics together (photograph by author).

Trying to implement recycling skills and techniques with more than 2 garments

A variety of experiments later demonstrated that she was somewhat confused about the basic implementation of recycling through reconstruction skills, especially with more than one garment. This led to her mainly experiment with the garments around the mannequin, such as trying to fit the skirt with the dark-green dress (see Figure 63). When I asked her what she was trying to do, she explained: "*I am trying to reposition the skirt. I am a little confused about how I should put this skirt together with the dress, to transfer the image of the character on my mind*" **(1.H)**.

Applied recycling techniques for the skirt without knowing that she was using them

While making the costume and engaging in informal conversation, participant **1.H** tried throughout to draw upon the skills and techniques she possessed, stating: "*Perhaps I think maybe I am now applying the right skills of a recycling techniques in this task*" (1.H). She relied on her imagination and memory of what she had previously seen at the tailor's, such as sewing and stitching the fabrics together. "*I think I will use free hand stitch to stitch the skirt and dress together*" (1.H).

Found the technical skills needed to reconstruct (recycle) the 2 garments to be too complex

While creating her costume, participant 1.H cut the collar off the dress she had chosen and then tried to shed pieces of the dress (see Figure 64), first using only her hand and then using only the scissors. I asked her what the reason was for cutting off pieces of the dress, such as the collar and other components, because I wanted to know if she understood the methods she was intuitively trying to apply. She stated: "*I think I am in between the reusing and recycling process, such as trying to create some accessories from this dress. Then I will try to stick them on the other dress, but I find this level 2 requires some complexity to transform (reconstruct) more than one garment to create one character*" **(1.H).**

Found it difficult to understand the terms "reusing" and "recycling"

The technique she employed, cutting off the dress's collar, confirmed that I should continue my conversation with her so that I could ascertain whether she was aware she was using a sustainable method of reusing and recycling garments. I asked her a direct question: "Do you know what method you are using now?" She responded: "I think I am now reusing pieces of fabric. I found this reusing technique a little bit complicated compared to how I usually proceed, which is by purchasing the accessories for any costumes that I want to produce and sticking them directly on the costumes." (1.H).

Figure 65: 1.H attempting to recycle fabric (photograph by author).

Figure 66: 1.H is attempting to attach the collar to the dress (photograph by author).

Uncertain about her technical reconstruction skills and techniques

In the final stage of the costume creation process, I observed that 1.H was having some difficulties completing Level 2. I asked her about the challenges she was facing, and she responded: "*I am now finding myself struggling somewhat to redecorate and stick the fabrics together* (see Figure 65). *I used a mix between glue gun and hand stitch. I feel the costume I designed looks great as a recycled costume*" (1.H).

1.H only understands what costume reuse and recyling techniqes consist og at the end of Level 2

During the final stages of preparing her costume for Amena, 1.H used a glue gun to stick the collar to the dress, as shown in Figure 66. While trying many times to put the skirt and the dress together, she commented: *"I think I am just experimenting. I am not sure how I can make this skirt hold on to the dress."* **(1.H).**

Eventually she used hand stitching, commenting *"I am good at using my hand stitching, I have skills of reconstructing (she means recycling) the fabrics but I am not confident enough to use this technique to transform more than one costume to a new character. Still, I think maybe now I understand what recycling means, namely, to transform something already used into new things with some second-hand materials"* (1.H). **Table 14** (findings from the photo session) and Figures 67-69 show the final version of the costume produced by 1.H for Amena at the end of Level 2.

Photo session

6.5.3 Level 2: The final version of the costume created for Amena

Figure 67: The final look for the character of Amena made by 1.H (photograph by author).

Figure 68: Amena's collar (photograph by author)

Figure 69: Amena's costume as viewed from the front (photograph by author).

Table 14: Findings from the photo shoot session

1. Figure 67 shows that participant 1.H tried to use her creativity by applying as high a level of recycling as possible in level 2; for example, by integrating the necklace and the red flower into the costume as accessories. The end result demonstrates that she tried to apply reconstruction skills by using more than one recycled garment and technique to adequately finish the costume.

2. Figure 68 shows all the accessories above the shoulders, with visible signs of 1. H's efforts to recycle them. However, the final state of this costume did not meet professional standards, mainly because she used a glue gun rather than manual stitching,

3. During the photo shoot session, the skirt fell down because it was placed on top of the dress using pins and only minimal manual stitching. I had to use some clips to hold the skirt around the model's waist **(see Figure 69).** Nevertheless, this shows that the participant knows enough to at least attempt recycling or use the other sustainable skills Level 2 relies upon.

6.5.4 Summary

The techniques used by the participant **(1.H)** throughout the costume creation process, as well as the concerns she expressed, indicate that she misunderstood what it meant to apply the right reconstruction techniques to complete Level 2. On the other hand, she did know some recycling techniques (the high level of reconstruction techniques in her design process) even if she did not recognise them for what they were. She tried to approach the task creatively and therefore used several sustainable techniques (reuse or recycling). However, when she tried to reconstruct the garments, she did so without a full notion of what she was looking to achieve by extracting decorations from one garment and reusing it in her costume. She states that a lack of resources prevented her from forming a full picture. She mentioned that usually she would buy all the accessories needed to create or embellish a costume. Ultimately, her experience in recycling was minimal, as indeed it was in reconstruction (re-cutting fabric materials, performing garment makeovers). The result was a reasonably good looking but flimsy combo of two garments, due to what she admitted was a lack of knowledge and understanding of reuse and recycling techniques, specifically reconstruction techniques and associated skills. In the following section, I will present the findings regarding the performance of the second participant (2.A) on the same task.

Level 2 / Participant: 2. A
Character Name: Cleopatra
Play Style: Egyptian style

6.5.5   Section One: The costume concept and design process during the workshop

Figure 70: A second-hand embellished black dress (photograph by author).

Figure 71: A second-hand embellished black skirt (photograph by author).

Some ability in applying reusing and recycling techniques involving 2 garments

To complete Level 2, the participant working on the costume for Cleopatra (**2.A**) selected two garments and some second-hand accessories. The first was a long black dress with golden embellishments (see Figure 70) and the second was a black skirt (see Figure 71).

As in Level 1, when **2.A** did not possess the skills to draw a sketch of the costume she wanted to create, she launched directly into research on her mobile phone to search for examples of a costume that would fit Cleopatra. During this research, I o asked what skills and techniques she intended to use to transform the two garments so that they would fit another character. She answered: *"This task is a real challenge for me. I remember that I once combined two hats together for one actress but transforming more than one garment to produce a single costume will be very challenging for me. I will try to cut the fabric and use my experience in hand stitching to do a garment makeover, but I am very excited"* (**2.A**).

6.5.6 Section Two: Costume production during the workshop.

Applying recycling techniques without knowing this

In the second step of my investigation, participant **2.A** worked on measuring and cutting the materials of the garments. When I asked her what she was doing, she said: "*I am trying to measure the waist of the dress (see Figure 72) in order to cut the pieces that I want so as to start making the costume. To be honest, in Level 2 I found that I have some skills that I did not know I had, such as measuring the fabric. It's rare for me to do that, or to recycle some pieces of leftover costume fabrics. I am not sure if I am applying recycling techniques or not, but I hope I am using the right process to complete this task*" **(2.A).**

Trying to recycle (reconstruct) a black skirt

During an informal conversation I asked the participant what methods she was working with, and if she had used recycling. I observed that she seemed to be having trouble cutting the black skirt. This was because the skirt was made of a stretch fabric and the line, she was trying to cut was not straight but curly (see Figure 73). This led her to comment that "*I am just trying to reconstruct it. so I'm now trying to reuse and re-cut this fabric to transform the skirt into something that fits my imagined view for the character. I will then combine this fabric with another fabric into one costume piece*" **(2.A)**.

Figure 72: Trying to understand how to measure a dress for the first time in her career (photograph by author).
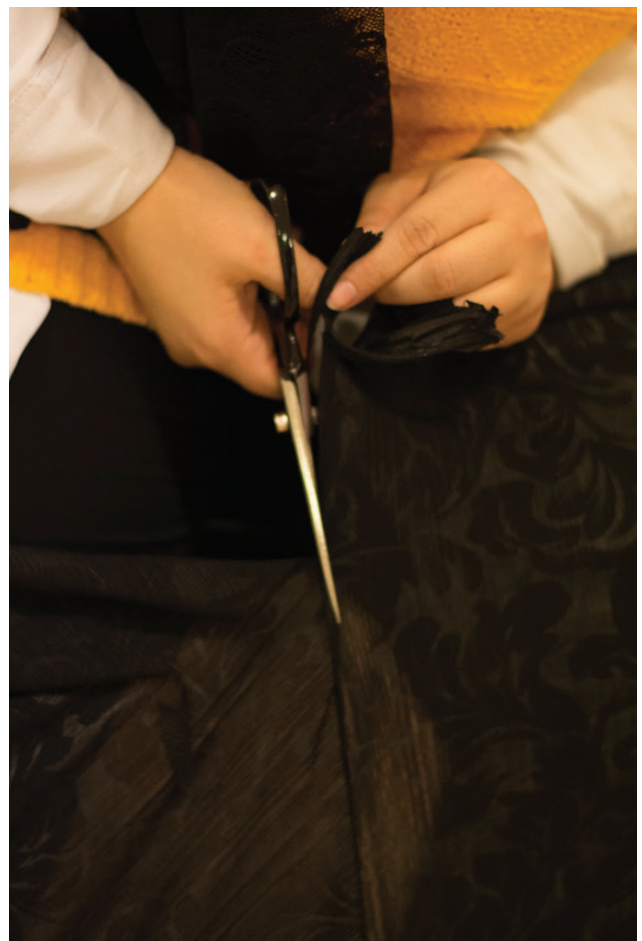
Figure 73: Trying to cut the long black skirt (photograph by author).

Figure 74: Trying to stick the accessories using a glue gun (photograph by author).
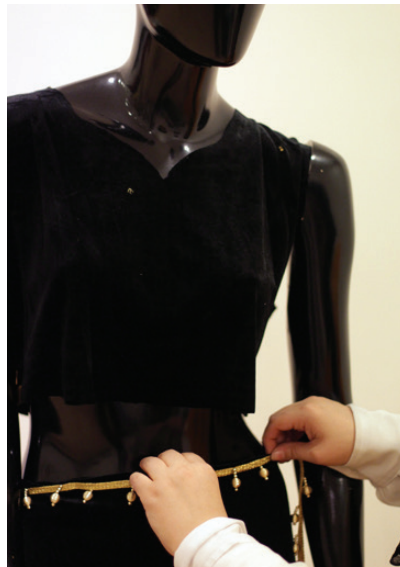
Figure 75: Sticking the belt using some pins as well as a glue gun (photograph by author).

Figure 76: Trying to change the position of the costume on the mannequin (photograph by author).

Using a glue gun and manual stitch to complete the recycled costume for the character of Cleopatra.

After trying several times to measure and cut the fabric, participant **2.A** moved on to produce her Cleopatra costume. However, I noticed that she was using a glue gun instead of manual stitching to apply the accessories to the costume (see Figures 74 and 75). When I asked her to tell me about the technique, she was using to put the garments and materials together, she told me: *"I don't know what the techniques that I am applying are called, for the accessories. But I am now trying to stitch the fabrics, I am using the glue gun to hand stitch them in place. I know that it may not work with the fabric, but I don't have any other choice. At least this way at the end I will have the chance to show the design I produced for the Cleopatra character and I will be able to complete the task."* **(2.A)**. This shows that the participant is wrongly conflating glue gun use with stitching, highlighting the gap in knowledge with regard to how actual garment construction and recycling skills are defined.

Technical issues while recycling the skirt and the dress

As she did with the belt, participant **2.A** put together the top of the dress and the skirt using a glue gun, which she considered to be a method of hand stitching. She did not consider it necessary to move the dress and skirt on to the mannequin. Consequently, when she tried to change the position of the garments, the two pieces would not move as they were glued to the mannequin (see Figure 76). Eventually she shredded and cut them so that she could shift and otherwise manipulate them.

Lost the mental image of her character while working on the recycled Cleopatra costume

Although participant **2.A** continued talking and commenting while she was making her costume on the mannequin, she did not know what the costume would look like at the end of the task. She mentioned that: *"I think I lost the picture and the image as to how the costume for Cleopatra will look at the end. I am just playing with the accessories to put them onto the costume."* **(2.A)**.

Changed her previous design ideas while reconstructing (recycling) the fabrics

During my investigation, I observed participant **2.A** change her design ideas during the second part of the process. She seemed to have changed her mind about what she had decided to produce at the beginning of Level 2. Her stated reason was: *"Before, I wanted to cut a bit off the waist, but I realised I cut the dress into pieces the wrong way, therefore I had to change my design according to this mistake"* **(2.A). Table 15** (findings from the photo session) and Figures 77-79 show the costume produced by **2.A** for the character Cleopatra at the end of Level 2.

Photo Session

6.5.7 Level 2: The final version of the costume created for Cleopatra

Figure 78: Different positions for the Cleopatra look (photograph by author).

Figure 77: The final recycled look for Cleopatra (photograph by author).

Figure 79: Pins are visible around the waist (photograph by author).

Table 15: Findings from the photo shoot session:

1. Figure 77 and 78 clearly show the success participant 2.A had in transforming the multiple garments she chose for the creation of Cleopatra's costume. However, they also show the unprofessional way in which the reconstruction techniques were applied, mainly through the large number of pins used to secure the gold belt and the skirt to the waist, thus making it impossible to wear comfortably.
2. Figure 77 shows how participant 2.A applied the recycling techniques, namely by taking multiple garments which she then cut and transformed, such as turning the long dress into a shorter skirt.
3. In Figure 79, it can be observed that the pins are visible around the waist. Also, the model had to hold the skirt with her hands during the photo shoot because the designer had not provided a zip and the stitching was not strong enough to keep the fabrics tightly fastened together. I had to use clips to hold the top and the skirt together, because otherwise the skirt would have fallen down.

6.5.8 Summary

Participant 2.A had some success in completing Level 2, managing to use multiple used garments and a bundle of fabric pieces/scraps to create a costume representative of her mental outline for the character Cleopatra. **2.A** actually applied recycling techniques, even if she did not precisely know she was doing so. However, throughout the process the participant faced some challenges due to her limited experience in reconstruction (recycling) and garment management skills, such as cutting and using manual stitching to sew fabrics. She therefore had to be creative when putting the pieces together, as she had no experience to guide her decisions regarding where to use pins or to sew instead of using glue. Participant **2.A** also realised at one point that she had not cut the fabric as needed. Consequently, she had to readjust her initial idea to fit the resources she had available. Regarding the techniques used (**re-cutting and reconstructing garments**), **2.A** demonstrated awareness of the fact she did not employ the most effective methods but admitted that she had no alternative but to try if she wished to complete the task. All things considered, participant **2.A** turned out to have the skills needed to work with recycled fabrics, but these were minimal due to her limited experience in manipulating garments. That said, she was still unable to demonstrate a clear understanding of the **recycling** concept and used the term "**re-cutting**" instead. In the following section, I will present the findings regarding the performance of the second participant (3.M) on the same task.

Level 2 / Participant: 3.M
Character Name: Alice in Wonderland
Play Style: Western style

Figure 80: Long red dress (photograph by author).

Figure 81: Red dress for children (photograph by author).

Figure 82: Second-hand white jacket (photograph by author).

