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# The Information Behavior of Fashion Students in the UK

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A Doctoral Thesis

Submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy

City, University of London

Department of Media, Culture and Creative Industries

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# Declaration

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# Abstract

This thesis investigates the information behavior of fashion students in higher education in the UK by testing the usefulness of Carol Kuhlthau's Information Search Process (ISP) model (2003) when studying this demographic. It interrogates whether these students go through the six stages of the search process-and associated emotions- as Kuhlthau identified and identifies the resources fashion students use and want, and where they are obtaining these resources during the course of their research. Situated between the fields of library and information science (LIS) and fashion studies, this is the first study researching the information behavior of fashion students from an LIS viewpoint. Employing a mixed methods approach, this thesis foregrounds the perspectives of fashion students in British higher education and information professionals and librarians supporting them in UK-based universities. This work argues that the ISP model is useful in understanding the information behavior of fashion students, and that fashion students in the UK are experiencing some of the six stages and emotions that Kuhlthau identified. However, it also concludes that there are some key differences between these students' information behavior and Kuhlthau's model. This work demonstrates that students are deviating from the model, and not going through all of the six stages; seek mediators at different stages than Kuhlthau identified, and are obtaining a range of resources (predominately digital) from multiple sources, and not exclusively their university library. These conclusions offer important insights to supporting information professionals in supporting the unique needs of this demographic of students and aids in the development of adequate and useful library collections.

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# Introduction

## 0.0 Introduction

The library is central to the argument of this thesis. While the availability of an abundance of information on the internet seems to have promoted the perception of a decline in the library's importance, in general and within higher education, especially with students undertaking creative or art-based degrees (Graham and Brown, 2016), this thesis will argue that libraries and their resources are still vital assets for students in higher education. Current university students use the library differently, or not at all, than students in the pre-internet era, due to the perceived mass availability of resources. Students are no longer reliant on the physical library; instead they rely upon the online library and resources they find elsewhere. This phenomenon affects all current higher education students, including creative students and those studying fashion-based degrees. This study examines the information behavior of fashion students in the UK through the lens of Carol Kuhlthau's Information Search Process (ISP) model, revealing that students do not follow all six stages nor experience them linearly. Findings show a strong reliance on online resources, reluctance to seek librarian assistance, and deviations from research patterns typically associated with the ISP, despite the availability of physical collections. These insights can inform the development of more effective library collections and support services tailored to the unique research habits and needs of fashion students. This model is used frequently within the LIS field; however, it has not been tested with fashion students before.

Historically, libraries have been and still are considered to be pillars of society, collecting and storing information and documents since the establishment of the oldest civilizations, with the first being built around 5,000 years ago. The development of libraries in the UK and Ireland began around 1,500 years ago, culminating with the establishment of

the first public libraries in the seventeenth century (Skjonsberg and Towsey, 2022). The primary function of the library at this time was the storage and documentation of knowledge.

Libraries in the twenty-first century have become vital hubs for learning and knowledge, providing students with a wide array of resources in various formats to support their educational and inspirational needs. Now, alongside books, libraries hold a wide variety of information resources that are expertly curated. These resources include a mixture of documents of different formats, such as textual documents, videos, photographs and of particular importance to this thesis, garments (Dukare, 2019). While different formats of documents and information have not replaced the physical resources or physical space of the library, this change has had a significant impact on the role of the library for students within higher education (Freeman, 2005). Libraries are an especially central component for universities providing resources for students, faculty and staff and are required to provide a wide range of resources in different formats, relevant to all courses that the university offers. Each cohort of students has different information needs and requires a variety of information resources from their library, featuring documents of different formats.

To ensure the provision of a prestigious education, it is essential to curate library collections to best serve the needs of the students. The information behavior of students needs to be acknowledged to deliver the best library service and meet their information needs. Yet, the unique needs of fashion students have been largely overlooked in both library science and fashion studies. The information behavior of these students has never been studied within the field of library and information science, nor have the resources and documents these students use been identified. This thesis sits between the fields of library and information science and fashion studies. Fashion studies is multidisciplinary and extensive research on object-based research has been published within the field (Sampson, 2020), but there is little published

research within fashion studies literature that comes from a library perspective. This creates a gap in the literature in both fields that this thesis seeks to address.

As a main area of study in the library and information science (LIS) field, the study of information behavior gives insight into the multiple ways people interact with, seek and use information. Having a deeper understanding of a demographics' information behavior means that LIS professionals can access and provide more accurate information resources to information seekers (Ford, 2015). The study of fashion accommodates a large variety of areas of study, including design, buying and merchandising, producing students with diverse and specific research needs who require an array of information resources. The UK offers the most recognized fashion schools and programs in the world, promising students a world-class education. To fulfil this promise, libraries need to support these students with the tools and resources to complete their degrees.

My research tests Kuhlthau's ISP model in relation to contemporary fashion students to determine to what extent these students progress through any of the six identified stages of the information search process which Kuhlthau identified as initiation, selection, exploration, formulation, collection and presentation. It also evaluates how these students' research process supports our understanding of their information behavior as a demographic, an invaluable insight for the librarians supporting them in a rapidly updating information environment.

This research addresses aspects of the model that have been previously overlooked. Due to Kuhlthau's focus on the cognitive aspects, the ISP model does not consider factors that are consistent with other studies on information seeking and behavior, such as the type of information need, the availability of resources or the type of resources used (Case, 2009). I have chosen to address these aspects, and I will present an updated version of the ISP model within this thesis. I have also chosen to address why fashion students are researching. This

may seem obvious, but fashion students are a unique demographic and need both resources for assessments and inspiration for their creative practices. This is an important factor to address in this research: fashion programs in the UK have an emphasis on the creative practice aspect of degree programs, which may affect which resources students use when researching. I am also inquiring as to what resources students are using when conducting research and which resources they want the most. I am including this in my investigation to aid librarians in their collection development. This focus also seeks to assess the adequacy of library resource collections for fashion students, and whether the resources available to them meet their diverse educational and informational needs.

Despite being developed before the internet era, the ISP model remains effective when studying information behavior in digital environments. When Kuhlthau originally developed the ISP model, the internet was not widely used and was not typically involved in the research process, with the students featured in the early studies researching exclusively in the library. The usefulness of the model when using the internet when researching was confirmed in 2008 by Kuhlthau, Heinstrom and Todd. Here, Kuhlthau and her associates revisit the ISP model, testing if the model is still useful within technologically rich information environments (2008). The findings of this 2008 study confirmed that the ISP model is still effective when the use of the internet is present in the information search process.

The ISP model is widely used in the study of information behavior, making it a key framework for this research. The ISP model has been used in a variety of educational and workplace settings and studies, being used most in studies examining the information behavior of students of different levels (please see Krubu, 2017; Buba, et. al., 2021; and Byron and Young, 2000; Haley and Clough, 2017). The model includes identification of the cognitive aspects a researcher goes through when seeking information. Information scientist

Donald Case states Carol Kuhlthau's model of "the 'information search process' is universally applicable to any domain" (2009, p. 145). This is due to the model's focus on cognitive aspects, such as thoughts and feelings that arise during the information search process.

Due to the COVID-19 pandemic, lockdowns and social distancing measures were put into place in the Spring of 2020. This forced library services to revert to fully online practices for a time, while social distancing restricted the number of students and staff allowed in the physical library at one time. This made students even more reliant on online resources. The extensive use of the internet, other updated technologies and the many different formats of resources used by students will also be addressed in the updated version of the ISP model that I will present.

This research finds that contemporary fashion students in the UK are going through some of the stages of the information search process Kuhlthau identified but are diverting from the process in a few keyways. Students are not going through all six stages, nor are they going through these stages in the order Kuhlthau previously identified. These students' emotions also deviate from Kuhlthau's findings, as they are more optimistic when beginning their research process, although feelings of uncertainty and anxiety do still persist. Fashion students are seeking the assistance of formal mediators, such as librarians, at previously unidentified stages, differing with Kuhlthau's results.

Through this research, I discovered that contemporary fashion information resource collections provided by UK university libraries are adequate, diverse and current. With information and information resources accessible to students at home or on their smartphones, the importance of the library in this instance does not cease to exist. Libraries are still vital to contemporary university students. The availability of academic and peer-reviewed resources, subject experts as mediators, subject experts developing the collection,

availability of resources specific to universities, courses, programs and modules all come from the university library.

This introduction chapter will introduce the aims and objectives, scope and research questions, justification of the use of the ISP model for this project, as well as key identify definitions of terms before venturing into the historical context of fashion education and the field of library and information science. It will then provide a schedule of work for the subsequent chapters of this thesis.

## 0.1 Aims and Objectives

The aims of this thesis are as follows:

**Aim 1:** To identify the information resources used by fashion students in the library and elsewhere and to identify where the students obtain their resources.

**Aim 2:** To examine whether contemporary fashion students experience the same emotions as Kuhlthau identified- uncertainty, anxiety, and optimism- during their research process.

**Aim 3:** To investigate if the emotions Kuhlthau identified in her ISP model are present in these research environments and with a demographic of students that has multiple categories and foci.

**Aim 4:** To discover and investigate the information behavior of fashion students in the UK by testing the Information Search Process model (ISP), as developed by Carol Kuhlthau (2003).

The objective of this thesis is to investigate the information behavior of fashion students in the UK.

The UK, and London in particular, offers some of the most prestigious fashion universities and programs in the world. The history of fashion, fashion education and the fashion industry in the UK and London is discussed in more detail in sections 0.5, 0.7 and 0.8 of this Chapter.

## 0.2 Scope

This study focuses on the experiences of fashion students and librarians studying and working at universities offering fashion programs within the United Kingdom. The UK is a valuable geographic context in which to develop the first close study of fashion students' information behavior, as it occupies a dominant place in the field of fashion studies and within the global higher education sector (please see section 0.5 for further discussion of fashion education in the UK).

This research focuses on fashion students in higher education, both those studying on undergraduate and Master's level courses. This is due to undergraduate and postgraduate Master's students in the UK generally being enrolled in taught courses, where they are presented with briefs and assessments. Fashion degrees have a large number of specialties and foci. Therefore, this research includes several "types" of fashion students. Students enrolled in fashion-related degree programs at ten UK-based universities participated in the questionnaires, rounds of observation and interviews for this research. These ten universities were chosen due to the responses of course leaders and lecturers allowing their students to be given the option to participate. Students enrolled in courses such as fashion design, business, and journalism participated in this research project. This range of students from different degree courses allows for exhibiting the diversity of fashion students in the UK and their needs.

Qualified librarians feature in this study, and not library assistants, as it is the librarians who make key decisions relating to acquisitions, who develop and run student-facing activities such as workshops and one-to-one tutorials, and who tend to have a holistic overview of the day-to-day operations of their libraries. Librarians from eight UK-based universities that work directly with fashion-related degree courses and students are participants in this research. There is some overlap between the ten universities whose

students participated and these eight universities. It was not within the scope of this research project to extend the study beyond the UK, or to feature PhD level students, although these foci offer valuable information for future directions.

## 0.3 Research Questions

The research questions for this study were designed to test Carol Kuhlthau's Information Search Process model and to acknowledge the model's shortcomings by identifying the resources librarians are making available and those that are used most by students. As follows:

### **Research Question 1: Is the ISP Model useful in discovering the information behavior of fashion students?**

- Why are current students looking for fashion information? For academic purposes or inspiration?
- How do students feel when they begin their information search?
- How do students resolve their information problems?
- Is there uncertainty present throughout the research process and, if so, at what stage?

This is the first time the ISP model is being tested in regard to fashion students in higher education. This inquiry aids in the understanding of the research process of these students and provides insight into this demographics' information behavior. This first research question addresses the possible emotions and uncertainty students face, which affects not only their research process, but their information behavior as a whole.

### **Research Question 2: Where are students obtaining their information resources?**

- What information resources are students using?
- What devices are students using when searching for information?
- What are the challenges, if any, that students face over access to information?

It is vital to establish where students are obtaining their information when researching, as this affects how they behave informationally. It is particularly relevant to this research, as this

may affect students' uncertainty and anxiety throughout the research process. There are many options as to where students are getting their information resources from, and it is important to establish if the library is fulfilling their needs in this regard. If the library is giving adequate collections, is the information literacy of this demographic of students an issue?

**Research Question 3: How can fashion librarians adequately develop their fashion resource collections?**

- What types of resources are needed to create adequate fashion information collections?
- Are students well-prepared for their future in the fashion industry with the resources libraries are providing?
- What careers are the students interested in obtaining post-graduation?
- How knowledgeable are students and librarians on virtual reality (VR), augmented reality (AR) and new and digital fashion documents?

This research question directly addresses library information resource collections and the need to provide students with diverse resources. Students pay a premium price for a quality education and require adequate library collections to support their degrees and to prepare them for their future in industry. The fashion industry is rapidly changing, which affects fashion education greatly. Resources provided via the library also need to reflect these changes, which requires the identification of the resources students use most, deem to be helpful, and those that they are lacking and would like to be provided via the library.

The limitations of the ISP model have been acknowledged in the literature (Case, 2009), although the aspects of what resources information seekers are using and why the need for information has arisen have not been included in all other research when using the ISP model. I include these aspects in my research due to fashion students being a diverse demographic and have a unique set of resource needs. By considering these aspects in my

study, I aim to identify the most used resources students are reaching for when researching in the library, as well as the resources which students need. Consequently, this work aims to support the development of adequate library collections for UK fashion students.

## 0.4 Defining “Fashion”

The concept of fashion is central to this thesis. As such, it is important to define the term “fashion” and detail the context in which it is used. The definition of “fashion” is widely debated within fashion studies literature. This section will introduce the key definitions of fashion that currently circulate within fashion studies and establish how “fashion” is defined for the purpose of this thesis. I will also define the term “fashion student,” which also appears frequently throughout this study in section 0.6.

Fashion is both a concept and a term, with both having a long and well-recorded history. According to fashion scholar Yuniya Kawamura (2023), the concept of fashion first appeared in France around the year 1300. Synonyms for fashion include clothing and dress, and the terms are repeatedly used interchangeably. Within scholarly literature, the concept of fashion is often linked with notions of change and modernity, stemming from industrialized Europe (Roach-Higgins, 1981; Wilson, 2003; Geczy and Karaminas, 2016; and Kawamura, 2023). Historically, many scholars argued that fashion developed only due to the emergence of the mercantile class in Western Europe, and later due to industrialization (Entwistle, 2023; Wilson, 2003). It was the nineteenth century, therefore, that changed the nature of fashion in Europe, with “the development of new technologies for producing clothes, such as the sewing machine” (Entwistle, 2023, p. 105). These developments further added to the growth of fashion media, which by the end of the century disseminated fashion “more widely than ever before, and fuelled women's desire for more variety and quicker turnover of styles” (Arnold, 2009, p. 15).

Fashion has long been intertwined with the concepts of change and modernity in Europe, with scholars increasingly challenging this framework. These notions are directly related, making fashion essential to European modernity as “fashion, in a sense, *is* change” (Wilson, 2003, p. 3). Historically what has been viewed as “fashion” is the Western European

view, which then became the basis of the transnational global fashion industry. Scholars in this field have claimed the previous view of fashion to be Eurocentric, due to the over-emphasizing of characteristics common within European society and constructing Western ideals that fails to see change, both social and aesthetic, in other cultures (Entwistle, 2023; Niessen 2007; Welters and Lillethun, 2018).

However, in academic literature produced over the past two decades, fashion studies scholars have argued that fashion as a concept is not inherently Western European, and that rather, fashion refers to an unplanned process of continual *change* within society that can be found in any historical period or within any culture (Aspers and Godart, 2013). The notion that identifies fashion as a purely Western system is currently being disproven in current fashion studies literature. Fashion systems have operated around the world, throughout time, within multiple cultures (Welters and Lillethun, 2018; Evans and Vaccari, 2020; Entwistle, 2023). Many of these decolonization efforts are lead with the desire to dismantle the idea of capitalist modernity being a condition of fashion (Cheang, Rabine and Sandu, 2022).

Fashion is a multifaceted concept encompassing both the tangible and the intangible. Kawamura identifies “fashion” as having a dual meaning; fashion as *change*, which is an intangible concept and phenomenon and fashion as *dress* which is represented through clothing and is tangible (2011). Therefore, fashion, is “a symbolic production while clothes are a material production. Fashion is a symbol manifested through clothing” (Kawamura, 2023, p. 71). According to Kawamura’s understanding, fashion is a wider concept, where dress and clothing are merely an aspect.

Fashion is frequently understood through its connection to clothing and dress, with varying scholarly perspectives on whether it is defined by cultural values or when manifested in physical form. Fashion exists in relation to near synonyms and dictionary definitions for clothing and dress, used in association with terms such as dress, adornment and style

(Barnard, 2014). For some fashion scholars, the concept of fashion only exists due to its relation to clothing and dress, with cultural values at the root of attempting to understand fashion. Others promote that fashion is only *recognized* when it is translated into dress.

Within this thesis, I define fashion as an intangible system that is present within everyday life as a social process that is related and most recognizable when it is translated into clothing and dress. I acknowledge that fashion is not only associated with clothing and dress but for the purposes of this research, I focus on fashion and the fashion industry that is related to clothing, dress and accessories. I reject the notion that fashion is only prevalent in the West (Arnold, 2009; Wilson, 2003; Roach-Higgins, 1981) but acknowledge that the concept emerged in Western Europe and has gradually become attached to the industrial and global fashion industry. The synonyms of clothing and dress are not used interchangeably with “fashion” throughout this thesis. I developed this definition of fashion inspired by the works of Rocamora and Smelik, 2016; Aspers and Godart, 2013; Kaiser and Green, 2021 and Kawamura, 2023, 2011.

## 0.5 The History of Fashion Higher Education

Fashion higher education in the UK has a long-standing and globally recognized history and significance. This makes the UK the ideal location for the first investigation into the information behavior of fashion students. It took many years for fashion to be recognized as legitimate in the higher education setting, and for others to see that fashion is much more than simply the designing of garments, branding and consumption or historical tradition (King & Clement, 2012). Currently, the UK is the world leader in fashion education, being home to the world's twenty leading fashion universities, including the London College of Fashion and Central Saint Martins, which are both part of University of the Arts London (Donaldson, 2016). An anonymous *Vogue* fashion critic identifies London's higher educational institutions as the key to its flourishing fashion industry and is its main contribution to its success (Broeke, 2019). As a multidisciplinary field, fashion supports studies within several specialties, which is reflected in the courses and programs offered across the UK. Fashion programs are competitive in their admissions and require a range of interests and skills (Street, 2024). It is important to note here the difference between fashion studies and fashion education. Fashion education is the practical education of fashion, such as training students to work in the industry. Fashion studies is a field of study that introduced theory, which emerged in the 1980s, although there is historical fashion-based work before this decade. In the 1980s, the *Fashion Theory Journal* was established and scholars such as Elizabeth Wilson became prevalent in fashion-based literature (Findlay, 2025). The theories of fashion studies were subsequently integrated into fashion education.

To fully understand the presence of fashion-related degrees within the current UK higher education landscape, it is important to appreciate its long history. The history of fashion education is essential to this thesis, as it provides crucial context for understanding how fashion students' information behavior has evolved. Tracing the development of fashion

education in the UK aids in the understanding of how curriculum design, and resource availability have shaped students' information-seeking behaviors over time. This history also details how the demands of the fashion industry have influenced academic programs. As the fashion industry has become more digital and fast-paced, fashion HE curricula has also transformed to meet these needs and prepare students. Historically, fashion education curricula relied heavily on hands-on learning, apprenticeships, and physical resources. Understanding these shifts helps contextualize why modern fashion students may rely more on online sources than on the physical collections available to them and if their library collections are adequate.

Fashion education began in Paris, with the first school of fashion, *Ecole superieure des arts et techniques de la mode* (ESMOD), established in the mid-nineteenth century (Stefanie, 2024). At this time fashion was initially taught as a trade, with an industry-based and technical focus. At ESMOD, students were taught the art of design, patternmaking and tailoring (Stefanie, 2024).

The development of fashion and art education in the UK was slow until the nineteenth century, especially in comparison to France. Prior to 1837, art training was limited and was coupled with little financial support from Parliament (Jewison, 2015). The Founding of the London School of Design in 1837 expanded art and design training and education in the UK, due in part to financial assistance from Parliament. The School was established to be the “application of arts to manufactures” (p. 66), to provide those in industry an opportunity to acquire knowledge of the arts to support their business endeavours (Jewison, 2015). The Birmingham and Leicester Schools of Art and Design were established as counterparts to the London location and opened in 1843 and 1869 respectfully. At this time, British fashion and design education was based in the belief that improving the “taste” (Romans, 2005, p. 42) of the “lower” (Bide, 2021, p. 7) classes through education was a moral and social imperative.

The nineteenth century saw a growing focus on textile education in the UK, due to the needs of the wool industry and wider British economy. During the 1860s and early 1870s, the British wool trade faced a crisis, which fuelled the interest in improving provision for textile education to support the industry, and in turn the British economy (Bide, 2021). This interest in industry was similar to those which played a part in the establishment of the London School of Design decades earlier (Jewison, 2015). This need for expanded textile education was further promoted by industry representatives and specifically the Leeds Chamber of Commerce in order to provide training in both technology and design (Bide, 2021). The 1870s saw the emergence of the vocation of textile design education, with the establishment of the Textile Industries Department at the Yorkshire College of Science, now the University of Leeds (Bide, 2021). This momentum within fashion education continued, with the establishment of a new school in 1906 by the London City Council intending to teach the designing and making of ready-made clothing to meet demand for “skilled workers” to design new garments and make up samples from a sketch (Bide, 2021, p. 10).

The nineteenth century also saw a rise in demand for post-secondary education in the UK. To meet this need, polytechnic institutions were established. Classes at polytechnics were commercially focused, and taught pupils the skills needed in trades to prepare students for their careers in industry (Wilson, 2022). Evening classes were common, and courses were available on a part-time and full-time basis. Fashion education courses were available through polytechnics with multiple courses and foci.