6.5.9   Section One: The costume concept and design process during the workshop

The first time the participant attempted to recycle more than one garment

The participant who created a costume for Alice in Wonderland surprised me by choosing three garments for the second task: a red long dress, a red dress for children, and a white jacket (see Figures 80, 81, and 82). On being asked why, she told me: *"I think it will be creative if I reuse more than one garment and tried to reuse (she means recycle) them to produce the character Alice in Wonderland., so I want to do my best to try and experiment throughout the process. I am looking forward to seeing what my costume will look like at the end of Level 2"* (3.M). Unfortunately, this optimism did not entirely hold up in the face of the issue that arose later during the workshop, namely the participant's lack of a clear design vision for the costume.

Working to complete Level 2 without any clear design vision

While observing the participant during Level 2, I noticed that she did not create a drawing and did not write any notes to organise her creative process. This prompted me to ask what the design vision behind her approach was, and how she knew what her costume would look like. I wanted to assess her understanding of what she had to do for the second task. She explained: "*I don't have a specific design process before working on a costume but can approximate the image of the costume in my mind.*" (3.M).

6.5.10 Section Two: The costume production during the workshop

Using YouTube tutorials as inspiration and for garment recycling research

After the participant **3.M** selected the three-second hand garments, she proceeded to reconstruct the pieces without knowing what the end result should look like. She started with the red long dress (See Figure 83). While she was cutting the garment, I asked her about the techniques and skills she intended to use to reconstruct a new costume from old garments. She answered: "*I have the skills of cutting the fabrics, but I am trying to re-cut or reuse the red dress fabrics to implement my design vision to produce the character's look. Ten minutes back I looked on YouTube for some tutorials on recycling garments, just to gain some idea of what it means to reconstruct more than one garment, because I want to do the job in this task the right way. Now I am trying to deliver my ideas according to what I have seen in the videos*" (3.M).

Figure 83: Participant 3.M trying to cut the red long dress after watching reconstruction tutorials from YouTube on her mobile phone (photograph by author).

Figure 84: Alice in progress (photograph by author).

Figure 85: Alice in progress (photograph by author).

Patching the costume accessories without understanding the recycling techniques

While working on her costume for Alice in Wonderland, participant (3.M) put together the elements of the costume by using a large number of pins, while manual stitching took a distant second place (see Figures 84 and 85). She also used a glue gun to stick on some playing cards (see Figure 85). When I asked her about her choice of technique in placing the accessories she stated: "I do not know the name of the technique I am using, but I am trying to give the character its proper personality. I remember from when I saw the play that she was standing on a background made of play cards. Additionally, I placed the big red flower on the waist because I consider this to be a beautiful addition to the costume" (see Figure 86).
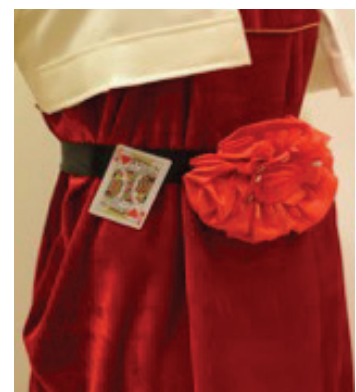
Figure 86: The red flower accessories (photograph by author).

Figure 87: Unused red children's dress (photograph by author).

Chose not to reuse and recycle the red children's dress

Her answers regarding design making and techniques led me to ask her if she understood the options available for **reusing and recycling** costume accessories. I also asked why she did not use the red children's dress (see Figure 87), as she had selected it at the beginning of the task. Her response was: *"When I first thought of the design, I imagined I would cut the flowers from the red children's dress and add them to the costume on the mannequin. Then I thought that maybe I would damage the dress and since they looked so beautiful, I decided not to cut them and instead place those playing cards and big flowers onto the costume"* (3.M).

Table 16 (findings from the photo session) and Figures 88-91 present the final version of the costume produced by **3.M** for the character of Alice at the end of Level 2.

Photo Session

6.5.11 Level 2: Final version of the costume created for Alice in Wonderland

Figure 88: Alice in Wonderland-final costume (photograph by author).

Figure 89: Alternative view of Alice in Wonderland-final costume (photograph by author).

Figure 90: Damage to the white jacket fabric (photograph by author).

Figure 91: Patching red flowers as a costume accessory (photograph by author).

Table 16: Findings from the photo shoot session

1. During the photo shoot session, participant **3. M's** minimal experience in reconstructing fabrics and garments showed in her attempts to recycle two out of three chosen garments, eventually bringing the character of Alice in Wonderland into reality, despite the lack of initial vision or design sketches (see Figures 88 and 89).
2. During the photo shoot session, I noticed that the fabric on two of the costumes was slightly damaged (see Figure 90) because 3.M had used a glue gun instead of purely focusing on freehand stitching when applying the recycling techniques.
3. It became evident during our conversation that the participant added the accessories (playing cards and red flowers) without having a clearly thought out reason for doing so. She commented that she just wanted to redecorate the costume without understanding which kind of techniques should be used (reuse or recycling) (see Figures 90 and 91).

5.5.12 Summary

Participant **3.M's** creative process entailed experimenting with the fabric and cut-outs from the garments she had chosen. This shows that she had some experience with sustainable strategies **(reusing/recycling)**. Nevertheless, her approach and techniques ultimately resulted in damaging the material and making it unfit for potential further reuse. What also stood out was that **3.M** approached the task without developing a clear design process for completing it. Instead, she was not sure how the final costume should look and tried to keep her options open while trying out different combos. She clearly had the ability to apply reusing and recycling techniques demanded by this Level 2 task, but her misunderstanding of sustainable concepts and techniques prevented her from avoiding pitfalls, such as giving up on using one of the three garments she had initially picked out. Ultimately, although the costume was somewhat serviceable, it was far from perfect and **3.M** was ultimately unable to properly explain and differentiate the techniques she used.

6.6   Summary of Task/Level 2

Following Task 2, one of the main research questions has definitely been answered: Are there any particular hitherto undiscovered issues stopping Kuwaiti costume designers from reusing and recycling textiles in Kuwaiti theatre production? Task 2 showed that the participants did not really **understand the differences between reusing and recycling** skills and techniques, nor how to apply them. 2.A and 3.M also made mistakes when cutting and had to change design choices on the fly, while reuse and recycling notions continued to elude them; however, this showed they had the creativity to bring the look of the character to life. Unfortunately, the practical skills needed for Level 2 in terms of the complexity involved in working on and using additional garments and materials were beyond their capabilities, especially when sewing (recycling) more than one garment. However, by the end of Task 2, the three participants had demonstrated their practical abilities in the use of reuse and recycling techniques and were able to transform their ideas into complete costumes (if not a completely perfect look).

These findings reflect those of Dam and Siang (2018), discussed earlier in chapter 1, regarding stage 5 of the design thinking process (Miller, 2017). The Kuwaiti costumiers were able to follow the design thinking process in this stage as they were able to 1) Empathise; 2) Define; 3) Ideate; 4) Prototype; and 5) Test. This was especially the case for **Ideate**: when they firstly implemented brainstorming or otherwise developed creative solutions to complete the task, and 2) **Test**: when they tested their skills while cutting the fabrics (IDF, 2018). This illuminates the explanation given by Cross (2011) that the term design thinking refers to the cognitive processes involved in design work, or the thinking skills and practices designers use to create new artefacts or ideas and solve problems in practice. The design thinking practices they employed also align with the claims of Kelley and Kelley (2013) and Henriksen et al., (2017) that design thinking is an interdisciplinary domain that employs approaches, tools, and thinking skills that help designers devise more and better ideas for creative solutions. In the next section, the findings for Task 3: (Level 3) Complete Costume Design – making a complete costume from scratch will address the following research question: ''What are the barriers preventing Kuwaiti costume designers from applying methods of reusing and recycling, or otherwise reducing textile waste?

6.7 Level 3: Complete Costume Design – making a costume from scratch

Level 3 / Participant: 1.H
Character Name: Amena
Play Style: Kuwaiti traditional style

6.7.1 Section One: The costume concept and design process during the workshop

Figure 92: Amena sketch (photograph by author).

Drawing a sketch of the character

For the third task, the participant (1.H) began by drawing a sketch of the character for whom she had to create a costumer. She was the only participant who drew sketches during the workshop; however, she was not consistent in her approach as she only drew sketches for the first and last task (see Figure 92). When asked during an informal conversation about her inconsistent approach to solving the proposed tasks, she answered: "*I do not know, it depends on my imagination. Sometimes I can build the full image of the character in my mind and sometimes I need to draw sketches to put on paper what I have in mind.*" (1.H) .

6.7.1.1 Section Two: The costume production during the workshop

Unsure how to recycle fabrics

Later, after she had finished her sketch, she appeared confused as to how she would build the costume from scratch. She told me*: "I really am not sure how to start, how to make a long dress using just a flowered pattern fabric, to make a costume from scratch. I think I will maybe look again on YouTube, to gain some experience in applying recycling techniques for this task. It's a really challenging task, but I will try to bring all my experience to complete the costume"* (1.H).

Figure 93: Trying use pattern cutting (photograph by author).

Figure 94: Attempting to make sleeves (photograph by author).
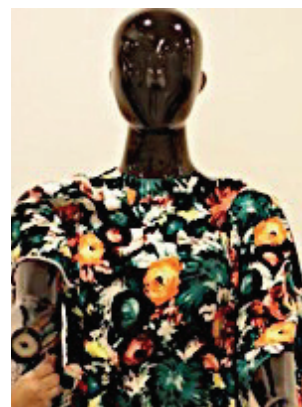
Figure 95: Trying to reconstruct the fabrics (photograph by author).

6.7.1.2 Little experience in pattern cutting or working with recycled materials in general

As she was working on her costume, I observed participant **1.H** trying many different ways to create it from scratch and contemplate the vision for the final costume. She wanted to create a long dress, so she started by cutting the fabric (see Figure 93) but commented on her limited experience with actual tailoring skills throughout the process: *"I know how I can cut the fabrics but don't have much experience in pattern cutting from scratch. I want to create a sleeve for this dress, but I am not sure how I can cut this fabric and recycle it in a professional way."* (1.H).

6.7.1.3 Demanding the assistance of a tailor when it came to use of the sewing machine

As participant 1.H continued to work on the costume, she continued to struggle to make the sleeve for the character Amena (see Figure 94). During our informal conversation I asked how she planned to recycle the garment and make a sleeve out of it, and specifically what was preventing her from doing so. She responded with the following: *"I found myself in some way struggling because I am alright with cutting this recycled fabric, but in the rest of the task, it's really hard because my skills in using freehand stitch or using the glue gun to combine the fabrics together are not working very well. I don't have any experience in using the sewing machine, as that's always the tailor's job. Still, I think I can use manual stitching instead, so I will try to bring my design idea for the character Amena to life by hand and hopefully complete this level 3"* (1.H).

Attempts to recycle the waist fabrics

As I continued observing **1.H**, I realised she was trying to reconstruct the fabrics meant for use on the waist of the outfit (see Figure 95). "*I am actually trying to change the shape of this fabric (she was referring to recycling them without knowing it) for the costume waist. I first tried to cut the fabrics in medium pieces so that I might stitch the two pieces of the dress together to give the costume at the end a different look. But I am struggling a little bit in combining the top part of the dress and the waist together into one piece. I really think a tailor is needed to sew these components together, but I will try to manually stitch them and use some clips to keep them in one piece*" (1.H)

.

Did not apply recycling techniques to the green fabric

As she was approaching the final stages of the creative process, putting the final touches to the costume she had created for Amena, I noticed that **1.H** did not apply any recycling techniques to the green fabric (see Figure 96). When I asked why this was, she commented: "*I have a design in my mind and in my sketches, but I cannot make it. I would need a professional tailor to help me deliver my ideas, so I used the fabric and made it into a head cover for the character.*" (1.H).

Reused the shells as part of a recycling technique

I observed that the green fabric was damaged and had been mended with some glue, so I asked the participant why she had applied the shells onto the perforated fabric texture (See figure 97). She explained: "*I used the shells as a costume accessory for the character Amena in an attempt to recycle the green fabric itself. This was because I found the technique on YouTube, to change the fabric style by adding some accessories on it, which I understand to be part of a recycling technique. Do you think what I did is wrong, or maybe it's just not an actual recycling technique?*" (1.H).

Table 17 (findings from the photo session) and Figures 98-102 present the version of the costume produced by **1.H** for the character Amena at the end of Level.

Figure 96: Amena in progress (photograph by author).

Figure 97: Amena in progress (photograph by author).

Photo session

6.7.2   Level 3: The final version of the costume for Amena

Figure 98: The final look for the character of Amena (photograph by author).

Figure 99: Alternative view of the final look for the character of Amena (photograph by author).

Figure 101: Unstitched costume
(photograph by author)

Figure 100: Unstitched costume (photograph by author)

Figure 102: Shells were falling off (photograph by author)

Table 17: Findings from the photo shoot session

1. The character (Amena) is a poor woman who lived in an old city in Kuwait from 1940 to 1960, before wealth was created by the discovery of oil. Participant **1.H** tried to reflect this in the design, as can be seen in Figures 98 and 99. She portrayed the character Amena as a rich Kuwaiti woman in 1940, which is the opposite of the character in the script. The participant started working directly with the fabrics and did not use any methods of textile recycling such as dyeing the fabrics. This reflects the poor personality outline for the character (Amena).

2. During the photoshoot session I noticed that, in all areas, the costume was not stitched very well (see Figures 100 and 101). Also, the recycled fabrics used for the costume were damaged due to **1.H** using a glue gun to complement her stitching technique.

3. **1.H** had thought the shells could be worked into the outfit as an example of a recycling technique using this green perforated fabric texture. However, during the photoshoot, i realised that all the shells that had been glued onto the costume were falling off, especially when the model changed her pose, indicating a poor understanding of how recycling techniques should be executed (see Figure 102).

6.7.3 Summary

Like the first task she completed, participant **1.H** began Level 3 by drawing a sketch of the costume she wanted to create. However, she struggled to identify an effective approach to actually creating the costume and adapted the end result to her capabilities to complete Level 3 using the recycled fabrics. For example, although she had initially planned to create and recycle a long dress with long sleeves, she could not find a solution for actually producing the sleeves, ultimately leaving the dress sleeveless. This showed she lacked the necessary cutting and sewing skills, prompting her to rely on manual stitching instead, with copious aid from the glue gun. [1.H repeatedly told me that tailors are meant to complete that part by using the sewing machine to stitch the recycled fabrics, this being the reason why costumes turn out professionally]. This clearly showed that the designer did not have much knowledge of implementing recycling techniques, let alone creating a whole costume from scratch or, as was the case here, from recycled fabrics. In the following section, I will present the findings regarding the performance of the second participant (2.A) on the same task.

Level 3 / Participant: 2.A
Character Name: Cleopatra
Play Style: Egyptian Pharaonic style

6.7.4   Participant 2.A

6.7.5   Section One: The costume concept and design process during the workshop

Figure 103: 1.H attempting to apply a recycling technique
(photograph by author).

Attempted to apply recycling methods

Similar to her approach to the first two tasks, for task three the participant (2.A) began by working directly on the fabric. Once again, she did not use any sketches or drawings before starting to cut the fabric (see Figure 103). Her first reaction upon being informed that Level 3 required her to work with recycled fabrics was to be intimidated: "I think from the last two previous tasks I gained some experience and understanding of recycling techniques. But if this Level 3 requires me to make a costume from scratch, and to use purely recycled materials, then I expect it to be a real challenge. It needs need more knowledge of recycling than I actually have, I think" (2.A).