Polytechnics helped shape fashion and textile education in the UK. In 1838, the Regent Street Polytechnic was established as London’s first polytechnic, founded with the aim of demonstrating new technologies to the public (LAM, 2024). Courses in garment cutting and tailoring, boot and shoe manufacturing, dressmaking, millinery and hairstyling began in 1880. Regent Street Polytechnic and Harrow College combined into what is now the

University of Westminster in 1992. Before this merger, Harrow College taught courses in dressmaking and textile design, which were developed into undergraduate and postgraduate courses during the 1980s (LAM, 2024).

Fashion education in the UK continued to grow in the twentieth century, beginning with theatre-focused courses. In 1919, the Central School of Arts and Crafts announced a new course focusing on “costume and fashion,” which catered specifically to the needs of the theatre industry, rather than the fashion industry, despite the growing importance of the fashion industry in the City of London (Bide, 2021). This momentum continued to grow throughout the twentieth century in the UK, with apprentices, private and trade schools and polytechnics supporting fashion educational needs.

In the early twentieth century, trade schools provided specialist training for women. The London County Council began to fund trade schools such as the Barrett Street Trade School for Girls in the beginning of the twentieth century. Specialist schools such as these were prevalent in working class neighborhoods (McLoughlin, 2017). By 1937 the Barrett Street Trade School, since absorbed into the London College of Fashion, had grown to be the largest trade school for women in London, focusing on dressmaking and ladies tailoring skills, with their courses shaped by the awareness of the need of practitioners in the industry (Bide, 2021).

However, despite these early developments in fashion and textile training for industry, McLoughlin (2017) argues that fashion education in the UK prior to the 1930s was limited at best. The decade of the 30s brought a crossroads to design education, given the advancement of technologies and increase in demand for mass-production methods in industry (Jewison, 2015). Apprentices were employed in design rooms in factories from the age of fourteen onwards, and were trained within the factories, with little to no outside training in formal arts schools (Jewison, 2015). During this time, trade schools granted entrance to children mostly

of the working class, admitting students as young as thirteen to prepare them to find employment (McLoughlin, 2017). Art-based schools also enrolled children from thirteen onwards and those that were deemed to be of exceptional talent could gain scholarship at age eighteen to what is now the Royal College of Art in London, although fashion was not taught at this time (McLoughlin, 2017). Private schools in the UK also provided fashion education, advertising courses available to potential students through adverts in fashion magazines and journals, such as British *Vogue*. These establishments came at a premium cost and were considered to be a more middle-class fashion-related training environment for future employment (McLoughlin, 2017).

The decade of the 1930s led to strong ties between art schools and industry, which aided the launch of the first fashion design course in London. Art schools began increasing their industry connections following the publication of the “Hambledon Report” in 1936, which recommended the re-organization of the Royal College of Art. This recommendation eventually resulted in the launch of a new fashion design course in 1948, headed by Madge Garland, the former editor of British *Vogue* and the RCA’s first professor of fashion (Bide, 2021). Garland furthermore established fashion as a subject at the RCA that required both academic credentials and creative skills, rather than only technical ones (Bide, 2021). This was a continuation of the campaigns she had run during her time with *Vogue*, which called for more formal training for fashion designers and stylists to elevate the reputation of the British Fashion industry (Bide, 2021). This is a turning point for fashion in higher education institutions, as the basis of the curriculum was no longer only focused on moving students into the industry to boost the British economy.

The 1960s saw a dramatic change within the wider higher education system in the UK. To address the need for more places available for students, the government redeveloped the polytechnic education system to offer both intermediate and degree level courses. This

contrasts with universities that only offered degree level courses (Jewison, 2015). Due to increased demand, previously established polytechnics and other colleges were transformed by the British government in England and Wales (Parry, 2022). This change had a major effect on arts schools and colleges, with the Leicester and Birmingham schools of design each becoming polytechnics during this period (Jewison, 2015).

The reward of completion for arts courses also drastically changed with polytechnics achieving greater higher education institution status. The National Diploma in Design (NDD), which was introduced in 1946 to give students more vocational and industrial experience, replaced with the Diploma in Art and Design (Dip. A.D) in 1963. Once polytechnics were restructured as higher education institutions, art, design and other fashion-based courses offering diplomas were reconstructed to offer bachelor's degrees. This combined arts and design programs completely under the umbrella of higher education in the UK, after being separated from the rest of the education system for over a century (Jewison, 2015).

Polytechnics grew into major higher education institutions, especially in the 1980s and continued this growth until 1992, when these institutions were granted university status (Parry, 2022). Access to higher education in the UK expanded exponentially in the early 1990s with the Further and Higher Education Act of 1992. Due to the government granting several former arts schools and colleges university status (institutions now commonly referred to within the UK as “Post-92s”), the number of British universities multiplied (Scott, 2012). With the inclusion of these new schools, over thirty institutions were given university status across the UK. The current significant offering of fashion- related degrees in UK higher education directly sustains the UK fashion industry, thanks in part to the recognition of status of arts schools after 1992. The current state of the UK higher education sector is discussed more in section 0.8.

From the mid-1960s, British universities began to produce many fashion designers and has since produced some of the world's leading fashion professionals (O'Byrne, 2009). This history has a direct effect on current British fashion and design programs and its "well-developed network of arts schools" (McLoughlin, 2017). Current prospective fashion students are aware of the prestigious reputation of these programs and universities, especially international students. 22% of international young people surveyed for the British Council in 2014 stated that fashion is something that made the UK attractive to them and that they had hopes of working with the British fashion industry upon graduation (Donaldson, 2016).

The emergence of fashion education at this level of study came with critique to its legitimacy as an academic discipline. As the field developed, librarians contributed greatly to the conversation of validity, expressing their support for the academic study of fashion (Thompson, 2021). Writing in 2024, the global fashion industry is undergoing major transformations, due to the focus on sustainability, the shift to digital and e-commerce, and the introduction of artificial intelligence in fashion (Rolling Stone, 2022). This raises the question of whether current fashion education and curricula are equipped to adequately prepare students hoping to go into the fashion industry. Fashion is an ever-changing landscape, wherein students are expected to adapt quickly and have previous training when entering the industry workforce (Street, 2024). The integration of technology within fashion higher education is integral to student success. For current fashion academic curricula to adapt to the changing requirements of students, teaching teams also need to adapt to new technologies and practices (Street, 2024). By extension, to continue to support the success of fashion higher education students in the UK, university libraries need to provide adequate and up-to-date information resources.

Currently, the teaching of fashion at the higher education level is changing, as new technologies have impacted the fashion landscape. This translates into current fashion higher

education, with the COVID-19 pandemic hastening fashion's digitization and engagement with the virtual environment (Cantrell, et al., 2024). Due to this, UK fashion higher education institutions have taken to integrating e-learning platforms and digital technologies into their curriculum and library information resource collections (Sun, et al., 2024). Those involved in fashion higher education are approaching the teaching of fashion from a decolonization standpoint (Hogans and Shaw, 2024). The decolonization of fashion education curricula involves invitation, appreciation and acknowledgement of those traditionally excluded through process, theoretical framing and present realities of fashion's formation, existence and evolution (Hogans and Shaw, 2024). It is the duty of fashion higher education institutions and educators to educate their students to be critical when responding to current issues in the fashion industry (Hogans and Shaw, 2024).

## 0.6. Defining Contemporary “Fashion Students”

Due to the new changes in technology, and more specifically the fashion industry in relation to these advances, studentship in the twenty-first century has changed. Students are no longer contained to the walls of a classroom, taking hand-written notes and checking out physical books from the on-campus libraries. Thus, a new generation of fashion professionals is emerging, and they will interact with the industry differently, and in turn will demand new ways of learning (Guedes & Buest, 2018). This is a complex demographic where

fashion students have the unique opportunity to explore clothing and textiles through a multidisciplinary lens, and it is their job to learn as much as possible about the objects they are researching (Warschaw, 2021, p. 3).

Fashion students enter a very competitive environment after graduation and arming them with the skills that they expressly need in industry is required (Ryan, 2020). With this notion in mind, it is necessary to hold fashion learning under a more holistic approach in which fashion designers, consumers and learners all belong to a community of interconnected researchers, sharers, creators, buyers, bloggers and promoters integrating between the physical and online channels (Guedes & Buest, 2018).

Recently,

studies have shown that the increasing adoption of digital technology in the field of fashion design create opportunities for new methods and skillsets to enter fashion design processes, leading to a more diverse array of practices and practitioners from multiple disciplines exchanging artistic and technical knowledge (Tepe and Koohnavard, 2022, p. 39).

Due to the nature of the industry, current students need adequate educational instruction and library resources in order to transition into a competitive climate.

In this thesis, “fashion student” refers to a university student undertaking a degree that focuses on an aspect of the system of fashion at a UK-based university. Within UK higher education, degrees in fashion are commonly organized within four main categories: fashion design, which includes sub-categories such as knitwear, men’s and womenswear, footwear design and contour; media and communications, including fashion journalism, and fashion public relations; fashion studies, which focuses on critical theories of fashion and fashion history; and fashion business, with sub-categories including fashion buying, brand management, fashion merchandizing and fashion business management. Each of the students involved in this research were studying for a degree in one of these categories, either at the undergraduate or postgraduate Master's level.

## 0.7 London: A Fashion City and the appeal of the UK for Perspective Fashion Students

The UK, and the city of London in particular, has a long-standing relationship with the fashion industry which has directly affected the UK's fashion higher education standards and reputation. Due to this, London is one of the world's "fashion cities." Fashion cities are particular cities that are intimately involved with the fashion process (Gilbert and Casadei, 2020). This makes London an attractive city to fashion students, both domestic and international alike. The idea of a fashion city has "been a long-running recognition of the significance of certain urban milieu as sources of fashion authority" (Gilbert and Casadei, 2020, p. 402). Fashion cities combine high-end design, globally significant collections, shows and events, manufacturing, skilled finishing, retail and consumption, and media that promote these cities as a central site of fashionable production and consumption (Gilbert and Casadei, 2020). What makes London unique as a fashion city is attributed to its "reputation as a place dominated by a uniquely diversified cultural and creative sector, which attracts international creative talent, hosts an extraordinary pool of creative industries, and generates strong economic and symbolic value" (Gilbert and Casadei, 2022). Therefore, it is acknowledged that London, as a fashion city, features important fashion media, events, strong and place-specific fashion cultures and histories, and well-established fashion centred educational institutions (Gilbert and Casadei, 2020).

The British fashion industry is often acknowledged as the most innovative and exciting in the world (O'Byrne, 2009). This is fostered by the nation's long-standing recognition of the importance of cultural heritage and the creative sectors. During the 1980s, Prime Minister Margaret Thatcher also paid close attention to the UK's fashion industry. Mrs. Thatcher championed the UK fashion industry and was more interested in this field than any of her predecessors had been (O'Byrne, 2009). The Prime Minister was interested in the

business aspects of the industry, showcasing this by hosting many receptions for members of the UK fashion industry at Number 10 Downing Street. Most notably, Mrs. Thatcher's government assisted the further development of the British fashion industry in the 1980s, through its involvement in the establishment of the British Fashion Council (O'Byrne, 2009).

The UK fashion industry and London as a city on creativity and exclusivity, with the city cementing itself in a top tier position in the fashion world. Dylan Jones, Editor-In-Chief of *GQ* Magazine and BFC's Menswear chair claims that the pure eccentricity of London is what sustains the city as a fashion capital, going on to say the creative industries in London continue to regenerate themselves constantly (Broeke, 2019). This is due to the perception that "in no other metropolis in the world is unbridled creativity so universally celebrated and, most importantly, so readily open to all. And nowhere is this sense of inclusivity more obvious than in London's fashion industry" (Broeke, 2019). The fashion industry is among the UK's largest and most successful sectors. In 2014, the British Fashion Council defined the fashion industry broadly, as "all businesses that are directly or indirectly associated to the retail, manufacturing and supply of clothing, footwear and accessories." As of 2018, the fashion industry employment figures in the UK rank almost as large as the financial sector (Fish, 2020). UK creative industries, including the fashion industry, contributed 49-billion-pound gross value in 2022 to the UK economy (Tiley, 2024). As of 2016, The UK fashion industry is worth 26 billion pounds and provides 800,000 jobs to the economy, making it the UK's largest creative industry (Donaldson, 2016).

In the late 1990s, the UK attempted to rebrand itself as "Cool Britannia," trying to rid itself of its reputation of grey, gloom and pessimism. This rebrand, although encouraged by the New Labour Party, originated in a 1997 issue of *Vanity Fair* (Purnell, 2024). The New Labour Party marketed this rebrand in its attempts to demonstrate the UK as a young, modern and cosmopolitan society, with a concentration on the importance of the arts and cultural

heritage (Anamik, 2020). Due to this notion of Cool Britannia within the government, ministers began to measure the economic impact of the “creative industries,” including the fashion industry, with policies championing these fields (Jeffries, 2007; Purnell, 2024). These policies included a 290-million-pound settlement where the galleries, libraries, archives and museums (GLAM) sector all benefitted (Jeffries, 2007).

Although fashion was not a degree subject in the UK until the mid-twentieth century, there is still a long-established history of fashion education. Consolidating London’s reputation as a leading fashion city and the UK as a destination for international students is: the fashion higher education institutions based in London and other parts of the UK and the support of the UK fashion industry. The access to creative and arts education in combination with the integration of cultures and experiences is what gives London its status as a fashion city (Broeke, 2019). These aspects associated with London see both UK nationals and international students moving to the City to continue their education at these prestigious programs. The global reputation of UK-based fashion programs is attributed to their promotion of creativity and artistic values, and to their conceptual approach to fashion that supports innovation, experimentation, originality and creative thinking at the highest level (Gilbert and Casadei, 2022).

## 0.8 Current UK Higher Education Environment and the Higher Education Crisis

Current UK higher education institutions are facing a series of issues, which affect all courses and degrees, including those focusing on art and design. Almost half of UK Vice-Chancellors expect their universities to run at a loss in 2024 (Woods, 2024). The cost of running universities continues to grow, while academic salaries are falling at a rapid rate (Davies, 2024). Higher education institutions are funded by a variety of income sources including tuition fees and education contracts, funding body grants, research contracts and grants, investment income, and donations and endowments (Weston, 2023). To combat financial issues, universities are introducing measures to reduce their spending by cutting their staffing costs, with redundancies made to academic departments and lecturers and administrative staff and introducing freezes on hiring and promotion (Davies, 2024; Williams 2024). Post-92 institutions are affected the most by funding cuts (Foster and Gross, 2024). Consequently, London-based Goldsmiths University announced a “transformation program” which required 17% of all full-time staff be made redundant, with some departments, including arts and politics, reducing their staff by 50% (Williams, 2024).

This crisis especially affects creative arts-based courses, as in 2020-2021 Government funding for creative arts courses at universities in England was cut by the Conservative party in power by 50% per-student (Davies, 2024; Woods, 2024; and Jowett, 2024). This lack of financial and government-backed support has direct influence on fashion schools and programs, as they do not always have the funds or technical staff to fully equip their students with all industry standard tools and programs (Postlethwaite, 2020). In 2020, the Rochester campus of the University of the Creative Arts was forced to close, with courses moving to the university's other campuses across England. Staff from the Rochester campus were either allocated to other campuses, forcing them to uproot themselves, or made redundant. Many of

the students were able to finish their degrees in Rochester, but there were students who were forced to transfer to other campuses.

Despite cuts to Government funding, student demand for creative degrees continues to rise. Creative degrees had their highest application percentage level in 2011-2012, with a 60% increase in the number of creative arts and design-based students in 2012 than in previous years (Bill, 2012; Jowett, 2024). More recently, over 271,000 students applied to design and other creative based degrees in the 2021-2022 academic year. The London College of Fashion and Central Saint Martins alone received 35,000 applications for admission for the year 2023-2024. This comes one year after the government halved funding for the arts in higher education (Jowett, 2024). These statistics indicate that student demand for these courses is increasing, despite the lack of funding from the UK government.

Over the last decade the Conservative Government has attempted to devalue creative education through their policy initiatives, dubbing these degrees as “low-value degrees” (Wicklow and Gamble, 2024). In 2021, a report was published signifying that there was a decline in those holding art qualifications at A and BTEC levels when applying to university, with the sharpest decline coming from those in the least advantaged areas of the UK (Wicklow and Gamble, 2024). Despite this, there has been a 6% increase in the number of students applying for these courses at university, according to the 2021-2022 data. This increase is substantial according to Diana Beech, the London Higher Chief Executive Officer, as this shows that the promoted government rhetoric of “poor value degrees” has not impacted down to the applicant level (Jowett, 2024). Students are not concerned about the perceived status of creative subjects, perpetrating that creative-based degrees are desired by students, and that aspiration does not seem to be fleeting (Jowett, 2024).

Despite the lack of government funding and the consistent rhetoric of creative-based degrees being those of low stock, the UK creative industries sector is still one of the most

prosperous and is only continuing to expand. A 2020 study conducted by the University of the Creative Arts (UCA), predicts that the UK creative industries sector will grow by 300BN pounds per year by 2030. This is an increase from the 180BN pounds per year that was predicted before the COVID-19 pandemic (UCA, 2020). This prediction will only be possible with the continued success and further championship of UK fashion higher education. This is to say that “without strong creative education, we are in danger of not being able to sustain our creative industry, nor provide our young people with worthwhile and important skills for their whole lives regardless of their socioeconomic background” (Wicklow and Gamble, 2024, p. 3).

The UK higher education sector is facing instability due to the financial position the sector is in. The UK higher education business model is at risk of collapse. The costs of educating students and undertaking research are not all covered by government expenditure. This shortfall has historically been accommodated for, due to overseas students paying uncapped and ever-rising tuition fees, particularly from those studying at the post-graduate level (Woods, 2024; Williams, 2024). Due to constraints and visa restrictions for international students, this model is becoming increasingly difficult to successfully operate due to the vulnerability of the market and political and social changes (Walmsley, Westwood and Willetts, 2024; Clarke, 2023).

UK universities rely heavily on international student fees to offset frozen domestic tuition, creating financial strain for both institutions and students. Income from tuition from UK home students relies significantly on government-backed student loans (Weston, 2023). University fees for domestic students in the UK have been frozen since 2017, costing students £9,250 per year (Woods, 2024). These students are leaving university in record-high amounts of debt, with the average student graduating owing £45,000 with interest accruing. The Government’s repayment scheme for student loans raises the graduate’s rate of income

tax by 9%, which results in the highest marginal tax rates for any workers in the UK (Davies, 2024).

### 0.8.1 Reduction of International Students

Policy changes for international and EU students and Brexit have impacted the higher education sector, contributing to its instability. Currently, UK universities are reporting a large reduction in international student applications, especially due to further reductions on student visas and the fear of the abolition of the graduate scheme, which allows international students to live and work in the UK for up to three years after graduation (Adams, 2024). Attributable to Brexit, EU students are now classified as international students and no longer qualify for the home student fees they previously paid and no longer qualify for student loans (Bolton, Lewis and Gower, 2024).

Due to the reputation of UK arts schools and programs, there is keen interest from and enrolment of international students. The continued debate and discussions of parliament regarding the graduate scheme is deterring potential international students from enrolling, as they are concerned that they will not be able to continue to live in the UK after graduation, which is showing a decline in overseas applications (Adams, 2024). This is especially true for the fashion industry, as “the creative economy relies upon a supply of creative graduates to meet ever-increasing demand for new ideas” (Bill, 2012). A joint letter by Creative UK and Universities UK, which represents university vice-chancellors, urged the government to keep the graduate scheme intact, stating “the role our universities play in attracting the best creative talent from around the world goes to show the soft-power influence of our institutions” (Adams, 2024). Higher education institutions in the UK are critical to the UKs future in industry. Universities are the “major source for new ideas-led businesses, they educate the skilled workforce of tomorrow and they enable the UK to compete internationally

as a science superpower and to exert long-term global influence” (Walmsley, Westwood and Willetts, 2024).

## 0.8.2 The Effect of Brexit on UK HE

In conjunction with the UK higher education crisis, wider socio-economic factors are also present. In the summer of 2016, the UK public held a referendum, with the majority of voters voting to leave the European Union (EU). This decision and the aftermath of the process of leaving the EU is referred to as “Brexit” (ITV News, 2019). After the vote, the UK and EU officials spent years navigating through the withdrawal of membership and stipulating the regulations for EU nationals living in the UK, and UK citizens living abroad. Although the referendum took place in 2016, the UK did not officially leave the EU until the 31<sup>st</sup> of January 2020.

Brexit has provided many challenges for the UK higher education sector. The loss of EU funding and other schemes has placed researchers at a disadvantage. Now, European scholars are less likely to take positions in UK universities, forcing the fall of the UK as the dominant force in retaining international research income (Davies, 2024). Post-Brexit there was a 50% decline in applications for undergraduate courses from countries in the European Union (EU) for the 2021-2022 academic year. This was the first year that students coming from the EU required a visa to study in the UK, as open travel between the UK and the EU is no longer. The visa process is complicated and expensive and is a deterrent to these students. There is a point of contention here, as the UK government has ambitions to increase international student numbers and reduce net migration as universities have looked to international student tuition fees to uplift shortfalls elsewhere in their budgets (Bolton, Lewis and Gower, 2024).

### 0.8.3 COVID-19 and Higher Education in the UK

The COVID-19 pandemic affected all industries and aspects of everyday life in the UK and had a significant impact on students and within higher education. The pandemic caused a severe recession within the economy, due to lockdowns and closures of businesses from the measures enacted to eradicate the virus (Brien, et. al., 2022). In the UK, 87% of residents surveyed reported that their cost of living increased exponentially, citing the rising costs of food, petrol and electricity bills (Lewis, et. al., 2022). The severity of the rise of the cost of living in the UK has had an effect on all other aspects of life, including one's social, professional and educational enterprises.

The COVID-19 pandemic led to substantial changes to teaching, learning, revising and researching within higher education. Due to the transmissibility of COVID-19, UK leadership enforced social distancing measures which included the closure of business, public and educational institutions. Khan has suggested that higher education institutions were unprepared for the change to emergency measures implemented by the government, and therefore all students, regardless of their level of study, were greatly affected by the changes to their education that were in direct response to COVID-19 (2021). Academic changes such as the transition to online learning and researching, the use of alternative assessments and grading methods, and adjusting to the new technologies and technological workspaces all affected students during this time (Khan, 2021).