Advanced skills are needed to apply fabric recycling methods

Participant 2.A eventually asked me outright what I meant by recycling textiles in Level 3. When I explained this, she was very surprised at the range of methods used (pattern cutting, sewing, dyeing, etc.), even more so when she used her mobile to find information on the Internet. She looked on YouTube and saw the many different techniques employed in reusing and recycling textiles. Subsequently, I asked her if she had ever used such techniques or wanted to apply them to the Cleopatra costume, she had to create for Level 3. She replied*: "I think reusing and recycling are amazing techniques, but it is very challenging for me to achieve such a task. But I remember that 2 years ago I tried once to make a bag from leftover fabric from a character costume, so I will try to use maybe the same techniques here, like cutting and freehand stitching, to complete this costume in level 3" (2.A).*

6.7.6   Section Two: Costume production during the workshop

Figure 104: Trying to find design ideas while she drapes the fabrics on the mannequin (photograph by author).

Figure 105: Creating a cocktail dress without using recycling methods (photograph by author).

Figure 106: Attempting to attach the gold necklace accessory (photograph by author).

Figure 107: Stitching the necklace (photograph by author).

Working without any specific recycling design ideas to complete the Cleopatra costume

After my informal questioning during the design process regarding her understanding of recycling textiles, participant **2.A** began to drape the selected fabrics onto the mannequin (see Figure 104). She tried many times to find a way to stick the fabrics together using pins. I also noticed that she was trying to develop design ideas as she was doing this (see Figure 104). I asked what technique she was using with the fabric to create the costume. She answered: *"I am not sure what the exact name is for the techniques I am using now, but I am planning to cut the fabric and transform it into a short dress. I mean like a cocktail style dress for Cleopatra (see Figure 105). So far, I have no idea what to do with the blue fabric, and I find myself struggling with sewing the materials. Manual stitching maybe isn't working so I need a tailor with actual experience in using the sewing machine"* (2.A).

Misunderstandings regarding the nature of recycling techniques

While creating the costume for Cleopatra, participant 2.A spent 10 minutes trying to attach the gold necklace accessory to the costume (see Figure 106). She tried many times to use pins to stitch the dress and the necklace together, but on each occasion the gold necklace came off. After many failed attempts, she finally managed it by using a needle and thread (see Figure 107). During this stitching process, I asked her to describe her technique, to which she responded: *"I am not sure what the right term for this technique is, but I think I reused the gold fabrics (necklace) to make the costumes"* (2.A).

Participant suggests hiring a special pattern cutter to help with recycling techniques

After she had faced the challenge of working on a costume made of recycled fabric, I asked participant 2.A if her design of the Cleopatra costume could be considered complete. She said: *"To be honest, maybe*

the outline of the costume is rather OK, but I think it's hard to just use manual stitching and pins to complete a costume from scratch fabric material. I think someone who is just expert in pattern cutting and using the sewing machine is needed to complete the costume. I assume based on these three tasks that there are a variety of **reuse and recycling** *methods to use with fabrics and costumes, but I myself need to study more before I am confident I can or even should apply these recycling techniques while making costumes"* (2.A).

Table 18 (findings from the photo session) and Figures 108-110 display the state of the costume produced by **2.A** for the character of Cleopatra at the end of Level 3.

Photo session

6.7.7   Level 3: The final version of the costume created for Cleopatra

Figure 108: The final look for the character of Cleopatra (photograph by author).

Figure 109: Lack of practical skills such as tailoring and stitching (photograph by author).

Figure 110: Costume made without zips and with damaged blue fabrics (photograph by author).

Table 18: Findings from the photo shoot session.

1. The final version of the costume for Cleopatra made by 2.A (see Figure 108) indicates multiple levels of skill (or lack thereof) in applying recycling techniques.
2. Figure 109 indicates a lack of practical experience in recycling fabrics, as well as tailoring and stitching skills in general.
3. During the photo shoot session, the model struggled to put on the costume as participant 2.A had not equipped it with any zips (see Figure 110). Furthermore, the blue fabric was damaged because the wrong pattern cutting, and fabric recycling techniques were used (manual stitching and pins instead of machine sewing).
4. Also, during the photoshoot, I found that the large number of pins in the costume, which the participant had used to put parts of it together, made it difficult for the model to wear. This shows that the designer struggled when working with recycled fabrics, as confirmed by 2.A herself when she noted that she only has experience in using free hand stitching as opposed to the sewing machine.

6.7.8   Summary

Consistent with the way in which (2.A) approached the previous two tasks, she began to create the costume by working directly with the fabric. When asked whether she understood what **recycling textiles** entailed, she spoke of hearing about the notion before and even demonstrated curiosity in finding out what such an approach would entail. The answer I provided, along with the information she found online when researching by herself, made an impression on her. She described the techniques as amazing but stated several times that only a professional with more advanced tailoring and sewing skills (especially using a sewing machine**)** could work with such techniques. Subsequently, she proposed that such a professional could be hired to work alongside the costume designer to produce new costumes by recycling fabrics, because she did not possess professional tailoring skills such as pattern cutting and sewing at the requisite level. In the following section, I will present the findings regarding the performance of the second participant (3.M) on the same task.

Level 3 / Participant: 3.M
Character Name: Alice in Wonderland
Play Style: Western style

6.7.9   Section One: The costume concept and design process during the workshop

Figure 111: Initial cutting (photograph by author).

Figure 112: Initial cutting (photograph by author).

Working without any design direction

The final participant involved in this task (**3.M**) chose to work with two pieces of fabric: a recycled white fabric and a recycled blue fabric (Figures 111 and 112), along with some second-hand accessories. As she had done for the other two tasks, the participant started by working directly with the fabric and began cutting it. However, she did not draw any sketches for this task to help orient her to the process or provide an image as to what the costume should look like at the end.

Rarely implemented reuse and recycling techniques to complete costumes

As I had with the other two participants, I asked 3.M if she understood how to apply recycling procedures when creating the costume for Alice in Wonderland. She said the task surprised her: *"I very rarely work with reused or recycled fabrics, let alone make costumes from scratch. I usually just use new fabrics and sometimes I drape the fabrics on the mannequin while I am at the tailor store. This is just to give me an outline and direction for the costume, but the tailor has to complete it. It is rare in Kuwaiti theatres to use recycled fabrics to make a new costume for any play. […] I think I will make the costumes for this Level 3 from my tiny experience with draping"* (3.M).

6.7.10   Section Two: Costume production during the workshop

Figure 113: Trying to arrange the pieces of fabric in different positions and then stitch them together (photograph by author)

Struggling to work with recycled fabrics, demanded tailor assistance with the sewing machine

I observed the participant (3.M) frequently trying to arrange the pieces of fabric in different positions and stitch them together. She used a variety of assembly techniques from pins to a glue gun, and at times she even tried to stitch by hand (see Figure 113). She tried her best but commented that she was unsure if she was using the right methods *"I am not sure if I am implementing recycling techniques or not, but I cut many fabrics to fit my design idea, hoping to reach the final form and complete a costume. However, I think this task needs me to use a sewing machine, as this isn't a costume that I can just put together with manual stitching, being made from scratch. It's always the tailor's job to use the sewing machine, whether or not the fabrics are recycled"* (3.M).

Figure 114: Draping the blue and white fabrics without using any recycling techniques (photograph by author)

Figure 115: Patching the black ribbon (photograph by author)

Lack of knowledge and understanding of how to apply recycling techniques

I did not observe any recycling techniques being used as 3.M draped the blue and white fabrics on the mannequin (see Figure 114). The fabrics remained the same; she did not attempt to alter them through any method. Instead, she tried for more than 10 minutes to work with the draped materials to restyle their positions. When I asked about implementing a recycling technique for the blue fabric (3.A) she confessed to having insufficient knowledge as to how. *"I think in my case I need maybe have to study or learn and get more knowledge of how I can apply the recycled techniques for the fabrics or how I can reuse the fabrics to recycle them for another character's costume"* (3.M).

Shocked when she eventually understood what textile recycling strategies entail

I observed that the participant tried to recycle the costume accessories (the black ribbon, see Figure 115) and on several occasions attempted to use these accessories to mask areas she had cut incorrectly (see Figure 115). This prompted me to ask about her vision for making and completing the costume for Level 3. Her response indicated mistrust in the ability of reuse/recycling to produce the costumes she was aiming for: "*I am not sure whether my costume really relates to Alice in Wonderland. Also, I researched on YouTube about recycling techniques to employ with costumes and recycled textiles, [and] I found that the work is very different from what I have achieved with my costume. There are variety of professional techniques to make a costume from recycled fabrics that I have not used, and I never would have thought of.*" (3.M)

Table 19 (findings from the photo session) and Figures 116-119 show the version of the costume produced by **3.M** for the character of Alice at the end of Level 3.

Photo session

6.7.11   Level 3: The final version of the costume created for Alice in Wonderland

Figure 116: The final look for the character of Alice in Wonderland (photograph by author).

Figure 117: Trying to implement a recycling technique by using accessories on the chest area (photograph by author).

Figure 118: Trying to redesign and recycle the sleeve (photograph by author).

Figure 119: Attempting to make a skirt out of the recycled blue fabrics (photograph by author).

Table 19: Findings from the photo shoot session

1. At one point, participant 3.M tried to recycle the blue and lace fabrics but, even then, was not sure if what she was doing was recycling or redecorating the costume (see Figure **116**).
2. In Figure **117** it is evident that participant 3.M only pinned the chest accessories onto the costume because she was trying to implement a recycling technique. In addition, she simply cut the black rope to match the costume's chest size (see Figure **117**). This proved problematic when the model tried to put the costume on.
3. As shown in Figure **118**, the participant tried to redesign and recycle the sleeve for the costume, but instead of stitching it in place she tied it on with a white ribbon. She told me that it would take a tailor to actually sew the recycled fabric on as she could not use a sewing machine.
4. At one stage the participant tried to make her costume shorter by making a skirt out of the recycled blue fabrics. To this end, she cut the material but did not try to hide the cut area (Figure **119**). Moreover, she used a glue gun to apply all the accessories (i.e. the white lace and the flowers) so that she could redecorate the skirt by adding the white lace to the top of it. This resulted in damage to the fabric.

6.7.12 Summary

The third participant, **3.M**, proceeded as usual when she approached the new task of designing a costume. She eschewed any forward planning in favour of directly working on the fabric. She confessed that she found the last task to be the most difficult due to her lack of experience in working with recycled textiles, or in actually creating costumes from scratch by herself. I observed that 3.M spent a considerable amount of time draping the chosen pieces of fabric onto the mannequin and changing their position to achieve a different look. She admitted that she did not fully understand what **recycling** techniques entailed, and, when she searched for some examples online, she was surprised. She eventually told me that she could not really work with recycled fabrics or materials due to her lack of experience using the **sewing machine**, and generally lacked any tailoring skills. By the end of Level 3, participant 3.M told me that she did not know if the costume she created really reflected the character for whom it was intended.

6.8 Summary of Task/Level 3

Following Task 3, one of the main research questions has now been answered, namely: What are the barriers preventing Kuwaiti costume designers from applying methods of reusing and recycling, or otherwise reducing textile waste? This also supports one of the objectives for Study 2 which was to understand the skills and techniques used by designers to recycle costumes, and to understand how these are applied to each of the three scenarios. However, the findings from Task 3 showed that the Kuwaiti participants **(1.H, 2.A and 3.M)** have limited experience in employing reuse and recycling techniques as their skills did not go beyond basic cutting and manual stitching. The more advanced methods that would have been needed to make a costume from scratch (pattern cutting, machine sewing, dyeing, etc.) were beyond all three costumiers, preventing them from recycling the fabrics and other materials I provided them with for Level 3.

The findings from Task/Level 3 support the views expressed by Clancy (2014) and Pollatsek and Wilson (2017) in Chapter 2 regarding the process of designing and making costumes. For example, these scholars contend that all costumiers should possess a thorough understanding of the theatre production system. In a practical sense, the basic tools of the costume designer are to understand how to gather the fabrics or other (reused and recycled) materials out of which costumes may be created (Jones et al., 2013). Another point that emerged from the literature discussed in Chapter 2 was that costumiers should also understand the various methods for putting costumes together, such as using a **sewing machine**, and the bodies of the actors themselves, because no costume will make it onto the stage without an actor in character wearing (Geneseo, 2014). Successful costumes are those which are strongly fitted and provide easy movement for the actors on the stage while they perform (Hishon, 2017).

The trio were quite surprised when I explained to them exactly what recycling techniques consisted of, after which they admitted that none of their costumes could be described as an example of reuse or recycling. The designers also unilaterally considered the assistance of a **tailor** to be essential at this level of costume design, even after the workshop was over. As tailors already possessed skills in using the **sewing machine** and professional pattern cutting, among others, the workshop did not impel any one of the participants to master these skills themselves. **3.M** was particularly sceptical of her chances of achieving a similar level of skill or results. Unfortunately, this universal lack of advanced skills prevented all the costumes from turning out to be serviceable, so I was unable to assess the degree to which 1.H was advantaged by sketching her costume in advance, unlike 2. A and 3.M. In the next section I will present findings that illustrate the impact of the three workshops by describing the experiences and perceptions of the three Kuwaiti costumiers regarding the reuse and recycling of costumes.

6.9 Impact of Kuwait Making Workshops: Post-Workshop Interviews

6.9.1 Introduction

In the next stage, I conducted a set of post-workshop interviews to I evaluate the impact of the three workshops on the participants' professional behaviour regarding reusing and recycling techniques in costume design. The interviews were designed to prompt the three Kuwaiti costume designers to talk about how the workshops impacted their "vision" regarding costume creation practices and skills. I also evaluated each participant's set of practices and examined the methods of **reuse and recycling** they implemented. In so doing, I was able to uncover the information necessary to explore both the generalities as well as the particularities of their techniques during all three workshop tasks. This was made possible by observing their practices and hearing their opinions on issues such as adjusting and cutting fabric, whether it was an easy task for them, whether they applied any reusing and recycling technique and strategies during the three workshops, if they were comfortable doing so, and so on. Conversely, I was able to determine how well they understood the elements underlying sustainability (reusing and recycling). I was also able to inquire as to their future plans, whether the challenges they faced (if any) were surmountable, and whether they will be using these techniques (reusing and recycling) in future costume design. I focused the semi-structured interviews on each participant's practices and views after they had finished all three workshops. This meant that two main sections were pursued during the interviews, each containing several topics. I identified the findings from the three Kuwaiti participants in terms of themes from which I was able to draw deeper insights (see Table 20), as I will explain in later chapters.

Table 20: Key topics and themes identified in Section 1

Topic 1: Challenges encountered while reusing and recycling costumes and textile materials
Theme: Insufficient skill and knowledge of costume making
Topic 2: Gaps in knowledge or understanding regarding the practice of constructing costumes and textiles (reusing and recycling)
Theme: Inability to understand costume recycling techniques
Topic 3: Difficulties involved in recycling textile materials
Theme: Failure to follow best practice in the use of recycling techniques

6.9.2   Section 1: Costume Design Practices used during the workshops

6.9.2.1 Introduction

After the workshops had finished, I asked the three Kuwaiti costume designers about the skills and techniques they used while working on the three different tasks. I also wanted to understand whether they encountered any particular difficulties with the skills (reusing and recycling) and techniques introduced in the workshops. The item that stood out most in this respect was that the designers found it hard to use the strategies necessary to effectively **(reuse and recycle)** costumes and textiles. In addition, my first major question concerned the challenges faced by the three Kuwaiti costumiers when reusing and recycling costumes and textile materials. Ultimately, this area proved to be quite problematic in Kuwait, as the ensuing discussion will more thoroughly demonstrate. The responses provided by participants will now be described sequentially.