Early research regarding the anxiety levels of students in the UK indicates signs of rising anxieties due to the changes the education sector faced during the pandemic (Khan, 2021). Due to the closures of university campuses and facilities, students were not able to access the physical library space and instead had to rely on resources that were available to them remotely.

The pandemic also had a great effect on higher education staff in the UK. Participants in a research project sponsored by the Open University reported that the pandemic had severely impacted their mental health and well-being (Kassem, 2022). The study reported that this sentiment rang especially true for participants with known disabilities, caring responsibilities, and staff in their twenties. Issues reported in this research include anxiety and depression, loneliness due to lockdowns, financial stress, loss of confidence and struggling to manage an increased workload (Kassem, 2022). Academic staff and lecturers reported they felt they were unable to engage with students through fully online teaching and felt a sense of detachment with their students (Kassem, 2022). There were also challenges in adopting teaching materials for online learning, and more students than usual were asking for deadline extensions, adding more pressure to academic staff. University faculty and staff were also affected by redundancies and employers ceasing all professional developments schemes and efforts (Kassem, 2022). The pandemic has provided universities with more understanding of how education can be delivered and how lecturers and staff can evolve to meet the needs of the students (Arrowsmith, n.d.).

## 0.9 The Effect on the University Library

The ongoing crisis within British higher education has had a direct effect on all aspects of institutions, including their libraries. University libraries are currently experiencing a series of external pressures, stemming from political, social and economic changes. Most notably, university libraries face funding pressures, which influences management, innovation and the development of resource collections (Cox, 2020). Generally, university libraries are financed via the Universities General Fund (Lewis and Bolton, 2024). A 2018 report found that representation of the library is largely missing from conversations and debates revolving around budgeting and other discussions relevant to the higher education institutions of the UK (Salisbury and Peseta, 2018). This is related to the drastic depletion of library funding. UK higher education institutions have experienced a drastic reduction in government funding since the 1980s (Cox, 2020). Library funding has declined as a proportion of total university budgets (Lewis and Bolton, 2024). Currently, library expenditure accounts for only 3% of total university spending, indicating a downward trend in academic library funding in the UK (Lewis and Bolton, 2024).

The value of the library to universities is rarely, if ever, acknowledged. Yet libraries and their staff are invaluable to universities, as they contribute to institutional competitiveness, with wider exposure of resources, librarian expertise, and library provided access to resources. Libraries are the backbone and keepers of knowledge.

Despite their importance, libraries can expect to not receive any long-term infusion of funds in the near future (Cox, 2020). This is a major source of contention within higher education, especially for fashion schools and departments. Students are promised and expect a world class education from leading universities and pay a premium for it. At the same time, staff redundancies, lack of international applications and admittance, and budget cuts are at an all-time high, with no end in sight.

## 0.10 Contemporary Library and Information Science Field

Having discussed the history and current developments of fashion higher education in the UK, the UK higher education crisis and other global plights and their effects, and the UK's recognition of the fashion industry and the creative arts, I now turn to discussing the field and recent developments of library and information science and the notion of documents. This section will detail and analyze the changes in which the field of library and information science is undertaking, and the expansion of the theories and ideas that are used within the field, as well as exhibiting the state of changes libraries and librarians are currently going through. Libraries, and the LIS field, are constantly developing and expanding their research interests. With the changes in technology and other socio-cultural aspects, libraries are undergoing significant changes in their operation and provided services (Chandwani, 2023). Online resources and collections have become commonplace in western and developed libraries. The technological advancement of resources being offered to students is continuous, even expanding into the virtual world in some cases. Resources are available via the internet and the online library and can be used and learned from without even stepping foot into the physical library. Library chat services and emails are replacing face-to-face interactions, and university libraries in the UK have reference desks manned by library assistants. To consult with a librarian, an appointment needs to be made.

Due to changes in the library and information science field and more specifically, the physical library space, librarians are required to have more and different skills in order to successfully do their jobs (Beschler, 2022). Technology continues to evolve, especially with the introduction of artificial intelligence and augmented reality. Librarians, and other information professionals need to understand the changing of technologies and be aware of how this affects the library and information science field, documents, the use of the library

space, and the needs of patrons (Romano, 2023). Electronic resource acquisition and management is becoming increasingly more important in libraries as these resources begin to develop and become more available (Chandwani, 2023).

With the changes of technology and cultural issues, Master's programs in the library and information science community are tasked with providing future librarians with the skills and tools needed to navigate these changes (Romano, 2023). Libraries are in a state of transition, and they need to adopt new technologies and regimes in order to serve their patrons adequately. It is important for information professionals to adapt with change. This notion is acknowledged throughout this LIS field, as "librarianship is in a state of continuous change- not just technologically, but also culturally" (Romano, 2023).

The changes happening within libraries are not purely technological. Culturally, libraries are facing tough positions and changes. There are protests and book bans ongoing in many countries, and this is changing the nature of libraries and what they offer to the community (Romano, 2023). Due to the COVID-19 pandemic, libraries around the globe were forced to switch to a fully online service, and despite the re-opening of institutions, a good deal of these libraries have also kept these virtual services and have begun focusing more on their online learning and born-digital resource collections and development (Anon., 2022).

Documents are also in a constant state of development, and the notion of what constitutes a document has been a central theme since the Post-World War II era. In 2001, LIS document theorists established the Document Academy, where those in the LIS community come together annually to discuss research in and of documents and documentation (Back and Lund, 2001). As discussed in this thesis (please see Chapter One), the notion of a document has changed and will continue to do so. The information literacy of documents is of the utmost importance for librarians and those working with HE students.

Due to the developments of document theory in LIS and via the Document Academy, some objects can be considered to *be* a document as they happen to already be and other objects can be *made* into a document due to the aspects of: indexicality, plurality, fixity, documentality, and productivity. Today, librarians need to be aware of the changing nature of the notion of a document and how to store, retrieve, learn from and make accessible resources and documents in library collections.

Documents have gone through evolutions and changes in formats in alignment with technological developments, and the scope of the constitution of a document constantly adapts with these new technologies and materials. Currently, documents constitute mixed/multimedia materials, including text-based resources such as books, journal articles and magazines, garments, objects, videos and live performances to name but a few (Robinson and Dunne, 2018; Krstev and Trtovac, 2014; Latham, 2012; Bapte, 2017; and Raieli, 2013). Bertoletti, Gaggi and Sapino (2006), elaborate the definition of multimedia documents, claiming that “multimedia documents are collections of media objects, synchronized by means of sets of temporal and spatial constraints” (p. 1374). This is not the only definition for a multimedia document, but was chosen to showcase here, as it is clear and concise in wording (for other definitions please see, Rouet and Britt, 2014; Raieli, 2013; Amadiou et al., 2016; Qin et. al., 2015). By contrast, multimedia collections are collections that feature documents that are either multimedia in mode, or a collection that features different types of documents. Due to the influence of the internet and its proliferation of media content, collections are becoming more and more multimedia based, especially with the new technologies that are now more widely available, such as virtual reality goggles and artificial intelligence-based phone apps. Social media and technologies such as smartphones are commonplace with such students, which falls in line with the new understanding of a document. According to Robinson and Dunne (2018) scholarly understanding of documents

continues to adapt, now including social media entries, streaming data, games, virtual worlds and software.

Due to the number of documents and information resources available, contemporary fashion students have a plethora of resources at their disposal. This changes the way in which students not only research but use their university library. Access to information is deemed to be available to an information seeker in an instant, but there is a discrepancy between students' access to information and their ability to understand and use the tools to find information effectively.

Presently, a perceived notion that everything can be found via a Google search is prevalent and that information found on a search engine must be factual. Most adults believe that search engines are fair and often rely on the ranking of search results for credibility, and this assumption is especially true when it comes to students (Lacey, 2021). Information is now available from the palms of our hands, and there is often little thought about whether the information we read is accurate. The critical evaluation of information resources is now key when navigating such a vast number of resources (Hunter, 2013). These implications can impact the library usage of students. They may visit the library less frequently, even though the quality of the information resources libraries offer is much better and more academically appropriate.

The rise of digital resources has expanded library collections requiring librarians to manage and organize vast amounts of data. Multimedia collections are included within libraries and due to the introduction of digital resources, digital data and information resources are collected and made available in vast amounts (Suryawanshi et al., 2023). Due to this, libraries and librarians are required to analyze, organize, and provide accessibility to this new data to their patrons (Suryawanshi et al., 2023).

## 0.11 Developments in the Fashion Industry

The fashion industry is going through changes and developments in all aspects. As with the information sector, the fashion industry has also been affected by technological transformation. Due to these factors, the needs and opportunities of the industry have also changed drastically. New businesses and business models are emerging with new digital innovation. Innovations such as Smart Clothes and other wearable technology are becoming increasingly popular (Behr, 2018). With developments such as these, there are merging possibilities within the fashion industry, and these changes are being implemented at a rapid rate. 2023 has been reported as a breakout year for AI within the fashion industry, with the potential to grow and explore the industry for years to come (Balchandani, et al., 2023). 3-D printing and other similar technologies are revolutionizing fabric design and production (Kochar, 2024). Due to these technologies, innovation and customization possibilities in the fashion industry are nearly limitless (Kochar, 2024). As consumers' lives are becoming more intertwined with the digital world, fashion designers and businesses need to embrace the technology available to them to continue producing cutting edge products and designs and continue to push the boundaries of fashion manufacturing and marketing (Kochar, 2024). Technologies such as these are also expanding upon the notion of documents within LIS. Digital garments are informational, just as their physical counterparts (Cummings, 2019), making them also documents in their own right.

The rise of social media and other technologies have changed the fashion landscape. The fashion industry has capitalized on these changes, by expanding into a space for immaterial entertainment (Pecorari, 2023). The shift to the digital has transformed fashion museums, archives and libraries, expanding the administrative purposes and inventory and records recording capabilities; allowing for the collection of fashion media and fashion shows; and the use of fashion audio and video documents in a curatorial setting (Pecorari,

2019). The concept and use of social media has completely changed how fashion is presented, reported, researched and consumed (Hsiao, et. al, 2020). This stems from the rich history of fashion media, continued into the age of the digital, especially with the appearance of the internet and introduction of blogs (Rocamora, 2011). Apps and other websites have emerged as new spaces and archives for consuming fashion, its history and exhibitions (Pecorari, 2019). Currently, “Instagram stories, online Tumblr exhibitions and blogs have become spaces for enriching content and promoting a rationalized digestion of online fashion digital objects” (Pecorari, 2019, p. 15).