6.9.2.2 Topic 1: Challenges encountered while reusing and recycling costumes and textile materials

Insufficient skill and knowledge of costume making

The three workshop participants, **1.H, 2.A** and **3.M**, all reported that they faced several challenges when using their skills and techniques to complete the three tasks. When I inquired as to the specific nature of these difficulties and challenges, their answers reflected both personal inability and a lack of experience with such practices. However, as noted in the literature review (see Chapter 2), costume designers from Kuwait principally operate on the basis that creation and *production* are not actually part of their job. This was especially true of participant **1.H**, an academic costume designer who studied at the Institute of Arts in Kuwait:

  *"For me, I found that Tasks 1 and 2 are a little bit more relevant to my practical skills such as hand stitching, but the last task [Task 3] was challenging for me, and I think it required someone with more experience than me, such as a tailor, in the way of reconstructing the costumes, textiles, using the **[machine sewing]** techniques. So, finishing all the tasks was a bit challenging because I have neither the experience nor the educational qualifications to reuse or recycle costumes or textiles"* **(1.H).**

The views of participant **2.A**, the freelance costume designer who had studied some courses in costume design in a private institute in Kuwait, were otherwise similar to those of 1.H:

*"The most challenges I faced were to use my hand skills when cutting the fabrics and trying many times on all the three tasks to find a way to stitch the garments together. I did not have any experience in **[tailoring]**, and I have little experience in using my practical hand techniques"* **(2.A).**

As before, participant **2.A** lacked the necessary skills and knowledge to employ reuse and recycling procedures, her justification being that this is the job of the tailor in Kuwait. The third participant, **3.M**, who is also a freelance costume designer with experience working on various academic plays for festivals and shows in Kuwait and the Gulf region, stated:

  *"It was a really surprising task for me, because in all the three tasks, it's **[a tailor's]** job not a costume designer's job, or someone who is expert at using [machine sewing] techniques to reuse and recycle. But in my case, I faced challenges in implementing my design on the mannequin, and I am not sure if I applied a recycling technique or not"* **(3.M).**

The trends that emerged during the initial interviews played out during the workshops. The three Kuwaiti costume designers proved to be very limited in their ability to reuse and recycle existing costumes and textiles to design a new costume. Chiefly, this is attributable to the division of responsibilities that exists in Kuwait between the roles of the costume *designer* and the costume tailor. The three Kuwaiti designers all told me that they lack the skills and even the necessary education, despite having received formal instruction in their roles from various learning institutions. In sum, Kuwaiti costume designers lack knowledge and understanding of how to reuse and recycle costumes and textiles to create new costumes. This tied in to my second major question, which focused on how much the three Kuwaiti designers knew and how well they understood the practice of constructing costumes and textiles using reuse and recycling techniques.

6.9.2.3 Topic 2: Gaps in knowledge or understanding of the practice of constructing costumes and textiles (reusing and recycling)

6.9.2.3.1   Introduction

Once all three workshops had been completed, I wanted to understand the three Kuwaiti costume designers' views on costume reuse, recycling, and reconstruction, and the reuse and recycling of textiles during the three workshops. Specifically, I not only asked whether they used recycling techniques but also whether they now understood the concept, as my prior interviews and investigation have suggested that Kuwaiti designers do not seem to understand the concept at all. This is demonstrated by participant **1.H**, who says she was aware of recycling and reuse, but not in the field of costume design.

Inability to understand costume recycling techniques

"This is really an interesting question, to be honest, I know how to reuse something for another time, but the term [recycling] techniques in making costumes is [...] confusing me. Regarding the three tasks that I worked on; I don't think that I implemented any recycling techniques because I don't have any experiences in applying this kind of technique" **(1.H).**

Participant **2.A**, the freelance costume designer, approached the workshops as a personal experiment and provided me with a different view regarding her understanding of reuse and recycling techniques. Nevertheless, she contended that such skills and techniques are for tailors to use, not designers.

"I think in all the three tasks I did a mass of different experiments, to understand how I can work as a tailor, and what I understood was that I was reusing the fabrics and costume for designing other characters. But I don't know exactly all the techniques that I used to complete all the three tasks, I think tailors have more knowledge in the ways of using (recycling) than me because they are more expert in the practical skills." **(2.A).**

The last participant, **3.M**, completed all three workshops the quickest and made extensive attempts to drape her textiles on the mannequin in various ways; she even started using hand stitching techniques. Nevertheless,

during the interviews **3.M** admitted she was not confident she could reproduce or recognise the techniques she used in the design process.

> *"I think I used a massive number of hand skills and experiment techniques, on the other hand I was just trying to complete all the three tasks, but I don't know the name of all the techniques that I used. But I think I implemented a reuse costumes and textiles technique and some accessories to decorate the costumes"* **(3.M).**

6.9.2.3.2 Summary of responses

Overall, the concept of reusing and recycling second-hand costumes and textiles for the sake of creating new costumes continues to evade the three Kuwaiti designers. Although one of the three participants did actively engage with reuse and recycling approaches, none of the participants expected to conceive of or recognise such techniques when designing their costumes. Thus, it is becoming more apparent that this is attributable to a lack of practical skills in making costumes. This ties in to my third major sub-section, concerning what exactly it is that makes the concept of reusing and recycling costumes and textile materials in practice so difficult for Kuwaiti participants to grasp.

6.9.2.4 Topic 3: Difficulties involved in recycling textile materials in particular

6.9.2.4.1   Introduction

Another discussion I had with all three participants, prompted by an earlier conversation during my investigation, concerned their hand skills, techniques, and practices while working, such as cutting and constructing the reused garments during the three workshops. This time, however, I focused on what prevented them from clarifying their answers to my earlier questions (detailed above). I had been wondering if they understood what kind of textiles they had been working with, if they knew that they were working with different textile materials, and that sometimes the textiles require a special technique to recycle and construct the materials. As noted earlier in this study in Chapter 2 (literature review), there are a variety of solutions to recycling a textile material, so I had hoped for at least some insight into this aspect. As before, three themes emerged.

Failure to follow best practice in the use of recycling techniques

My first inquiry into this issue with participant **1.H**, the academic costume designer, provided the first negative answer.

> *"I don't have much knowledge and experience of the way to apply recycle techniques for all the fabrics and the textile materials for all the three workshop tasks or in general in my costume design production. I found in the workshops some materials that I had purchased before, such as the fabric in the last workshops. For the character (Amena) I found myself struggling to work with the textiles material, or to apply recycling techniques. It needs an expert textile designer to apply these techniques"* **(1.H).**

This was the stance of the second participant, the freelance costume designer **2.A**. She stated that she did possess some knowledge of textiles, but that understanding how to secure and process recycled textiles in theatre production is not a cultivated skill in Kuwait. This was evidenced by the participants' total lack of experience with such things:

> *"I cannot say all the names of the textiles materials in the textiles market, but I know the popular ones, but if we are talking about implementing recycling techniques for textile materials, for myself I cannot, because it really needs someone expert in recycling the textiles, or some specialist factories. And during all the workshops I worked without any knowledge of which kind of techniques I was using because I don't have much knowledge of reusing and recycling a costume or textiles, because I know it needs an expert to do this work "* **(2.A).**

As the prior findings indicate, this was the principal recurring theme in my post-workshop interviews. Although the third participant, the freelance costume designer **3.M**, has worked on a variety of academic plays for festivals and shows in Kuwait and the gulf area, her answer displayed the same conceptual unfamiliarity as 1.H and 2.A. This, it seems, directly impacts on the participants' inability to reuse and recycle textiles and costumes in general.

> *"I know that there are many recycling techniques for reusing and recycling textiles materials, but I tried many times in the three workshops to implement recycling techniques working with textiles and using my hand skills and techniques. But I did not have much experience [with] recycled textiles or costumes to apply to any character in the theatre production"* **(3.M).**

6.9.2.4.2 *Summary of responses*

To summarise, Kuwaiti costume designers do not have sufficient experience in reusing and recycling textile materials, nor do they know the names of the techniques and skills required. This is because tailors are the ones who perform such tasks in Kuwait, and designers are not taught these skills even when they attend formal instructional courses. Combined with the previous questions during this part of the interview, the initial comparison between UK and Kuwait practices (which I have summarised in the main interview section) continues to bear out, as explained below.

6.9.3 Section 2: Kuwait costumiers' thoughts and opinions on sustainable costume design (reusing and recycling)

6.9.3.3 *Introduction*

In this part of the interview, I endeavoured to see whether the workshops had prompted any change in the three Kuwaiti costume designers' thoughts and opinions on sustainable costume design practices (reuse and recycling). As such, my questions focused on their perceptions of the barriers that prevent them from applying sustainable reuse and recycling strategies. I also asked their opinion about the possibility of implementing reusing and recycling, not just during the three tasks but also in the future. Two main topics and themes emerged from their responses (see Table 21).

Table 21:

Topic 1: Existing barriers to reusing and recycling costumes.
Theme: Importance of education in sustainable costume making
Topic 2: Motivation to implement reusing and recycling techniques in the future
Theme: Future utilisation of sustainability (reusing and recycling)

6.9.3.2 Topic 1: Existing barriers to reusing and recycling costumes.

Importance of education in sustainable costume making

Participants such as **1.H** felt that the barriers preventing designers from applying reusing and recycling strategies to costumes in the future was due to education, or rather the lack thereof, as she stated that:

> *"The barriers are, for sure, the lack of educational knowledge in applying those techniques and skills in the workshop tasks, from the design process to making the costumes. I did not learn to use recycling techniques while I was in the process of designing and making the costume. In addition, when applying the (reusing and recycling) strategies, higher skills (can only be acquired) from someone specialised in this field (sustainable costume or fashion design) and, as you know, in Kuwait we did not learn during university studies how to reuse or recycle the costumes. We were only taught how to draw costumes and about the history of costumes, and my tiny experience in making costumes comes from my experience working in the theatre."* **(1.H).**

Participant **2.A** also expressed her reservations regarding this issue:

> "*Hand skills and techniques are the barriers to applying reusing and recycling techniques to costumes and textiles. In the three workshops, as I told you, all those skills are held by the tailoring staff, so I think it's, I should study or take a short costume (constructing) course, to understand how to use the recycling techniques later when I want to apply those techniques*" **(2.A).**

Participant **3.M** concurred with the other participants, stating:

> *"My barriers to applying [reusing and recycling] to costumes and textile materials in the workshops are, for sure, I need to learn more and study more and gather more practical knowledge to*

understand how I can use the practical skills, how I can sew, cut the fabrics. After that and when I feel I am strong enough, I think I can work into reusing and recycling the costumes and textiles, as well as using a variety of constructing costume techniques" **(3.M).**

6.9.3.2.1   *Summary of responses*

In sum, the three participants are not entirely opposed to using recycling and reuse techniques, but they believe it will be impossible for them to do so without advanced or specific courses on such approaches, such as reusing. The idea that this is all part of the tailor's role, however, remains deeply embedded in the mentality of Kuwait costume designers. Nevertheless, two out of the three participants stated outright that they were considering using reuse and recycling strategies in their future work, albeit without any particular wish to leave their comfort zone to do so. This neatly tied in with my second question, which sought further insight into this topic.

6.9.3.3 Topic 2: Motivation to implement reusing and recycling techniques in the future

6.9.3.3.1   *Introduction*

As my interviews drew to a close, I decided to move the focus entirely away from issues associated with reuse and recycling Instead, I inquired as to what would motivate participants, and under what circumstances, to use reuse and recycling techniques and skills. I also asked the participants whether they would try to include such techniques in their future work and, if so, why? What do they perceive to be the benefit of using such methods)? Ultimately, the three participants could only reiterate what they had said before, although their answers did seem somewhat at odds with previous ones given their ostensibly greater desire to use recycle and reuse techniques than had been implied in Part 1.

Future utilisation of sustainability (reusing and recycling)

On this issue, participant **1.H** responded:

"For sure I will apply (reusing and recycling skills and techniques) but after I study more about those skills and when I find myself to have the confidence to implement those techniques, because this technique in the future will save time and budget as well. It's a great technique and I can reuse the same costumes from a previous character and recycle it to another, rather than as I always do buy new fabrics and make costumes from scratch '' **(1.H)**

Participant **2.A** said she was very pleased that she had tried and conducted many experiments in all the workshops and stated ':

> *"My motivation is that those techniques [reusing and recycling) will help me a lot in the way of saving the fabrics and costumes that they throw into the landfill after the play has finished., At least I can save my costume collection, by implementing the [reusing and recycling strategies] and using them for another play, but I will try to do more research on YouTube and in different books and increase my knowledge about how to apply reusing and recycling techniques in the*

costume design industry" **(2.A).**

The final participant, **3.M**, who has worked as a costume designer for more than 4 years in Kuwait theatre industry, had a different view to her fellow designers in this respect. Nevertheless, she told me she would consider trying it.

> *"My motivation is to use these techniques [reusing and recycling] because I found during the three workshops that there are possibilities to reuse and recycle and save my costumes from different plays that I have worked on, or sometimes saving and reusing costumes and textiles that are left and then shredded in some Kuwaiti theatres [costume storage]. This will really bring creativity and save time on project work. I will try and do my best to study and understand more about recycling costumes and textiles, because, when I watched YouTube, I found a massive amount of different techniques and strategies to implement on the costumes"* **(3.M).** In the following section, I will summarise and analyse the findings of Post-Workshop Interviews

6.10   Summary of the findings of Post-Workshop Interviews

Three main findings thus emerged from these interviews. These are as follows:

1) A clear difference in the design and production processes used by Kuwait and UK designers.

2) UK design processes facilitate the application of reuse and recycling approaches. Specifically, the 'hands on approach' used by UK costumiers facilitates the use of a range of sustainable techniques. In contrast, processes in Kuwait require the cooperation and collaboration of the tailor, which makes it complicated to employ reuse and recycling strategies. The Kuwaiti costumiers also needs to develop this as a concept at the design stage, before they even speak to a tailor.

 3) All Kuwaiti costume designers perceived reuse and recycling as too risky to try. This was despite their optimistic realisation that they did possess the basics in terms of tailoring skills, or at least had the ability to pick up manual stitching quickly.

Given the status of costumiers as the driving force behind any innovation and sustainability in their sector (Sherburne, 2009; Perez, Fornasier and Martins, 2016; Shakya, 2016), this seemed to point towards a less than fortuitous conclusion for my research. Arguments against the employment of sustainable practices were also quite substantive, with a lack of education regarding reuse/recycling strategies and a lack of hand skills being chief among these. However, I ultimately conclude that implementing sustainability (reusing and recycling) in Kuwaiti theatre costume design, although difficult, is ultimately possible and worth attempting due to its many benefits (as detailed in the literature review and in interviews with UK designers).

Most importantly, the personal opinions expressed by costume designers, though unified in their caution,

were not opposed to or even dismissive of sustainable techniques. In fact, they all said they would be open to sustainable costume design in future work, For instance, **2.A** commented that**, "*The motivation I found using those techniques (reusing and recycling) will help me a lot in terms of saving the fabrics and costumes that are thrown into the landfill after the play has finished, at least I can save my costume collection"* . The only thing holding the designers back is a lack of education regarding reuse/recycling strategies, and a lack of hand skills that only tailors in Kuwait currently possess.

Self-study was suggested as a promising means to make it all possible, even if that meant going on You-Tube to watch tutorials. However, in the designers' opinion, it is unlikely that anything large-scale will be possible without institutional changes, particularly regarding higher education and training. Given that the ideal costume designer in Kuwait will merge two different jobs (designer and tailor) and also knows all about sustainability, this is arguably the most reasonable avenue to take, especially given that sustainable costume design is heavily based around the wardrobe departments that are universally absent from Kuwaiti theatres.

The findings from the Post-Workshop Interviews regarding the "talking and making" practices employed during the workshops support the literature discussed in chapter 2 regarding the role of Kuwaiti and western costumiers in designing and making costumes. For instance, in terms of the level of education needed to make costumes, the knowledge Kuwaiti costumiers possess is low although they have some, albeit limited, skills in constructing costumes. However, compared to western costumiers, these skills, specifically in relation to reusing and recycling costumes, are poor. This is supported by Ismail (1999) who stated that the Kuwait Institute of Dramatic Arts **taught costume design** as a subject concerned with 1) the history of the costumes and 2) drawing costumes. These areas are taught within the department of stage design rather than as a full degree and offer limited practical skills in making costumes. All the knowledge applied by participants when making their costumes in the three workshops derives from their experience working in costume design production with a Kuwaiti theatre company. This provides further support for Ismail's claims and explains why Kuwaiti costumiers lack the skills needed to make a full costume by reusing and recycling materials. In the final chapter I will summarise and discuss the findings from Studies 1 and 2 before drawing all the material together and presenting final conclusions.

7 Chapter 7 : Discussion and Conclusion

7.1   Introduction

Having carried out and analysed my primary research, I can now review the stated aims of my research. I began this study with the following targets in mind: **1)** To investigate current sustainable theatrical costume design strategies in Kuwait and the UK, with a focus on reusing and recycling; **2)** To investigate the costume design process currently used by costumiers in Kuwait and the UK; **3)** To explore and understand the possible barriers preventing the further adoption of sustainable practices (reusing and recycling) by UK and Kuwaiti costumiers; **4)** To investigate current attitudes and perceptions of reusing and recycling as ways of reducing textile waste; **5)** To work with Kuwaiti costumiers to investigate in more detail their experiences with and different practices towards reusing and recycling costumes and materials. I can say with a fair degree of certainty that I have produced concrete answers to my research questions.

Thus, this research has achieved its aim of informing me how sustainability [reuse and recycling practices] can be implemented in Kuwaiti theatre costume design in the future. The literature review thoroughly explored the 3Rs of sustainability, as well as the ways in which sustainability is already practiced in the western world, particularly in the UK (Lyngaas, 2017; Rinkesh, 2018; Seher, 2018). The only gap in the research was the one I had already identified prior to undertaking this study, namely the dearth of scholarly information on sustainable (reusing and recycling) costume design in Kuwait. As my Study **1** interviews and Study **2** Kuwait costume making workshops later revealed, this gap was due to an almost complete lack of sustainable design practices among Kuwait costumiers with limited experience. Following the 26 interviews with both UK and Kuwaiti respondents, the benefits Kuwaiti costumiers could attain from implementing sustainable practices can be summarised thus.

These are: a reduction in textile waste; an economic benefit due to cost savings from reusing and recycling old costumes; additional creative opportunities derived from working with older costumes and fabrics; a reduction in the environmental impact of textile waste on the environment (Blackburn, 2009). Furthermore, my research uncovered ways costumiers could contribute to the development and implementation of sustainable practices (reusing and recycling). Although implementing reusing and recycling practices in Kuwaiti costume design is certainly possible, based on what I have learned and witnessed in the UK, Kuwait costumiers have mixed feelings and attitudes about the desirability of such practices. It was in the workshops that this gap in knowledge and approach became starkest, although it had become obvious from the very first interview, as I will now elaborate.

7.2   Study 1: Interviews- UK and Kuwaiti costumiers' practices and opinions

7.2.1 Differences in design thinking- the storage and sourcing of costumes and materials

In this section, I will summarise the findings from **Study 1**: Interviews, which focused on UK and Kuwaiti costumiers' practices and opinions regarding the designing and making of costumes, design thinking practices and attitudes, and the storage/sourcing of costumes and/or materials for costumes.

Design thinking is the hallmark of any successful costume designer (Lawson, 2006; Vianna et al., 2011). However, as Chapters 5 clearly shown, different ideas are expressed regarding the meaning of design thinking. Beyond using sketches to plan costumes, the way Kuwaiti and UK-based costumiers approach creating costumes is often diametrically opposed (Cross, 2011; Dieffenbacher, 2013). Most Kuwaiti costumiers were surprised to hear the words 'reuse' and 'recycle' used in relation to theatre production. They often felt that reusing costumes would infringe on their reputation and perceived creativity. Respondent 3.N, for example, stated that all costumes are disposed of immediately once a production is finished. However, he also mentioned that, before the invasion of 1991, there were storage areas and procedures in place for storing costumes, but this changed the following year. 3.N even told me that he had attempted to save costumes on a few occasions by taking them home, but ultimately this proved unsustainable for one person. The only practice that comes remotely close to preserving a costume in Kuwait seems to occur when a designer decides to save certain, unique pieces for sentimental reasons. For example, 5.M told me he had done this on several occasions with the costumes he made for theatrical works over the years.

When I specifically asked interviewees where materials to make a costume came from, the answers I received only reinforced this massive disparity. For instance, UK costumiers 7.A, 13.C, 8.R and 5 P stated that, although they always look at former costumes first, they often buy their materials from second-hand and charity shops. In contrast, Kuwaiti costumiers make costumes entirely from scratch using new fabrics. For example, costume designer 11.H stated that they purchase textiles from the Kuwait textiles market where they are given a sizeable discount. Several respondents agreed that Kuwaiti costumiers face an institutional barrier in that theatres do not store costumes long-term once a production has concluded. Furthermore, 4.R and 13.S told me they are not allowed to take possession of costumes when they are no longer needed (they do not own them any more than freelance UK costumiers own theirs).

By contrast, respondents from the UK presented a picture that was almost entirely antithetical to that of Kuwait, with sustainability methods being the first choice for practically all costumiers regardless of place of origin. For instance, the UK costumier 6.B explained that going into the stockpile in the theatre and looking through existing costumes for reuse/recycling possibilities is the first thing she does at the costume production stage (Jones, Selby and Sterling, 2010). This shows there is effectively no foundation on which to support the design of sustainable garments in Kuwait. Nevertheless, several interviewees (9.K, 10.R and 11.A) hinted at the potential for reducing textile waste through practices, process, and techniques up until the final stage of making costumes. However, although tutorials exist on the internet, none of the Kuwaiti participants told me of any cases where they had used these resources. My interviews with some of the UK costumiers (2.L, 1.Y and 5.P) provided insights into how costumiers gain their experience and skills. Although differences exist due to their work in different theatre companies, their views overlap regarding the opportunity's theatres provide for reusing and recycling costumes and materials after a production.

Nevertheless, I was able to surmise from the considerable ignorance evident in most Kuwaiti respondents' knowledge of reuse and recycling that an institutional barrier is not the only reason Kuwait lacks a sustainable costume design industry. There is also a lack of education regarding costume design practices in Kuwait theatre, especially at an institutional level. For instance, when I asked them to describe what sustainability means, 2.B said: "this is the first time I have heard this word." and 11.A stated: "I am not sure what this word means exactly, but mostly when I hear about this word, it's an energy for something". This is not to say there have been no attempts to preserve costumes for posterity or later use in Kuwait, although only 4.R and 8.Z stated they had done this; one out of fondness for a specific costume, while the other – the only one who showed any awareness of the benefits of preserving a costume – ended up incurring unsustainable costs related to storage.

The next section will focus more closely on the discussion in Chapter 5 regarding costume design practices and opinions in the UK and Kuwait.

7.2.2 Conceptual, institutional, and educational differences in attitudes and approaches to sustainability

In this section I will discuss the interview findings presented in Chapter 5 (Kuwaiti and UK Practices and opinions) which investigated the design practices and attitudes (opinions) currently adopted by costumiers in Kuwait and UK theatre productions. This enabled me to achieve the following research aim: "To investigate current attitudes towards and perceptions of reusing and recycling as ways of reducing textiles waste." It also achieved one of the specific objectives for Study 1: "Elicit professional opinions, attitudes towards, and perceptions of reusing and recycling as ways of reducing textile waste from costumes and fabrics (textile materials) in both UK and Kuwait theatre settings". In line with my expectations, the Kuwaiti costumiers confirmed that, unfortunately, sustainability (reusing and recycling) does not exist as a concept in their design thinking and theatre costume production. This means that although I had obtained an answer to one of the research questions that guided this research, I had no way to put it into practice in order to answer the following research question: "How can sustainability be implemented in theatre costume design in Kuwait?". Unfortunately, the findings were rather more extreme than even the conceptual gap in the literature had prepared me for.

My interviews confirmed the dearth of sustainable ideas in the design thinking of Kuwaiti costumiers. In fact, sustainability (reusing and recycling) does not even exist in the minds of Kuwaiti costumiers, unlike UK-based costumiers who use it as their guiding principle. Although I set out to compare reuse and recycling strategies among both UK and Kuwaiti costumiers, the end result was a description of UK techniques versus the complete lack of such in Kuwait, which extended beyond the extremes predicted by the literature review. While my interviews with UK costumiers showed clearly that their practice is closely in line with the 3Rs; s (Farley and Hill, 2015; Rinkesh, 2018; Muthu, 2018), this was not the case for Kuwaiti costumiers, who therefore lose out on the many benefits of sustainable design and design thinking.

This goes far beyond Kuwait merely lacking wardrobe departments, although this alone deprives them of the considerable environmental, economic and creative options referred to in the aforementioned literature and by UK respondents. Kuwait costumiers do not engage in most of the design thinking steps taken by UK costumiers despite the importance of sketching and designing in the costume creation process. This means that Kuwaiti costumiers often fail to develop a clear vision for the costume or how it will look on the stage. Consequently,

they fail to determine what kind of materials are best to use for sewing the fabrics or how the costumes will be manufactured (Ingham, 2003). Conversely, UK respondents spoke about the many benefits of sketching, using doll models, and selecting the best fabrics, which often meant reusing or recycling older costumes to obtain period-appropriate materials and the correct look.

Thus, achieving one of the aims of this research arguably came at the cost of a step back in terms of gathering data that provides evidence of how UK and Kuwaiti costumiers construe the application of sustainable methods (reuse and recycling). Thus, although such strategies have been examined, they did not actually provide much of a starting point for reducing waste beyond implying that the starting point is at zero. This is not merely because of the confirmed lack of practical options for sustainability, it is also due to gaps in the actual design thinking of Kuwaiti costumiers.

The vast majority of Kuwaiti costumiers lacked any skill or inclination towards sketching, 3D modelling, or anything resembling visual artistic talent or skill of their own, with some even admitting to only providing verbal instruction to tailors. This effectively ensures that choices in general will be suboptimal at all stages of costume design and creation. However, perhaps the greatest and most damaging disparity between Kuwaiti and UK costumiers in terms of the prospects for sustainable costume design in Kuwait lies in the separation of tasks between the costumier and the tailor.

In the UK, costumiers do everything: they develop a vision of the costume before they do anything else, they sketch, make dolls, track down used costumes for reuse or recycling, work with the actors, playwrights and directors on stage, and, most importantly, they make every costume themselves. This means they are in total control throughout all stages of the process, and consequently bear the responsibility for everything to do with the costume: how it looks, what it is made of, how sturdy it is, how comfortable, and how much financial, creative, artistic, and environmental impact the costume will ultimately have. In Kuwait, however, this is not the case. Beyond the lack of a standard approach to planning, Kuwaiti costumiers do not actually make the costumes themselves, which means they do not get to exercise much design thinking. Ironically, although Kuwaiti respondents stated consistently stated they are the ones who pick out the fabrics (which they then tell the tailors how to use and where), the materials are always new, having been bought from the Kuwait textile market. Even though a lack of wardrobe departments in Kuwait robs them of many of the options UK costumiers enjoy, there was not even the barest thought given by Kuwaiti costumiers to buying second-hand clothes or hiring used costumes or period/traditional clothing from other sources

As mentioned in chapter 5 and confirmed by the UK interviewees, the goal of costume design construction techniques is to ensure that the result is not only beautiful but also strong and provides the required utility (Ingham, Covey and Ingham, 2003). Unfortunately, Kuwaiti costumiers did not even consider sustainability (reusing and recycling) to be part of a costume's strength or utility. Long-term storage was not mentioned anywhere in the interviews, whereas the UK respondents told me costumes are universally stored long-term in the United Kingdom. The separation of tasks between Kuwaiti costumiers and tailors appears to act as a barrier to even conceiving of such things, although the immense gap in design thinking regarding sustainability remains the primary issue. However, I admit this is an inference at this stage. While it is impossible to confirm this as being universally the case in Kuwait, due to the limited generalisability of findings from semi-structured interviews, the lack of exceptions and the degree to which it exceeded even my most pessimistic prediction indicate that this is the case.

The various examples and confirmations of prior research derive from my UK respondents would seem, on the surface, to do a good job of answering this. However, these reuse and recycling practices are reliant on elements that are either absent or actively frowned upon in Kuwait. For one thing, Kuwaiti costumiers were generally confused when I asked them about sustainability, especially reuse and recycling, having never heard of such things before, with many even believing they were impossible.

My interviews with UK costumiers ironically served only to confirm this further, incidentally completing the answer the literature review had provided to the second research question: "What are the benefits of finding common ground between sustainability and costume design?" Unfortunately, an answer to the first question remained elusive, as the interviews failed to clearly indicate a starting point for change. The differences in design thinking between Kuwait and UK interviewees were too great to provide any point of crossover. Whereas Kuwaiti costumiers largely had no idea what sustainability even meant, my UK interviewees perceived it as a guiding principle. Moreover, a lack of appropriate formal education effectively means there is no foundation upon which to support the design of sustainable garments (Jones, Selby and Sterling, 2010).

I therefore conclude that Kuwaiti costumiers must entirely rethink the process of making costumes. They must actively reshape their approach and plan for the second life of costumes by reusing and recycling (McDonough and Braungart, 2005; Fletcher, 2013). Overall, I was left with clear answers regarding UK and Kuwaiti costumiers' understanding of and opinions towards sustainability and differences in design thinking practices. These largely supported the literature discussed in chapter 1, which argued that sustainable design thinking will enable costumiers to develop processes for producing sustainable solutions such as reusing and recycling costumes and materials in the design production process (Fletcher, 2008; Cross, 2011, Vianna et al., 2011 Jones et al., 2013). However, the immense divergence in design thinking makes it difficult to develop an understanding of sustainability in Kuwait theatre. Fortunately, my findings did at least allow me to shape the workshop tasks in such a way as to provide me with another approach to tackling this problem, allowing me to anticipate (and subvert, where necessary) the needs and expectations of the three participants. Consequently, I was able to identify the starting point for change, even if it proved much more of a challenge than I expected I will now consider the insights obtained from Study 2: Kuwait making workshops and the post-workshop interviews that followed.

7.2.3   Study 2 : Limited knowledge and skills (reusing and recycling) in making costumes

In this section, I summarised the findings from **Study 2**: Kuwait costume making workshops and post-workshop interviews. As both the workshops and the subsequent interviews showed, all three Kuwaiti costume designers were surprised when I not only asked them to design a costume but to make it in full rather than relying on a tailor to do so. Moreover, they were clearly shocked when I told them to employ as much in the way of used fabric or former costumes as possible. It was clear that, during informal exchanges while working on the costumes, they had no clear concept of what reusing, or recycling meant in the context of costume making. Although they eventually adapted to these requirements, a considerable mental effort was required to adjust their mind-set and a large amount of external knowledge had to be obtained, particularly through YouTube tutorials. Unfortunately, although they proved relatively capable of adjusting to the task mentally, they did not find it very easy to construct the costumes.