Sustainability is becoming a key focus in the fashion industry, with new regulations reshaping production and environmental accountability. In 2018, the UK Government announced a twenty-five-year plan to combat climate change, including strategies for textile production (Kuwamarra, 2023). Across certain areas within the fashion industry, especially within the European Union (EU) and the UK, new rules and protocols are going into effect (Balchandani, et al., 2024). These new regulations affect the entire fashion system and its practices, including textiles production, chemical use, product design recycling, and waste (Russell, 2024). These new rules will set the minimum for all products that will be sold and placed within the EU, by reshaping the industry, focusing on eco-design, and supply chain due diligence (Anon., 2024). Brands will furthermore be required to report their environmental impact, meet waste reduction targets and follow enhanced packaging regulations (PureLondon, 2024).

Socio-economic factors are driving changes in the fashion industry, with sustainability and ethical consumerism becoming key priorities affecting the industry. Topics such as climate change, sustainability and fair wages for workers are at the forefront of today’s consumers’ minds more so than in years passed (Kochar, 2024). The Paris Agreement on climate change in 2015 saw 195 countries committing to efforts to combat climate change

(Abbate, et al., 2022). Studies have shown that sustainable clothing and a sustainable fashion industry correlates with environmental awareness, social media usage, subjective cultural norms and perceived behavioral regulation (Abbate, et al., 2022). New innovations for dyes and materials are taking over the fashion industry in attempts to make these practices more sustainable (Chan, 2023). Consumers are shopping differently, be it the mode in which they make their purchase, or the notion of purchasing from a brand that is “greener” and better for the environment. Sustainable fashion apps such as Vinted and Depop have also emerged onto the market, making second-hand shopping easier than ever before (Kochar, 2024).

E and Mobile commerce and its associated technologies are getting increasingly advanced (Kochar, 2024). Smartphones are being used for online shopping, with the use of digital wallets to make purchases both in person and online. Studies have shown that two out of three consumers would rather shop online than in store (Kochar, 2024). The growth of social media has of course contributed to e-commerce fashion growth. Apps such as Instagram offer a shopping feature for brands, making it easy for their followers to shop via the app (Kochar, 2024).

These variables, mentioned above, affect the industry as a whole, and the opportunities and careers within it. Upon graduation, new roles and opportunities for recent fashion graduates are emerging, in line with the changes in the industry. The traditional design, marketing and merchandising job roles continue to attract recent fashion graduates, but there has been an increase in applicants applying for sustainability, supply chain and diversity and inclusion roles (Webb, 2021).

## 0.12 The Future of University Fashion Programs

Fashion higher education programs are evolving to address industry changes and student needs, incorporating new courses and resources. These changes in the fashion industry and library and information science field, discussed above, directly affect fashion-based university programs. Fashion HE programs are developing with these changes and have implemented new classes and even new courses to address the contemporary needs of the fashion industry and are curating library collections with relevant and industry-led resources. Present interests and social issues are now affecting students, and fashion higher education is working to address their new needs and desires. Currently, universities are developing new departments and curriculums based on multidisciplinary approaches, advanced design software, and digital fashion courses (Webb, 2021). As fashion students entering higher education become more aware of environmental and social issues, fashion education is responding to work in conjunction with their students (Webb, 2021). In line with the efforts to decolonize fashion curriculum, universities throughout the UK are offering new courses to students that explore fashion from different perspectives. Classes on how fashion intersects with societal and global issues, and the development of fashion across the world are being offered to support the initiatives that their students are interested in (Webb, 2021). Following with this, “fashion education is changing to meet the needs of the industry and the students” (Arrowsmith, n.d.).

## 0.13 Thesis Chapter Overview

In the introduction, I define the terms “fashion” and “fashion student,” introduce the aims, objectives, and research questions of this thesis, contextualize the history and current state of fashion higher education in the UK, and address how this relates to my thesis and research. I also provide a chapter breakdown of what is to come in the subsequent chapters.

Next, in Chapter One, I introduce and examine the literature relating to the evolution of the formats of documents and LIS document theory, access to documents and information, fashion documents and collections of fashion-related information resources, fashion studies and fashion education, and the new innovations within the fashion industry and fashion education. This is done in order to establish where this thesis fits into the literature and adds context to this study.

Chapter Two focuses on the LIS theory of information behavior and its use of models. Here, I analyze the Information Search Process model (ISP) developed by Carol Kuhlthau (2003). I acknowledge the usefulness of the model when investigating the information behavior of students and review the relevant literature.

Chapter Three presents my research methodology and offers a review of the research methods employed in this study. I detail and justify my mixed methods approach and discuss the data collection methods I used to conduct this study, and what information these methods make available.

Chapter Four presents the findings of this research regarding the documents and information resources that contemporary fashion students are using to conduct their research. This chapter addresses the main research questions of this thesis and concludes the types of resources students are using the most, what resources they want the library to offer, and where they are getting their information resources.

Chapter Five presents the findings of this thesis when testing the usefulness of the ISP model when investigating the information behavior of fashion students. This chapter identifies what stages of the search process fashion students are going through, and when in their research process they seek the aid of mediators. This chapter will also detail the deviations from the model that the students present in this research.

The Conclusion summarizes the theoretical contributions of this work and offers recommendations for future research into the information behavior of fashion students. It also evaluates the impact that the research this thesis presents on the fields of library and information science and fashion studies within higher education. I also present a modified version of the ISP model here.

# Chapter One Fashion Studies Literature

## 1.0 Introduction

To begin the investigation into the information behavior of fashion students, an examination of the existing literature is necessary. I will split this literature review into two chapters. In the first chapter I will explain and define the themes and theories relating to documents in the field of LIS, digital documents, and fashion documents. I will also discuss current and historic fashion information resource collections. Information resources used by fashion students are a main concern of this thesis, requiring an analysis of the literature to provide context concerning the documents fashion students have available. The history of these themes and documents are also presented here to showcase how these documents have transformed and how they are still important to make available to current students. The collections that are available to students vary in size, location and online availability. A discussion of these collections is included to demonstrate the limitations and specialized importance of institutions such as these. I will also review the literature regarding the myths of access to information and information literacy as these themes directly correlate to documents and fashion information resources, and their ability to be found and used correctly by students. I also discuss the future of the fashion industry and fashion higher education in regard to new and emerging technologies and industry needs, as this concerns my demographic of students. In the second literature review chapter, I will examine the concept and different types of information, the origins of information behavior and information seeking behavior and why there is no published literature on the information behavior of fashion students.

These themes are being explored here to introduce the documents and information resources that fashion students in the UK may be using when conducting their research. Since

there is such a wide range of documents available, it is important to understand that this creates diverse fashion resource collections that students may be using. To best understand the information behavior of a demographic, it is important to recognize the complexities of what constitutes a document. Documents communicate information, and information behavior is the study of how humans interact with and encounter information, which is communicated to them via documents. As this is a study on the information behavior of fashion students, it is necessary to understand the types of documents and information resources they are using to complete their studies. There is a long history of fashion documents, and these resources have continued to evolve and are present in the library and beyond.

## 1.1 What is a Document?

The notion of what does and what does not constitute a document has been a central conflict in the library and information science field since pre-World War I (Lund and Skare, 2009; Buckland 2013). During this time, the beginnings of what has now been coined as “Document Theory” was developed for the first time by Paul Otlet (1934). Documents are central to the library, as they create the information collections which this thesis is concerned with. To behave informationally, the information seeker interacts with a variety of information resources. The following section details documents, both generally and specifically fashion documents, to introduce the concept and notion. The ISP model of information behavior is being used in this research, although there are acknowledged limitations. The types of resources used by information seekers are not discussed in Kuhlthau’s original findings when developing this model. This limitation will be addressed in this thesis, and understanding the multitude of possible fashion documents is examined here in preparation for the discussion of the findings of this research in Chapter Five.

Document theory has changed the ways in which documents are perceived and understood. When thinking of the word “document,” some type of text-based object typically comes to mind. But with a wider understanding of documents, they can, within a certain context, be objects that are not textual or related to a text. Documents communicate, and we as people use them in every aspect of our lives. Communication does not necessarily need to be spoken or written. So, with document theory, the scope of a document has changed and expanded with the progression of time, introducing objects and digital components into its definition.

As documents and their forms are so vast, the resources students use, in this case fashion students, are diverse in nature. Fashion students use documents of many formats, and their resources should be viewed as documents by applying a broad use of the term. I will

now turn to three library and information science theorists whose research and discussions brought the definition of a document to its current usage within the LIS field; Paul Otlet, Suzanne Briet and Michael Buckland.

The concept of a document was revolutionized by expanding its definition and establishing a foundation of knowledge management. Bibliographer and entrepreneur Paul Otlet, of Belgium, was one of the first to expand the definition of a document to also include objects that were evidential and informational (1934). In 1895, Otlet partnered with lawyer and friend Henri La Fontaine, and together they established the International Institute of Bibliography (Perkowitz, 2016). Otlet's original desire was to create a universal compilation of knowledge (Perkowitz, 2016). To do this, Otlet sought to catalogue the "materials" of a given field, which created his documentary standards (Rayward, 1992, p. 93). These ideas allowed him to conceptualize and develop a new field, which he named "documentation" (Rayward, 1992, p. 93).

With the introduction of this new field, Otlet felt as though documentation should not only be concerned with written and graphic records, but should also include objects, because they had "documentary" value (Rayward, 1992, p. 93). Otlet included museum objects and other informational artefacts into his definition of a document. This notion took the definition of a document further than ever before (Gorichanaz, 2016b). Until this point, this idea of the constitution of a document had never been extended beyond the scope of textual. Otlet's establishment of documentation laid the foundations for document theory, and how this is used in LIS studies today.

French theorist Suzanne Briet built upon Paul Otlet's foundational ideas in documentation, further expanding the concept of what constitutes a document and influencing the development of what is now the field of library and information science. Writing a generation after Otlet was Briet, a teacher and librarian. From the 1920s onward, Briet was an

active participant in the development of the documentation field, which would now be considered the field of library and information science (Day, Martinet and Briet; 2006 Buckland, 2006). In 1951, Briet published her manifesto, which translates to “What is Documentation?” where she pushed the boundaries instituted by Otlet as to what constitutes a document. A Spanish edition of this pamphlet was published in the 1960s, but these writings were not translated into English until 2006, thanks to the translating and editing of Ronald Day and Laurent Martinet (Buckland, 2006). Briet expanded upon Otlet’s “notions of not only documentation as a methodology, but also of documents themselves” (Tourney, 2003, p. 294).

Briet’s definition of a document depends on its “concrete or symbolic indexical sign” (Day, Martinet and Briet, 2006 p. 10). The context in which a document as an indexical sign is central to Briet’s theory, as documents are examples of things or larger groups of things, such as; a star is not a document, but a photograph of that star is. A wild animal is not a document when in its natural environment, but an animal in a zoo enclosure is considered to be a document (Briet, Day, Martinet and Anghelescu, 2006). She took Otlet’s theories and writings on what constituted a document further, by including live animals in her definition. Her theory differs from Otlet in this instance, as she does not require objects, or in this case animals, to be created by “human hands” which was essential to Otlet’s theory (Tourney, 2003 p. 299). Therefore, Briet’s notion of a document is concerned with evidence, rather than with texts (Lantham, 2012). Briet focused on the fluidity of knowledge, as she counted only what was changeable as knowledge in order to shift information needs that were brought about due to changing technologies, and political and cultural practices (Allen-Robertson, 2017).

The 1990s brought about a revitalization to the arguments of document theory previously presented earlier in the twentieth century. This resurgence arose in part due to the

founding of new librarianship education standards in Norway led by Niels Lund due to new media technological innovation (2024), and Michael Buckland's research seeking to accommodate natural history specimens in LIS document theory (2017). Document theorist Michael Buckland, of the University of California at Berkeley, was instrumental in the revival of the ideas of Otlet and Briet. Buckland, along with his three types of information, defined in Chapter Two, identified three views of a document. Buckland's first view of a document is what he's coined as the conventional, material view. This can be considered to be an "everyday" view of a document, meaning a record, usually text-based, that is written on a flat surface. The material used, be it paper, a clay tablet, or a word processor, is local and transportable (Buckland, 2017, p. 22). These objects can be considered as "made" documents, as they were made for the purpose of informing (Buckland, 2017, p. 22). The second view of a document identified by Buckland is referred to as the instrumental view (2017, p. 22). With this, almost anything can serve as a document. Notably, natural history collections and archaeological pieces can be included within this viewpoint as they are used to signify evidence of some sort. With this view, these objects are made into documents, as with context, they can be informational (Buckland, 2014a).

Buckland uses the example of a sixth century battle between the Welsh and the Saxons to demonstrate this instrumental view of a document. Before the use of military regalia, it was difficult for soldiers on the battlefield to distinguish friends from foes. Before this battle, the Welsh army leader Saint David instructed his men to pin a leek on their lapels to be identifiable as Welsh to their fellow soldiers. In this instance, the leek is used as a form of communication from unit to unit. Here, the pinned leek is evidentiary, as it is proof of which side the soldier was fighting for. This viewpoint of a document is in accordance with Briet's as this follows her assertion that documents are concerned with access to evidence, and not just text (Buckland, 2017). Buckland's instrumental view widens the scope of a

document, meaning library resource collections are stocked with resources of many formats. I have chosen to focus on this view of a document for this thesis, because of its broad and situational nature.

Buckland's third view of a document is that of the semiotic view. Using this viewpoint, anything could be considered to be a document if it is regarded as evidence of something, regardless of what the creator, if there is one, intended that object to be, if it was intended to be anything. With the semiotic view of a document, context is relied upon (Buckland, 2017), as sometimes an object simply is just an object. This viewpoint of a document differs from the previous two as they emphasize the creation of documents, while this viewpoint focuses on evidence being considered *as* documents (Zadar, 2013).

For something to be a document, the item needs to have significance. There is a phenomenological aspect to documents. Phenomenology is the study of objectivity and reality as being subjectively lived and experienced (2003). This is to say, documents are experienced by a viewer. From this, if documents are objects that are perceived as signifying something, the status of a "document" is given to the object. In this instance, if the viewer of an object *perceived* it to be signifying, the status of "document" can then be given to an object (Zadar, 2013). Therefore, meaning is always constructed by the viewer of the document and needs to be given by the viewer to be a document (Buckland, 2017). These LIS scholars have outlined and evolved the understanding of a document. Next, I will address documents in a digital format in more depth, and their usage in regard to current fashion students.

## 1.2 Digital Documents

As technology continues to evolve, digital platforms and online resources have become integral to the definition of documents, aligning with Buckland's theory and influencing modern learning and research practice. Following the trend of what constitutes a document changing and evolving with technological developments, documents on digital platforms, such as the internet, are considered to be documents, in line with Buckland's theory. These types of documents are commonplace in today's library and academic environments. Contemporary students studying at the higher education level are online often and use digital documents and access digital libraries and other resources frequently.

Documents are potentially informative based on context, and this notion is still valid even if the document is electronic in form (Hjørland, 2000). No matter the time, documents and their formats of information have always been technologically dependent. In essence,

“the characteristics of documents are bound to technologies: our perceptions of traditional documents have been shaped by print technologies just as our perceptions of electronic documents are being shaped by electronic technologies” (Schamber, 1996, p. 670).

Just as the printing press revolutionized documents in the fifteenth century, digital innovations today are expanding the possibilities of how documents can be represented and accessed. The inventions of the fifteenth century transformed documents just as digital innovations are reshaping documents today. We are not losing materials or “traditional” documents when we digitize them. Instead, we are providing more possibilities for documents. We now have many media to represent all our documentary forms, including text, graphics, photographs, sound, and moving images to name but a few (Levy, 2016).

Recently, there have been huge developments in the creation and demand of virtual and augmented reality technologies. In 2018 there was a huge rise in the use of VR and AR

technologies, 360 recording and the documents and resources they in turn create (Oyelude, 2018). Virtual reality, in terms that are more easily understood, is technology that is capable for simulating a “reality” that can be immersive and engaging, involving full physical interaction of the user, embodied as virtual avatars that could influence user cognition (Ch’ng, Li, Cai and Leow, 2020.). These new innovations allow for new methods which allow for the recording, archiving, preserving and replaying of documents, which has great effect on fashion documents and resources (Robinson and Dunne, 2018).

## 1.3 The Myth of Access

As technology continues to evolve, access to documents in all formats is a central concern within libraries. There are logistical factors in regard to physical documents and resources, such as location and transportation. Access to digital documents, though wider in scope, still comes with issues and inequality of access. Since this thesis focuses on researching students who use online and digital information resources, access to resources relates greatly to their information behavior.

The digital revolution has transformed society, yet the persistent issue of the digital divide continues to hinder equitable access to digital technologies. The digital revolution refers to the advancement of the digital technologies that are available today. This began in the 1980s, and is ongoing (Chaurasia, 2018). With the digital revolution, wider access to information resources has become available. The increase in access does not negate that there are still issues of access inequality that come with these developments. This data inequality can also be defined as the digital divide. The digital divide is the gap that exists between those that have access to modern information and technologies, and those who do not (Steele, 2019). There is digital inequality in many communities, such as: between those living in metropolitan areas and those living rurally, between those living in more developed countries and those living in less developed places, and between those that are educated and those that are not (Lai & Widmar, 2020; Steele, 2019). Those who are affected most by this digital divide have less, and sometime no, access to information and cultural heritage, forcing them to fall behind (Moss, 2002). The digital divide causes a continued hindrance to those within it, causing a lag in growth and development (Steele, 2019).

The digital revolution has necessitated the development and implementation of innovative preservation and archiving techniques to safeguard information resources for future generations. Due to digitization new forms of preservation and conservation of

documents, as well as bringing on new ways of creating archiving, storing and exhibiting these documents have emerged. This access does come at a great financial cost, as it is expensive to digitize collections. Due to this, a significant number of resources are being invested in the US and Europe to keep up with the demand to digitize (Dalstrom and Hansson, 2019). Although access to information has changed due to the internet being readily available and the increase in the digitization of documents, this does not mean that this information is used accordingly. This concept of information literacy is discussed in more detail in the subsequent section, as this is a main concern of contemporary librarians and educators.

### 1.3.1 Information Literacy

By fostering and developing critical information literacy skills among students, this equips them with the tools to distinguish credible resources from others that are not relevant, especially in a digital environment. Although there is a perceived notion that there is increased or easier access to documents and information due to the internet and digital formats of documents, this does not guarantee that the information seeker is equipped with the understanding of how to adequately find proper resources or understand and apply them to address their information need. American researcher Paul Zurkowski was the first to use the term “information literacy” (Landoy, et. al., 2020). With the amount of online based and digital resources available to fashion students, it is important to understand the concept of information literacy. As defined by the American Library Association, which bases their definition on Zurkowski’s work, information literacy is the ability for users to recognize their need for information, and can location, evaluate and effectively use the needed information (Yevelson-Shorsher and Bronstien, 2018). Students are more reliant on the internet when researching, and this is contended with students not necessarily having the information

literacy skills that fall in line with this reliance. Educating students in information literacy is essential to their success in using documents and information resources properly. This consists of educators and information professionals creating thinking styles that are appropriate to the demands of contemporary information resources and the access to information and creating skills and the ability to work with information resources (Landoy, et. al., 2020). Since fashion documents and fashion information resource collections are vast and feature so many different formats of documents, students are interacting with multiple types of media.

Information literacy affects all students, and there is a range of literature published regarding different demographics of students. Studies such as the information literacy of university students in Slovakia (Fazik and Steinerova, 2021), the confidence with the concept of information behavior of first year undergraduate students (Dann, Drabble and Martin, 2022), the information literacy of university students in Bangladesh (Akter and Ahmed, 2024), and the impact of the librarian-student relationship on information literacy in small colleges and universities (Bennedbaek, Clark and George, 2021) have been investigated. Currently there is limited published research involving information literacy and fashion students.

There is one existing study on the information literacy of fashion students in particular (Warschaw, 2021). Warschaw, a librarian, focused on the information literacy of fashion students in the United States and drew on her intimate knowledge of this demographic through her interactions with them in the library to contend that documents are not simply textual. She found that fashion students are unique in that they need image and object-based documents, as well as textual, they are guided by their eyes and objects they can physically touch. Warschaw argues that since fashion students use documents that are not textual, librarians need to be knowledgeable about the research methods and resources these

students need to properly assist them with their educational needs. Warschaw identified that these students needed aid when translating visual information into searchable vocabulary when researching. Their unique needs contribute to a gap in their information literacy, as the varying taxonomies of choosing key word search terms are difficult especially if they are not equipped with the ability to identify characteristics that can be used when searching for information. Due to this, students need to be able to translate visual and tactile cues to develop a searchable vocabulary for research. Warschaw offered the recommendation of conducting information literacy sessions with students, introducing them to the specific resources their library offers and how to manage the library systems to aid in the research process.

## 1.4 Fashion Documents

Exploring the significance and history of fashion documents is of main concern for this thesis. As this research focuses on the information behavior of fashion students, with special attention to the resources the students are using, fashion documents will be examined closely in this section of Chapter One. I will first exemplify what might constitute a fashion document, giving examples. Next, I will turn to those who may use these resources, and how these demographics intersect. These documents have a long-standing history, especially within the last few years, as there has been a surge of new types of fashion related materials published (King & Clement, 2012). They can range in formats from “traditional,” such as journal articles and photographs, to more technologically advanced formats, using VR and other digital technologies.

By tracing the developments and history of fashion documents and their formats, a comprehensive understanding of the changes in format, dissemination and influence on society and the fashion industry can be gleaned. Fashion media documents have developed in tandem with the fashion industry, and the dissemination of new fashions and fashion ideals through imagery and text was common (Arnold, 2009). The movement of fashion information in Europe can be traced back to before the Italian Renaissance, with international traders or travelers bringing news of fashion, trends and styles (Arnold, 2009). Letters were also circulated around Europe and provided a means of communication about fashion and the latest styles (Arnold, 2009). During this period, the dissemination of fashion information documents made fashion visible and increasingly desirable (Arnold, 2009).