Nevertheless, and perhaps surprisingly, **1.H, 2.A and 3.M** were able to show they had some experience in cutting and using manual stitching skills, although certainly not to the professional standard they would have liked. They therefore had to rethink the way they made things (Lawson, 2006). This meant that all three Kuwaiti costume designers were forced to resort to pinning and gluing, although 1.H and 2.A did what they could with needle and thread to prevent their costumes from falling apart. Furthermore, in all three cases the costumes were made without a full understanding of sustainable costume design practices (reusing and recycling). This was something the three designers themselves were forced to realise once I explained the situation, and they then checked online for information on these techniques.

Overall, the three workshops supported the research findings discussed in chapter 2, which found that Kuwaiti costumiers think very differently from those in the UK regarding their roles and practices throughout all stages of the design and production process (Lawson, 2006; Ingham, 2003) and lack any notion or understanding of how to implement sustainable design strategies. They can work with their hands on reused or recycled garments to make costumes for characters but they found it hard or even impossible to use the sewing machine (as shown in Task 3), which prevented them from actually implementing fabric recycling techniques. Furthermore, because this approach and mind-set were largely due to the division of responsibilities between the Kuwait costumiers and their tailors, it highlights a widespread institutional barrier not just to sustainable costume production but also to sustainable design thinking (Vianna et al., 2011; Brown, 2018). This shows that sustainability education and instruction regarding sustainable garments and textiles (Fletcher, 2008; Dieffenbacher, 2013; Andersen and Earley, 2014) needs to be offered primarily to tailors in Kuwait.

Alternatively, Kuwaiti costumiers need to undertake these practices as well as take on the responsibilities of tailors (in other words, become the tailors). Because the concepts of reusing and recycling costumes and textiles continued to elude the three workshop participants, even after they finished the tasks (as shown in my post-workshop interviews), I am leaning towards the former option as being most feasible. According to Kidd (1996), "The costume designers should find it much easier to integrate concepts and skills such as cutting, disassembling, modifying and reassembling garments into their work as these naturally fall within the standard skills set of a tailor". Consequently, they will be better positioned to integrate sustainable practices (reuse and recycling) into the fashioning of fabrics and costumes (Blackburn, 2012; Jones et al., 2013). However, there are reasons beyond a lack of knowledge and skill that will, as things currently stand, prevent Kuwaiti costumiers from adopting reuse and recycling practices in the future. For instance, all three participants **1.H, 2.A and 3.M** told me that it would be considered detrimental to a designer's perceived resources and originality to reuse older costumes or parts of costumes.

This echoed previous answers from the post-workshop interviews and highlights a very real cultural barrier preventing the adoption of sustainable design (practices to reduce textile waste). This is ironic given that UK costumiers informed me that the successful reuse and recycling of costumes provides evidence of their perceived skill and originality. Thus, a genuine cultural shift will be needed in the Kuwaiti theatre costume design industry, involving a complete turnaround in design thinking (Lawson, 2006), before anything approaching UK practice becomes seen as acceptable in Kuwait, let alone possible. A renaissance on an ethnographic level is therefore required (Davies, 2016).

At the very least, this transformation will need to be supported (or enabled) by Kuwaiti theatres who need to ensure the bulk long-term storage of costumes after production runs takes place, rather than disposing of them immediately in the landfill (Al Ghareb, 2001). It is therefore reasonable to claim that Kuwaiti costumiers are prevented from creating environmentally sustainable costumes for productions (Stone, 2009), rather than being personally unable or unwilling to do so. Surprisingly, however, the findings from all three workshops complement Houti's view (1999) that Kuwaiti costumiers, before oil was discovered (Alabdaljalil, 2004), were skilled in making handmade costumes that "were elaborate hand-made pieces of high quality". However, in the Kuwait Higher Institute of Dramatic Arts, new generations of Kuwait costumeries are not taught how to make costumes or use the 3Rs of Sustainable Garment Waste Management Strategies (Blackburne; 2009; Fletcher, 2008) to produce sustainable costumes rather than purchase new costumes from the Kuwait textiles market (Al-Ghareb, 1988).

In the next section I will discuss the findings of chapter 6 in depth, focusing on the personal attitudes of the participants regarding the potential use of sustainable practices in their future work.

7.2.4 Perceived benefits, openness to learning, and the ability to adapt

I originally intended the workshops to become a way for this research to achieve one of its stated aims, which was: "To work with Kuwaiti costumiers to investigate in more detail their different practices, experiences with, and attitudes towards reusing and recycling costumes and materials". The three workshops instead manifested practical examples of the insufficient skill and knowledge of not only sustainable design but also costume making in general that characterises Kuwaiti costumiers, with all three telling me that they have limited the skills and even the education needed to make their own costumes. While they did admit to having received formal instruction in their roles from various learning institutions, they showed they have little experience or understanding of how to create costumes themselves. This was exhibited in their limited knowledge and skill in using reusing and recycling techniques to make costumes. However, my workshops (especially workshops 2 and 3) also confirmed the specific disconnect from sustainable design, attributing it to the designer-tailor separation that my research and interviews had already confirmed by this point. One aspect that stood out in particular was their inconsistent approaches to design thinking, where modifying a costume, creating additional garments, or making something totally new was approached in different ways following different steps (2.A and 3.M especially), instead of anything resembling LCA (Lawson, 2006; Perez, Fornasier and Martins, 2016).

They even omitted developing a vision for the costume via sketches or written descriptions. The lack of any hand skills (cutting, sewing, stitching, costume assembly, pattern making, or other such procedures) means their options for using, reusing, and changing things will remain limited even if they do expand their design thinking (Blackburn, 2009; Vianna et al., 2011). The silver lining, however, is that Kuwaiti costumiers have witnessed tailors work often enough that they can reproduce manual stitching from memory, suggesting that they may be able to adopt the skills quickly.

Moreover, they expressed openness to receiving education, or for tailors to receive education, on sustainability, which is positive because both my research and the participants themselves unanimously agree that this is necessary. This means that change at an institutional level will be needed before anything major is achieved

in the Kuwaiti theatre sector, namely the implementation of wardrobe departments and long-term storage of costumes by theatres themselves, not unlike Western nations (Jones et al., 2013; Monks, 2009; Evans, 2015; Ingham, 2003; Pollastek, 2017; Abbey Theatre, 2017; Malarcher and Headrick, 2009). Thus, whether or not tailors take over the task of making the costumes, if costumiers gain the knowledge and skills needed to implement sustainable design thinking, the Kuwaiti theatre design sector could be brought up to western standards of sustainability (Stone, 2009; Chick and Micklethwaite, 2011; Jones et al., 2013).

A ray of hope did finally emerge, however, in the serious consideration given to future reuse and recycling of costumes and textiles by all three workshop participants. This shows that, although there is no particular wish to engage in such practices in Kuwait, the benefits of sustainable design did become apparent to the costumiers by the end of the workshops. Moreover, it indicates that Kuwait design thinking does come with the requisite adaptability and a willingness to acknowledge the worth of new methods, even if costumiers are not very enthusiastic about it. Ironically, the starting point for finally making this happen revealed itself not through any enthusiasm on the part of the three participants, but through their reticence. In fact, although the three Kuwaiti costumiers did show at the Post-Workshop Interviews willingness to reuse and recycle in the future, they said this was conditional on two things: **1)** receiving more training in hand skills and especially in sustainable techniques, even though education on this is hard to find in Kuwait; and **2)** an institutional change in the Kuwaiti theatre sector in terms of sustainability opportunities (wardrobe departments especially). While self-study (such as YouTube tutorials) were acknowledged as a workable alternative to the first condition, the participants saw no way to avoid the second, showing the practical consequences of the limits of otherwise far-reaching design thinking (Andersen and Earley, 2014; Plattner, 2018).

With this, the third question in this research study: "How can costume designers contribute to the development and implementation of a practice focused on reducing or avoiding textile waste?" has been tentatively answered. It is not the ideal answer due to the aforementioned institutional barrier, but at the very least Kuwaiti costumiers have the willingness and capacity for expanding design thinking and practice, even if they do not currently have the skill or provisions to do. Therefore, some valuable contributions to knowledge have been made.

7.3   Contributions to Knowledge

This study set out to answer three questions:

1. How can sustainability be implemented in theatre costume design in Kuwait?

2. What are the benefits of finding common ground between sustainability and costume design?

3. How can costume designers contribute to the development and implementation of a practice focused on reducing or avoiding textile waste?

Answers were found for all three questions, though not to the same degree. The findings, along with the discussions of Studies 1 and 2, fully confirmed prior research on the issue of sustainability (reusing and recycling) in Kuwait, and specifically sustainable costume design in the theatre sector. Most of the new information that came to light added weight to the implications and revelations of the literature

review presented earlier in the thesis. Nevertheless, there were also some novel findings that emerged. For instance, one new finding is that the deficit in knowledge pertaining to reuse/recycling strategies in Kuwait costume design is even more extreme than the literature implied.

This means that, at the present time, there is no concept of sustainability in the minds of the designers, nor in that of tailors. Kuwaiti costumiers have limited knowledge and understanding of reuse and recycling techniques, which means that they overlook an entire step of the garment lifecycle (Payne, 2011), excluding this from the earlier phases of design thinking and causing them to overlook all possibilities for costume imagining and construction (Payne, 2011; Perez, Fornasier and Martins, 2016). Consequently, Kuwaiti costumiers fail to reduce the environmental impact of textile waste, and also restrict their own ability to achieve optimal results in their work. Even period costumes suffer from this, with only one of my interviewees confessing to using traditional wear, attempts which often fail because some fabrics, patterns and components are no longer available (Hunnisett, 1986; National Theatre, 2018).

Perhaps the greatest contribution to knowledge provided by this study comes in inserting reuse, recycling, and all other notions of sustainable design into the consciousness of the Kuwaiti costume design sector. Other than that, this qualitative study has allowed two main issues to be identified, along with the conditions for their resolution.

First, Kuwaiti costumiers showed they have the skills to create costumes by recycling materials, but they lack the education and training in sustainable design. Specifically, they do not understand the different skills required to reuse and recycle costumes from the first step in the design process until the costumes are finished. This is largely because tailors do the practical work, although, according to every single one of my study participants, tailors also lack the requisite knowledge and skills.

Secondly, Kuwait universally employs an institutional practice of discarding all costumes after the first production. No Kuwaiti theatres have wardrobe departments, nor any other type of facility for the long-term storage of costumes and textiles or props. This means that the virtually unlimited quantity of old costumes available for reuse and recycling in countries like the UK (National Theatre, 2018; Bowden, 2018) is absent from the Kuwait theatre costume design industry. This policy even forbids the Kuwaiti costumiers from keeping the costumes they make, forcing costumes to be binned, shredded then binned, or just dumped in a landfill after a show is done.

Identifying these issues through the literature review, exploring comparative design practices and the thoughts and opinions of Kuwait/UK costumiers on this matter, and building a chronicle of the practical consequences of this through my workshops, are the chief contributions to knowledge this study provides, although not the only ones. Table 22 provides a more detailed breakdown of all the contributions made.

Table 22: Contributions to knowledge made by this research

1. Sustainability is considered an environmentally friendly as well as an economically beneficial element of costume design, based on international research explored in the literature review.

2. Western countries such as the UK faithfully follow precepts of sustainability (reusing and recycling), with almost no outfits or textiles going to waste unless a costume is damaged beyond repair, and, even then, the fibre is usually recycled.

3. Kuwaiti costumiers, on the other hand, have no concept of sustainability (reduction, reuse, recycling), having largely never heard of the concepts sustainably reused and recycled costumes before my research.

4. Costumiers in the UK conceive, design, and construct costumes personally, even if they sometimes collaborate with other people, teams, or professionals.

5. As part of their job description, Kuwaiti costumiers do not have to actually make the costumes they design. Instead, this job falls to tailors, who most theatres have on retainer. However, the tailors themselves lack any knowledge of sustainable practices.

6. The majority of Kuwaiti costumiers are not, in principle, opposed to the idea of implementing sustainable practices (reusing and recycling) in their future work. However, environmental benefits aside, Kuwaiti costumiers consider reuse and recycling to be hard to do, less likely to produce vibrant and beautiful costumes, and risks them being perceived as uncreative. Conversely, for UK costumiers reuse/recycling is considered evidence in *favour* of designer creativity, as well as more likely to yield a rich and colourful ensemble of outfits and materials compared to costumes made from scratch with all-new fabrics. These views were conveyed to me during the interviews, making this one of this study's most important contributions to the field.

7. Kuwaiti theatres do not have wardrobe departments or anything else in place (facilities, procedures, etc.) that would allow for the long-term storage of costumes after a show, making this the main barrier to reusing and recycle costume design. This is in sharp contrast to the UK where wardrobe departments and sustainable (reusing and recycling) costumes policies are the norm.

8. The theatre sector in Kuwait does not provide any information or education on sustainable costume design practices, explaining why designers and tailors alike continue to remain oblivious to these concepts, unlike those in the UK.

9. Surprisingly, the costumiers from Kuwait (or at least the workshop participants) showed that they do possess some rudimentary ability in reuse (cutting, manual stitching), even if they did not recognise these skills. These were manifested for the first time in their careers during the three workshops, based purely on YouTube research or a memory of witnessing tailors work. This provides the one silver lining in the research, namely that Kuwaiti costumiers should be able to expand their practice to incorporate tailoring skills. However, this leads into the issue of the costumier-tailor divide and the deep-rooted nature of this part of the industry.

Although it is not entirely up to costumiers alone to add sustainability (reusing and recycling) to costume design in Kuwait, the information above is sufficient to sketch out a path for improvement, albeit one that will require considerable institutional backing of the type recommended in the following section.

7.4   Recommendations

Blind spots in costume design thinking as well as institutional limitations make it impossible at present to sketch a path capable of bringing Kuwait to the same level of sustainable costume design as the UK or other western countries. However, several recommendations can be made to help Kuwaiti costumiers achieve a greater level of sustainability in their approaches to costume design. Based on the findings and discussion summarised previously, and the detailed accounts of skills and experience provided through the interviews and workshops (Talking and Making), I have identified four key steps that can be taken. Based on lessons derived from the UK costumiers, in Table 23, I provide a list of recommendations for a more sustainable approach based on the 3Rs that will help Kuwaiti costumiers reuse/recycle costumes and materials in Kuwait theatre productions. I shall then elaborate upon these in the remainder of this chapter.

Table 23: A summary of recommendations

The path to sustainable costume design in Kuwaiti theatre
1.   Establish wardrobe departments in major Kuwaiti theatres 2.   Proactively adopt UK processes and thinking in relation to costume design 3.   Reusing /Re-making repairing costumes and fixed textiles 4.   (Textiles library) Reusing and recycling fabric Scrap 5.   Recycled Costumes Via (Reconstructing Techniques) 6.   Encourage Kuwaiti costumiers to use second-hand garments in costume design 7.   Educate and train designers and tailors in the use of sustainable design and costume   production methods.

Establish wardrobe departments in major Kuwaiti theatres

The first recommendation is to establish wardrobe departments in Kuwaiti theatres, or at least major Kuwaiti theatres such as the ironically named Kuwait Little Theatre (Alvarez, 2012). Ideally, the time will come where all theatres have such a facility, or at least the means in place to hire costumes and textiles from theatres that possess such departments. As shown in the literature review and by UK costumiers, wardrobe departments are the backbone of sustainable costume design, offloading the cost of long-term storage onto the establishment and even providing a means to accrue additional profits by hiring costumes to other theatres and shows. Thus, instituting wardrobe departments in Kuwait theatres will not only reduce the textile waste going to landfills, it will also provide a stream of extra income while giving theatres less reason to buy new textiles when a new show is being made (incidentally decreasing their own level of textile waste). This will probably come at a cost to textile markets and the many textile delegates Kuwaiti theatres call on as a matter of course, but this is inevitable in any sustainability scenario, and the other benefits of a ready costume supply have now been well established. The Abbey Theatre (2019), The Sabotage Theatre (2017), and National Theatre (2018) are three examples of venues where such practices can be established.

Proactively adopt UK processes and thinking in relation to costume design

The second recommendation is for Kuwait costumiers to proactively adopt the same design thinking as (UK) costumiers. This means design thinking that is fully aligned with all stages of a garment's lifecycle (Payne, 2011), and by extension is capable of life cycle assessment (Blackburn, 2009; Muthu, 2015). In so doing, the reuse/recycling part of the lifecycle (the second life, as it were) will no longer be overlooked (Payne, 2011). Self-study venues such as online tutorials should be actively pursued as part of this process. Although a change in mindset will not yield any practical benefits until wardrobe departments are established, proceeding without delay will allow costumiers to make the best of the opportunities therein from the very outset.

(Reusing) Re-making and repairing garments and fixed textiles

The third recommendation, based on the responses from UK costumiers, to reduce textiles waste from Kuwait theatre productions **is to repair costumes and textiles**. This will help save costumes and textiles materials and give them longevity through a second life rather than sending them to landfill (Al-Shatti, 2016). This is one of the most effective means of reducing textiles waste in Kuwait. which means designers are now coming around to the idea that garments can no longer be just thrown away, they need to be fixed and given a second life (Palm et al., 2015; Fletcher, 2013) There are numerous ways to reuse garments / costumes that will help Kuwaiti costumiers adopt a more sustainable approach to costume design. For instance, the UK costumiers indicated there are opportunities to fabricate (reuse and repair the costumes so they can be used a second or third time in another production) (Jones et al., 2013; Blackburn , 2009;Black, 2006).

Using techniques such as repairing, restyling, reshaping, and over printing gives the discarded garments

and textiles value through a new life and reduces the amount of waste sent to landfill (Fletcher, 2008). For example, it could be possible to fix and repair Jacket patchwork, or an old dress, pants, and shirt from the 19th century (Lambeth, 2017). All these methods explore the boundaries dictating where the life of any costume starts and ends (Foreman, 2010). Gwilt (2014) explored community-based approaches to developing sustainable product service systems for clothing repair. She found that collections of historical garments typically demonstrate a wide variety of ingenious and resourceful approaches to their repair, several of which could be revisited to enable contemporary users to reconnect with repair practices.

Recycling Costumes Via Reconstruction Techniques

The fourth recommendation, based on the experiences of UK costumiers, is to transfer the costume of one character to another character for a different stage production. This reconstruction technique creates something new and desirable from something old and unwanted. It requires creative design thinking solutions (Harve, 2014; Lawson, 2006) on the part of Kuwaiti costumiers. For example, they could **1)** use second-hand garments and deconstruct them into smaller parts before piecing them together to create a 'new' costumes (Redress, 2011; Bridgett and Karetnick, 2013_ and **2)** reconstruct classic male suits and shirts into 'new' women's garments through a transformation process that turns classic men's costumes into women's trouser-style dresses, skirts, and jackets (Milch, 2014). The environmental benefits of reconstruction techniques are immense, as they reduce the lifecycle of textiles, limit unnecessary textile production, reduce landfill pressure, and curb the demand for natural resources (WRAP, 2011).

Textiles library: **Reusing and recycling scrap fabric**

The fifth recommendation is for Kuwait costumiers to recycle fabric scraps left over from costumes and reuse and recycle them for another production. This creative process was utilised by UK costumiers such as **12.L** who stated, "*Nothing is thrown away- costumes or textiles materials*" and **6.B** who discussed *"how to make a costume without wasting textiles and materials. such as left-over fabric scraps*". This recommendation can help Kuwaiti costumiers develop their creativity through the use of sustainable practices. For example, they could establish a textiles library where all scrap fabrics from old productions are deliberately stored in small boxes where they work, resulting in massive supplies of costumes and clothes and a variety of coloured fabrics and materials that can be used to make new costumes. Sustainable practices such as these will also help reduce the amount of textiles waste sent to landfill (Al-Otaibi et al., 2012).

Educate and/or train designers and tailors in the use of sustainable design and costume production methods.

The sixth recommendation is to provide education and/or training to Kuwait costumiers and tailors. Ideally, costumiers would assimilate the skills currently offloaded onto tailors along with their responsibilities until, like UK costumiers, they are able to handle the entirety of the design process including cutting, sewing, stitching, pattern making, and so on. However, because the division of responsibilities is so entrenched, a more realistic goal would be to teach Kuwaiti costumiers about reuse, recycling, and other sustainable practices as well as provide on-the-job training in these skills. Without such training, there will be no one to make good on the possibilities provided by storing costumes in recently established wardrobe departments.

Encourage Kuwaiti costumiers to use second-hand garments in costume design.

A seventh and necessarily indispensable vector for change would be to encourage Kuwaiti theatrical and cultural productions and Kuwaiti costumiers to use second-hand garments in costume design. In the same way that UK costumiers go to charity and second-hand shops for materials, Kuwait costumiers may also want to consider calling on such shops for their costume design needs. This method is not expected to show dividends until well into the future, if at all, due to the low proliferation of sustainability (even outside Kuwaiti theatre costume design) although on a positive note it is not entirely unheard of (Al-Arfaj Group, 2015).

Thus, while UK-level sustainability (reusing and recycling) is not feasible for Kuwait in the foreseeable future, the foundations for a similar system can be laid by: establishing wardrobe departments; training designers and tailors to use sustainable methods; encouraging the acquisition and use of second-hand garments such as charity shop products; developing sustainable techniques with Kuwaiti costumiers to reuse and recycle costumes and leftover scrap fabrics, and change design thinking (Lawson, 2006; Fuad-Luke, 2009) so that their techniques match those of UK costumiers. The next section will present the final conclusions that can be drawn from the research in light of the findings generated**.**

7.5   Conclusions

The main conclusion of this research is that relevant parties in the Kuwait theatre industry must focus, before anything else, on redressing the critical deficit in knowledge pertaining to reuse and recycling strategies in costume design. This is because, as things currently stand, there is no concept of sustainability in the minds of Kuwaiti costumiers, nor in those of tailors. The fact that Kuwaiti costumiers have limited experience and knowledge of reusing and recycling costumes and materials means they have opportunities in the future to address each step in the life cycle of a garment (Payne, 2011); however, the consequences extend further than this. As already noted in the literature review, excluding this step from consideration during the earlier phases of design thinking causes a costume designer to overlook an abundance of possibilities for the imagining and construction of costumes (Payne, 2011; Evans, 2005). Thus, Kuwaiti costumiers not only miss opportunities to reduce the environmental impact of textile waste, they also limit their own ability to achieve optimal results in their work. This is especially the case for period costumes which pose the greatest challenge in terms of finding the right fabrics and accessories as many fabrics, patterns and components are no longer available (Hunnisett, 1986; National Theatre, 2018).

As noted previously, however, Kuwaiti costumiers are not themselves the only barrier to sustainability. A second barrier is the institutional practice of discarding all costumes after the first production. Kuwaiti theatres do not generally have wardrobe departments, nor any other type of facility for the long-term storage of costumes and textiles or props. This means there is none of the virtually unlimited quantity of old costumes available for reuse and recycling, unlike the UK where almost all theatres have wardrobe departments and those that do not can hire costumes from others or costume shops. Coupled with the lack of permission for designers to keep the costumes they make, this means that costumes are either binned, shredded then binned, or simply dumped in a landfill after a show is finished. This may be the greatest hurdle sustainability faces in the country, although the fact that Kuwait had long-term storage and wardrobe departments prior to the Iraq invasion of 1990 does provide some traditional grounds for reinstating

the practice (Zahra, 2009; Al-Wgyan, 2010).

As has been demonstrated throughout this research, the use of waste management strategies based on the 3Rs (reduce, reuse, recycle) has enabled UK costumiers to implement design thinking and sustainable practices in costume production that have had a significant and beneficial effect on the environment. The ultimate goal is to therefore enable Kuwaiti costumiers to develop a similar mindset and implement comparable practices. As the research has shown, this is a challenging task given the current lack of such practices and a design mindset that is not yet geared towards change. Nevertheless, the potential exists, and it is apparent that Kuwaiti costumiers are willing to make such changes given the right circumstances and support. Following the recommendations I have outlined will therefore go some way to achieving this aim and, as a primary goal, reduce the amount of environmentally damaging waste sent to landfill.

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9 Appendices

9.1 Appendix 1: A sample Participant Information Sheet for interviewees in both Arabic and English text

Sheffield Hallam University

PARTICIPANT INFORMATION SHEET

TITLE OF PROJECT: Utilising re-use and recycling strategies in costume design in Kuwait theatre.

1. About the study:

You are being asked to take part in a research study that will aim to investigate the design and production process used by costume designers in Kuwait, and to explore and develop innovative design solutions that will enable the designer to reduce or avoid textile waste. An outcome of the study is to present a design methodology that can be used by costume design practitioners in different theatrical contexts and to work with costume designers to develop and test reuse and recycling strategies through creative samples applicable in specific theatrical settings.

تمهيد:
السلام عليكم
اسمي علي دشتي .. ادرس في جامعه شيفيلد هالام ببريطانيا .. اتمنى قبولك المشاركه معي في هذه الدراسه ... وهي اعاده تطوير الازياء المسرحيه في المسرح الكويتي وكيفيه اضافه عنصر الابداع عليهم ......ومن خلال هذه التجربه والدراسه بامكاننا في النهايه الصول الى نتائج مرضيه.

2. Why am I being asked to get involved?

Your experience and contribution will be valuable to the study. Taking part is voluntary, if you choose not to participate or wish, at any time, to withdraw then this is fine. You can also withdraw at any point in the study.

السماح لي بإجراء مقابلة معكِ لهذه الدراسه ... مشاركتك ستكون تطوعيه ولك الحق باي استفسار .. وويمكنك الانسحاب باي وقت تريده.

3. What will I be required to do?

If you agree to take part in this research study, the researcher will conduct an interview and / or observe you carrying out a specific design activity. Interviews will be recorded using audio equipment; audio files will be transcribed. There are no right or wrong answers the researcher just wants to hear about your experiences and opinions related for the questions. Please note that some of the questions will relate to your personal study and your history experiences. The participant will have to read through the information sheet and sign the consent form before the start of the interview session.

السماح لي بإجراء مقابله معكِ شخصيا ، حتى أتمكن من التحدث معك بشكّل مفصّل عن هذه الدراسه والتي تهتم باعداده تدوير الازياء المسرحيه في المسرح الكويتي .. سيكون هناك تسجيل صوتي ومرئي وذلك لتحليل المعلومات في وقت لاحق لهذه الدراسه ، ونريد ان نستفيد من خبرتك في هذا المجال كونك شخص اكايمي في المجال المسرحي .. .وقبل بدا المقابله سنقرا سويا النموذج وثم يتم التوقيع من قبلك للموافقه في هذه الدراسه.

9.2   Appendix 2: A sample Participant Information Sheet for the workshop in Kuwait in both Arabic and English text

Sheffield Hallam University

PARTICIPANT INFORMATION SHEET

TITLE OF PROJECT: Utilising re-use and recycling strategies in costume design in Kuwait theatre.

1.   About the study:

You are being asked to participate in a research study that aims to investigate the design and production process used by costume designers in Kuwait, and to explore and develop innovative design solutions that will enable designers to reduce or avoid textile waste. The outcome of the study is intended to present a design methodology that can be used by costume design practitioners in different theatrical contexts and to work with costume designers to develop and test reuse and recycling strategies through creative samples applicable in specific theatrical settings. The aim of the workshops is to examine costume design in practice, and to subsequently use the resulting observations to develop operable reuse and recycling strategies.

تمهيد:

السلام عليكم

اسمي علي دشتي .. ادرس في جامعه شيفيلد هالام ببريطانيا .. اتمنى قبولك المشاركه معي في هذه الدراسه ... وهي اعاده تطوير

الازياء المسرحيه في المسرح الكويتي وكيفيه اضافه عنصر الابداع عليهم ......ومن خلال هذه التجربه والدراسه بامكاننا في النهايه

الوصول الى نتائج مرضيه. والهدف من ورشه العمل هو استدراج النتائج النهائيه بالادلهر والبراهين المصوره والمسجله لهذه الدراسه

والتي تريد اختبار عوالمل الاستدامه مابين مصممين الازياء المسرحيين في الكويت وماهي الموانع والنواقص او الامور الغير واضحه

من خلال المقابلات التي تم اجرائها سابقا في هذا البحث العلمي .

2.   Why am I being asked to get involved?

Your experience and contribution will be valuable to the study. Participation in the workshops is voluntary; if you choose not to participate or wish, at any time during the workshops or the study, to withdraw, this will be absolutely fine.

السماح لي بمشاركتك   لهذه الدراسه والتي بشخصك الكريم سوف تضيف اليها الكثير من العلم والمعرفع لهذا البحث العلمي ...
مشاركتك ستكون تطوعيه ولك الحق باي استفسار .. ويمكنك الانسحاب باي وقت تريده .

9.3   Appendix 3: A sample Participant Consent Form for Kuwaiti and UK interviewees in both Arabic and English text

PARTICIPANT CONSENT FORM

Study title:	Utilising re-use and recycling strategies in costume design in Kuwait theatre.
	موضوع الدراسه: **محاوله المحافظه وامكانيه اعاده تدوير الازياء في المسرح الكويتي**
Chief investigator	**Ali Dashti**
Telephone number	
Email : **B4039531@my.shu.ac.Uk**	

┌───┐
│ Participant name   │
└───┘

Please answer the following questions by ticking the response that applies

الرجاء التّكرم بالإجابة على الأسئلة التالية عبر وضع علامة صح تحت إجابتك	YES	NO
1. I have read the Information Sheet for this study and have had details of the study explained to me. لقد قمت بقراءة المعلومات في الخطاب المُوَجَّه للعينة، ولديّ فكرة واضحة عن الدراسة	☐	☐
2. My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point. تمت الإجابة على جميع أسئلتي حول مشاركتي في الدراسة بشكل مرضٍ، وأعلم أنه بإمكاني الحصول على أي معلومات إضافية في أي وقت.	☐	☐
3. I understand that I am free to withdraw from the study within the time limits outlined in the Information Sheet, without giving a reason for my withdrawal or to decline to answer any particular questions in the study without any consequences to my future treatment by the researcher. أعلم بأنه بإمكاني رفض أو الانسحاب من المشاركة في الدراسةأثناء المدة الموضحة في الورقة السابقة دون إعطاء أي أسباب لذلك، دون أن يترتب على ذلك أية نتائج.	☐	☐
4. I agree to provide information to the researchers under the conditions of confidentiality set out in the Information Sheet. أوافق على تقديم المعلومات التي يحتاجها الباحث ضمن ضوابط الخصوصية التي تم توضيحها في الخطاب المُوَجَّه للعينة.	☐	☐

9.4 Appendix 4: A sample Participant Consent Form for the Kuwait workshop in both Arabic and English text

PARTICIPANT CONSENT FORM

ورقه عمل للمشارك

Study title:	موضوع الدراسه: محاوله المحافظه وامكانيه اعاده تدوير الازياء في المسرح الكويتي Utilising re-use and recycling strategies in costume design in Kuwait theatre.

Chief investigator	**Ali Dashti**
Telephone number	
Email : **B4039531@my.shu.ac.uk**	

Participant name :

Please answer the following questions by ticking the response that applies

الرجاء التكرم بالإجابة على الأسئلة التالية عبر وضع علامة صح تحت إجابتك	YES	NO
1. I have read the Information Sheet for this study/workshop and have had details of the research explained to me. لقد قرأت الورقة التعريفية الخاصة بهذه الدراسة/ الورشة وتم شرح كافة التفاصيل المتعلقة بها جيدا وبوضوح.	☐	☐
2. My questions about both the workshop and study have been answered to my satisfaction, and I understand that I may ask further questions at any point. قد تم الإجابة عن كل أسئلتي واستفساراتي بخصوص كلا من الورشة والدراسة بكل وضوح وأتفهم تماما حقي في إمكانية طرح أي أسئلة إضافية في أي فترة خلال الدراسة.	☐	☐
3. I understand that I am free to leave the study/workshop within the time limits outlined in the Information Sheet, without giving a reason for my withdrawal, or to decline to answer any particular question in the research without any consequences for my future treatment by the researcher. أتفهم وأستوعب حرية قراري في ترك الدراسة/ الورشة خلال الفترة الزمنية الموضحة في الورقة التعريفية بالبحث، وبدون إبداء أي أسباب عن انسحابي، كما أنني أملك تام الحرية في رفض الإجابة عن أسئلة معينة دون التعرض لأي عواقب أو تغيرات في معاملة الباحث لي في المستقبل.	☐	☐

9.5 Appendix 5: Semi-structured interview questions

1. What is your job/role at the theatre/company? (Are you part of an in-house costume design team employed by the theatre?)

2. What are you working on now? What does that involve? Whom are you working with? Do you do any freelance work?

3. What does a costume designer do?

3a. Can you describe the way that costumes are designed and produced in your company/theatre? (Explore - is there a standard process or does this vary between productions?)

3b. What materials do you use? Where do you get the materials?

4. What techniques do costume designers use?

4a. Who is responsible for which type of work? For example, in your job are you responsible for design ideas, sketches and/or sourcing fabrics?

4b. In what ways do you work with other people in the theatre on costume design e.g. with a director or with actors?

5. What happens to old or used costumes in your company?

6. Do you reuse and recycle costumes/materials in other productions?

If not, why not?

If yes, in what ways? (Give me an example)

7. Do you think costumes/material could be reused and recycled after productions?

If not, why not?   /   If yes, in what ways? (Give me an example)

8. What are the reasons for reusing and recycling costumes or materials from one production to the next?

9. What is sustainability?

10. How do you think this applies to costume design in theatre here in the UK/Kuwait?

9.6 Appendix 6: Supporting evidence: a confirmation email regarding an interview with one of the UK participants

Date: 1/03/2017 22:23 (GMT+00:00)
To
Subject Ali Dashti (PHD Student)

Dear

My Name Is Ali Dashti And I am PHD student

I Read Your brilliant profile from your website, which is describes all your creative costume design works, from different plays and projects.

Please , I will very pleased if I can meet you and have an interview with you , to discuss and talk about you works in costume design , and that's will help me to develop my PhD research , the interview will not take longer than 30 to 45 minutes .

Many Thanks
Ali

9.7   Appendix 7: Professionals and specialist Kuwait costume designers interviewed in Kuwait from July 2016 through to December 2016.

Participant Code	Position	City	Date, time and places	Consent signed	Method
1.H	A costume designer working for many theatres who has designed costumes for various plays in Kuwait and the Middle East.	Salmyia	10.7.2016 Office:10:30–11:15	Yes	Face to face interviewing and digital recording (Kvale, 2007)
2.B	A prominent costume designer who has worked on several plays in Kuwait and Spain.	Salwa	13.7.2016 Coffee shop: 17:00–17:40	Yes	
3 N	One of the first costume designers to have emerged after the Iraq invasion in 1991.	Nzha	16.7.2016 Office: 12:00–12:45	Yes	
4. R	An award winning academic, stenographic, and theatrical author and costume designer.	Shammiya	21.7.2016 Office: 17:45–18:20	Yes	

Participant Code	Position	City	Date, time and places	Consent signed	Method
5. M	Costume designer for more than 12 theatrical works (children's theatre and adult theatre).	Mishref	22.7.2016 Coffee shop: 15:22–16:00	Yes	
6. A	A theatrical costume designer who specialises in theatre academics.	Nzha	24.7.2016 Coffee shop: 13.10–13:45	Yes	
7.I	Academic costume designer based at the Kuwait Art Academy. Has worked on a variety of academic and free-lance plays over the past 10 years	Kuwait Down town	24.7.2016 Coffee shop: 17:00-17:40	Yes	Face to face inter-viewing and digital recording (Kvale, 2007)
8.Z	Costume designer for a popular Kuwaiti theatre band	Jabriya	25.7.2016 Office: 11.30–12:10	Yes	
9.K	A costume designer and the owner of the Mudian Moda company for costumes and props	Salmyia	26.7.2016 Office: 10:00–10:40	Yes	

Participant Code	Position	City	Date, time and places	Consent signed	Method
10.R	Costume designer and supervisor at the Back-Stage Theatre Company	Keifan	3.8.2016 14.30–15:10	Yes	
11.A	Freelance set and costume designer; has worked on different plays for the past 6 years.	Surra	20.12.2016 Coffee shop: 1.30-1.50	Yes	Face to face inter-viewing and digital recording (Kvale, 2007)
12.G	Costume design-er specialising in children's plays and costume design	Jabryia	25.12.2016 Coffee shop: 19.30- 20.15	Yes	
13.S	A costume designer interested in de-signing traditional costumes for any traditional play in the theatre	Rai	27.12.2016 Office: 13.12-13.45	Yes	

9.8 Appendix 8 : Details of professionals and specialist UK costume designer interviewed from November 2016 through to March 2017

Participant Code	Position	City	Date, time and places	Consent signed	Method
1.Y	A stage and costume designer trained in Theatre Design at the renowned Motley Theatre Design company in London.	London	11.11.2016 Coffee shop: 14.30.15.10	Yes	Face to face interviewing and digital recording (Kvale, 2007)
2. L	Costume designer/collaborator with wide ranging areas of interest including set design/execution, R and D, installation and live art.	Sheffield	17.11.2016 Coffee shop: 18:00–18:44	Yes	
3.S	Experienced wardrobe and costume designer (theatre, TV, commercials, shorts, and feature films)	Sheffield	18.11.2016 Sheffield Theatre: 12:00–12:45	Yes	
4. M	Set and costume designer for the past 12 years. Working predominantly in theatre, has also worked for the National Theatre, London's West End, and regional theatres all over the UK.	Leicester	30.11.2016 Coffee shop: 13:5 –13:33	Yes	

Participant Code	Position	City	Date, time and places	Consent signed	Method
5.P	A costume maker from Mabel Fletcher, Liverpool since 1985. Has vast experience cutting, making, and supervising costumes for Theatre, Opera, TV and Film.	York	14.12.2016 Northern College of Costume. 15:10-15:40	Yes	
6.B	Costume maker and tailor for theatre and film. Has 20 years of experience cutting and constructing men and women's period costumes, underpinned by an extensive knowledge of dress history.	Sheffield	4.3.2017 Yorkshire Art space Exchange Place Studios. 13.22-13.45	Yes	Face to face interviewing and digital recording (Kvale, 2007)
7.A	A costume designer and maker. Studied at the Academy of Fine Arts in Palermo and specialised in costume and set design for theatre at the Academy of Fine Arts of Brera, in Milan.	London	7.3.2017 Coffee shop (Covent Garden). 13:5-13:46	Yes	
8.R	Designer of multiple trades. Has experience in the fields of costume design, illustration, filmmaking, fashion design, and photography.	London	7.3.2017 Coffeeshop (Covent Garden). 16.10-16:42	Yes	

Participant Code	Position	City	Date, time and places	Consent signed	Method
9.Z	A founder of the Sabotage theatre company, and a costume designer and maker. Her work involves reusing and recycling costumes and materials for all the shows at the Sabotage theatre	Ashford	8.3.2017 Office: 14:00-14:52	Yes	
10.S	Costume designer for a variety of plays in the theatre, pantomimes, and festivals including Glastonbury. Ground Acts: stilt characters, fire dance, roller-skating.	Sheffield	12.3.2017 Coffee shop 17:15 –17:52	Yes	
11.A	Costume maker/designer. Has worked in various plays as a costume designer including *The Peter Pan, Squad Goals, and Pop Xmas Shout out*. Has provided wardrobe assistance for Qdos entertainment and The Churchill Theatre.	London	16.3.2017 Coffee shop (St Pancras Station) 13:5-13:46	Yes	Face to face interviewing and digital recording (Kvale, 2007)
12.L	Freelance costume designer, costume maker, and dresser. Based in Liverpool, her experience consists of pattern cutting and construction alongside design aspects. Has worked in various plays as a costume designer including *Kill the Beast, Marat /Sade,* and *Cirque Du Kaka*	Liverpool	23.3.2017 Art Space Studio 14:20-14:41	Yes	
13.C	Freelance costume designer and clothes maker. Has worked as a wardrobe supervisor for the Imagine Theatre production of *Aladdin,* Grimsby Auditorium. Experience of hand sewing, alterations, fittings, pattern drafting, weaving, budgeting, sourcing fabric, and dressing.	York	25.3.2017 Coffee shop 13:44-14:5	Yes	

9.9 Appendix 9: Kuwait workshops templates and timetable

Weeks and duration times	Activities	Description of the activities during the weeks
First Week **Half day** **from: 1pm to 3pm**	**Introduction day** Introduction to the three workshops.	In the first meeting, I explained my research which meant leading the workshops and introducing the aims and objectives of the study, namely to assess how re-usable and recycling strategies can be applied to Ku-waiti theatre. To provide clear information with regard to what the three workshops entail and what they should do, I gave participants the opportunity to ask questions prior to starting the three workshop tasks.
Second week **Half day** **from: 1pm to 4.30 pm**	**Working on Level 1** Redesigning (minimal intervention) - working with a one used garment.	
Third week **Half day** **from: 2pm to 5.30 pm**	**Working on Level 2** Makeover Garments – selecting used garments, working on additional garments, using additional materials.	
Fourth week **Half day** **from: 3pm to 6 pm**	**Working on Level 3** Complete Costume Design – making a complete costume from using discarded fabrics and materials.	
Fifth week **Half day from** **1pm to 6 pm**	**Photo session** Throughout the day, I took photos of costumes and compared the designers' professional work both before and after their participation in the workshop.	
Sixth week **Half day from** **2pm to 4 pm**	**Interviews** In this session, I evaluated the impact of the three workshops through an in-depth discussion with each participant. This comprised a semi-structured interview held with each individual based on specific questions that I had prepared in relation to the three workshop tasks.	

9.10   Appendix 10: Kuwait costume designers who participated and their positions

First participant	The participant, their position, and career experience
Participant name: 1.H	A freelance costume designer who has worked as a costume and stage designer for more than 8 Kuwaiti theatre productions. She has more than six years of design experience.
Name of the play/script: Amena	
Character name: Amena	
Play style: Traditional Kuwaiti	
Second participant	
Participant name: 2. A	A freelance costume designer who took courses in costume design with a private institute in Kuwait.

Up until recently (2 years ago), she had worked on more than 5 plays. She gained experience in costume design by working with Kuwait experts in the field. |
Name of the play/script: Cleopatra	
Character name: Cleopatra	
Play style: Egyptian Pharaonic style	
Third participant	
Participant name: 3.M	A freelance costume designer who has worked on a variety of academic plays for festivals and shows in the Kuwait and Gulf area.

She developed experience as a costume designer by undertaking private stage and costume courses and working alongside other Kuwaiti costume designers for different Kuwait theatre productions.

She has been working as a costume designer in the Kuwaiti theatre industry for more than 4 years. |
Name of the play/script: Alice in Wonderland	
Character name: Alice	
Play style: Western/Fantasy play show	

9.11   Appendix 11 : Semi-structured evaluation questions asked of participants after the workshops - February 2017

1_ What have you found most valuable about this workshop?

2_ What challenges do you face when you work on recycling (constructing) costumes and textile materials?

4_ How did you find it when you adjusted and cut the fabric? Was it an easy task for you?

 - If yes, explain

 - If no, explain why

5_What are the current barriers preventing the reuse and recycling of costumes and textile materials?

6_ Do you understand the term of sustainability practices (reusing and recycling) and the construction of costumes and textile materials?

- If yes, explain   /   - If no, explain why

7_ What are the specific difficulties involved in recycling textile materials?

8_ Do you think it is possible that you will implement reusing and recycling techniques in the future?

9_ What is that motivation that will make you, as a costumier, use these strategies (reusing and recycling) in costumes and textiles for the theatrical productions?

9.12 Appendix 12: A screen shot from the Trint program where the programme converts the audio file to text from an interview with a costume designer from Sheffield

Interview (London)

[00:00:01] What Q1

[00:05:05] It does vary because sometimes it depends on. Something that's.

[00:05:10]. Specific questions of the show then. Then that's a different process. Because you're. Making something from scratch rather than finding something. So it depends on the scale of the show the type of the show how much money they. Have for all the stuff

[00:05:49] Q 3 B.

[00:05:57] Okay. I used all sorts of different things. A lot of. Rage. Justin Leicester and the marketplace has loads of stuff. It's quite cheap. And we've got a few favorite shops there. In Leicester. Sometimes I have to go to London to see a Broadway extra to get more. Specific things. I get the stuff online. As a company in Germany that I get a lot of things from. There's also a company that does more structural.

[00:06:29] Materials that you used to make more. Solid things. For example, So recently I'm making stuff like this is that Arman. Yes, that's our material called warbler and uses a phone. So it's sort of a mixture between.

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المتحدث 1 : خالد ، ممكن تحدثنا عن عملك كمصمم أزياء هل عملت في المسرح من قبل أم لا ؟

المتحدث 2 : بداية أنا خريج المعهد العالي للفنون المسرحية ولذلك المعهد يدخلك للعمل في جميع المجالات سواء رسم أوديكور ، في كل شئ ،خصوصاً هنا في المسرحيات يجعلوك تعمل في كل شيء حتى أنني في عام 2004م عملت مع عبد العزيز المسلم وعملت في الديكور والأزياء والإكسسوار .

المتحدث 1 : لكنك الآن تعمل في التصميم فقط صحيح .

المتحدث 2 : نعم ، أساس عملي الآن في الأزياء والإكسسوار ولكن لدي أهتمامات في جميع مجالات الفنون. وأيضاً أنا مصمم ديكور.

المتحدث 1 : أين؟

المتحدث 2 : في ورشة خاصة لي في السالمية وطبعاً أنا أعمل أيضاً في الأزياء والمجوهرات

المتحدث 1 : إذا ماذا تعمل الأن مصمم أزياء؟

المتحدث 2 : نعم مصمم أزياء لكن ليس هو مجالي الوحيد، فمثلاً من يريد أن أصمم له ديكور فسوف أصمم له ، خصوصاً أنني متنوع في مجالي