Investigating the diverse types of fashion documents is essential when researching fashion students. Fashion documents include a multitude of visual documents including illustrations, paintings and periodicals showcasing fashion and have historically been

popular, as are store catalogues, pamphlets and advertisements (Kuwamura, 2023). Sculptures and ceramics may also showcase fashion information, although these are not widely available within collections (Roach-Higgins and Eichel, 1992). French fashion engravings and prints were the precursor to fashion plates (Avidon, 2024). These documents were used to show the latest fashion styles as worn by the French aristocracy and were seasonally circulated to show the newest trends. In addition to showcasing the latest styles, fashion plates, illustrations and print collectibles, published in books or purchased individually (Indermühle, 2023). Documents such as photos, paintings and other illustrations are some of the most popular and most used fashion resources, as they offer a glimpse into specific eras, places, trends and designs (Warschaw, 2021). Fashion information is present in written document formats as well as visual. Trend forecasting data, personal diary entries, accounts of travel, biographies, novels, memoirs, essays and articles (Kawamura, 2023) may all be used when researching and studying fashion.

Fashion dolls are an example of non-textual fashion documents. Fashion dolls became popular in the seventeenth and eighteenth century in Western Europe, being used to spread the knowledge of new fashions (Kawamura, 2023). The dolls were dressed in miniatures of the latest fashions, hairstyles and accessories promoting the styles of European courts, namely the French court. These dolls were important to the French fashion trade encouraging patrons around the world to support French tailors and seamstresses (Best, 2017). The popularity of these dolls continued into the nineteenth century, before falling out of use due to the rise of fashion plates and magazines, and the banning of the dolls by Napoleon (Kawamura, 2023; Best, 2017). The French monarch was concerned with secret notes being passed to France's enemies through the shipment of these dolls. Other fashion resources began to circulate at this time, aiding in the spreading of French fashion and culture around

the world. Fashion plates were distributed and acted as templates to show a tailor or dressmaker when ordering a style (Arnold, 2009).

By examining the history of fashion magazines, the evolution of publications aimed primarily at women to invaluable fashion documents can be understood. Fashion magazines have become commonplace, and have served as the premier source of fashion information, particularly for consumers, (Jones and Kang, 2019; Arnold, 2009). Fashion studies scholars argue that the development of fashion magazines in Europe emerged with the rise of consumer culture, along with the debut of the middle class (Andersson, 2021). The first magazine dedicated to fashion, *Le Cabinet des Modes*, was first published in France in 1785, and was quickly imitated in the UK, Germany and Italy (Best, 2017). The publication of these magazines promoted fashion journalism and fashion image-making in the eighteenth century. The nineteenth century saw a dramatic growth of the number of fashion magazines, with 180 fashion magazines published in a 37-year period in France alone (Best, 2017). Magazines aided in the dissemination and promotion of fashion with historian Anne Higonnet estimating that these prints reached over 1 million French women by the end of the nineteenth century (1992; Best 2017). This expansion is directly linked to France's successful fashion industry and widespread industrialization. Currently, magazines are published in physical and digital forms, with their layouts and content stemming back from their roots in eighteenth century France. Fashion magazines are a part of the culture that produces them, and therefore reflect wider attitudes in regard to race, class, and gender (Arnold, 2009). As a profession, fashion journalism grew in tandem with the rise of these magazines (Wilson, 2003). The invention of the printing press and movable type was monumental in the dissemination and availability of early fashion documents.

Fashion documents are unique in that they include such varied media. Physical fashion garments themselves can and should be considered documents in their own right, (see

Cummings, 2019), seeing as “whether a garment is photographed, illustrated, or physically present, it has a story in its threads” (Warschaw, 2021, p. 3). These stories are not necessarily evident in the same way they would be in another form of document, say one that is text based. Clothing carries both symbolic or representational and indexical meaning (Sampson, 2017).

Digital garments and e-learning platforms are expanding the definition of fashion documents, serving as key resources in the development of smart textiles and digital clothing design. Garments being showcased digitally are also considered to be fashion documents. This is due to the notion that “digital garments are more than just designs- they are *artefacts* in digital form” (Särmäkari, 2021, p. 16). There are also numerous e-learning platforms dedicated to the digital fashion movement (Radulescu, et al., 2023). Platforms such as Skills4Smartex, Digitex, and OptimTex were readily available online as academic/educational resources (Radulescu, et al., 2023). These tools are useful in the learning and development of smart textiles and 3D and digital clothing design.

Robinson and Dunne 2018, argue that live performances are also considered to be documents, and this notion has particular relevance to fashion documents. Despite often being viewed purely as entertainment, fashion shows therefore can also be included in this list of fashion documents. A fashion show can be defined as “an art form that presents clothing through narratives enhanced by the performing arts with the aim of circulating new ideas to the public” (Barry, 2018, p. 8). The purpose of fashion shows is to disseminate new information, such as from creator to consumer (Barry, 2017). Live presentations of new designs were first staged in Parisian haute couture salons in the late nineteenth century and were attended by couturier’s elite clientele (Rocamora, 2016), an audience that gradually came to include department store buyers and members of the early fashion press.

Contemporary fashion shows offer brands and designers the opportunity to showcase their new collections to their industry peers, who circulate them to the public via media and retail channels. Fashion shows are ideal platforms to showcase knowledge that is derived from clothing (Barry, 2017). In this context,

“the fashion show introduces a new mode to share embodied and multisensory data, which can be used by researchers who study topics related to the body, embodiment, and identity, irrespective of how they define their arts-based approach”

(Barry, 2018, p. 5).

As discussed, in a fashion library or within a fashion information resource collection, one may find a variety of sources, such as garments, personal documents, sketches, written descriptions and forms of oral histories (Trame, 2023). Fashion library collections are also required to support students by making available digital fashion resources. Ilaria Trame (2023) comments on the introduction of digital fashion resources in libraries, arguing that the internet has become a democratic tool when researching within a fashion higher education context. A collection of resources in the fashion library must be diverse, and the formats in which they are featured must be diverse as well. This is due to the need for new interpretations of documents, and to “stir the minds of researchers. We risk stagnation and fail to strengthen the intellectual corpus of design studies” (Trivette, 2017, p.147).

New technologies and the internet create new forms of documents and new ways for people to share their lives. Social media, and in particular blogs, have recently become very important online and via apps for fashion students and within the fashion industry (FRA, 2023; Whitaker, 2024; Crews et al., 2015). Fashion has emerged as a progressively important area for collection development in a variety of institutions (King & Clement, 2012). Blogs, especially those focusing on fashion, have become documents that are informative for fashion brands and their advertisers, which furthermore contribute to the information behavior of

fashion consumers. Social media is disseminating fashion information similarly to traditional platforms such as through print media and the runway (de Perthuis and Findlay, 2019).

Digital platforms such as Facebook and Instagram have become legitimate spaces of diffusion for fashion collections and other aspects of the fashion industry (Rocamora, 2016).

During the 2010s, Instagram became the social media that developed the most effectively regarding the presentation and dissemination of fashion, as well as the monetization of the fashion field. This is due to its transformation into a multi-use platform, allowing users to post photos, videos and stories in an instant (Pedroni, 2022). Pedroni argues that Instagram took over from blogs, due to its focus on the visual, rather than the written word. New social media platforms continue to emerge, such as TikTok, showing that fashion has the ability to keep pace with new platforms that appear (Pedroni, 2022). Students are using social media in their research process, as it is widely available to them. Information professionals also need to be keenly aware of these new platforms, as their students are interacting with them daily. These sites are used by contemporary students daily, either for pleasure or for inspiration and university-related purposes.

### 1.4.1 Who Uses Fashion Information Resources?

Fashion information resource collections are widely used by a diverse range of individuals, including students, researchers, and industry professionals, each engaging with these resources in unique ways. These resources are used extensively, with researchers using forecasting services, trade magazines, newspapers, fashion magazines for example. As this work focuses on fashion students, I will detail the resources they use most in Chapter Five. Students and scholars and other academic researchers use fashion documents frequently for their assessments and research. Although fashion students are the main demographic of this thesis, it is important to examine other users of fashion information resources. These

demographics intersect and use the same or similar resources, although they use these documents differently. In this section I will examine the users of fashion resources, and how they interact with one another.

The use of fashion documents is important to fashion retailers and business owners, as they find that it is imperative for their businesses to understand the minds of young consumers when shopping for clothing. This is to aid in explaining how consumers choose and evaluate new fashion products, which can be understood to be their “buying behaviors” (Gigauri, 2024). Business owners gain valuable insight from using fashion information resources, as they can then make confident and informed decisions (Gigauri, 2024). For professionals, researching with fashion information resources helps them to: understand consumers and competitors, identify areas for growth, new markets and customers, understanding existing customers, gain insight into consumer spending, consumer opinions and interactions with the fashion industry, and understanding how fashion marketing campaigns influence consumers’ opinions and buying behaviors. They do this via fashion information resources such as market and industry research papers and reports, fashion industry websites, keyword and trends research, government stats, competitor's websites and social media (Team, 2021).

Consumers are also frequent users of fashion documents. The search for pre-purchase information is complex, making consumers research and use fashion information resources. They typically use multiple fashion resources when seeking this type of information, including social media, with each person finding a combination which works best for them (Cho and Workman, 2015). Consumers use resources similar to those of fashion students, using: advertising, websites, and other marketer-provided information, internal information-experience and knowledge already held, fashion magazines, non-fashion magazines,

catalogues, the internet, television ads, celebrities, observed street-wear, store displays, and information from friends and family (Cho and Workman, 2015).

The diverse range of users—consumers, industry professionals, students, and academics—requires fashion information resource collections to be varied and comprehensive to meet their different needs. The above literature has identified examples of fashion documents used by each of these demographic groups. These groups do overlap and intersect, with each using the same or similar documents for different purposes. Due to the variety of demographics using these resources, collections need to be diverse to satisfy the plethora of needs when it comes to fashion information resources.

## 1.5 History of Fashion Document Collections

By examining the historical and cultural significance of fashion resource collections, the critical role these documents play in current and future collections is revealed. As a concept, fashion is central in literature, art, painting, theatre, opera and film (Wallenberg, 2020). Due to this belief, fashion has become central to resource collections in libraries, archives, and museums. During the eighteenth century, no major museum collected fashion of any kind, as the “very notion of collecting them seems to have been an anathema to male museum curators...” (Taylor, 1998, p. 389). Fashion was presumed to be in the women’s sphere and was therefore not widely collected and displayed in museums or other similar institutions. Fashion was seen as a type of “feminine folly” and was not deemed worthy enough to be on display (Caponigri, 2017).

This bias against fashion in the museum space lessened, although this has not fully disappeared. Fashion garments and other related items eventually became objects that were collected, as these pieces were considered to be evidentiary and therefore were regarded as documents. To show the specialties and give insight into the industry, multiple textile museums and dedicated collections were established around the world, most notably at the Museum of Fine Arts in Boston (1870), the Musées des Tissus et des Arts Décoratifs in Lyon, France (1890) and the Musée de la Mode et du Textile in Paris (1905). Although a great deal of these museums focused on production, the changing of the clothing and fashion industry, as this aspect was directly related to the textile industry (Lahoda et al., 2022).

The first fashion and dress collections and exhibitions all debuted around the same time in France in the late nineteenth century (Bass-Kreugar, 2018). The “Musée historique du costume” opened in 1874 in Paris, featuring over 6,000 fashion documents in varying formats, including garments, fashion sketches, engravings and prints, paintings and

illuminated manuscripts. The exhibition focused mostly on European fashion, though it did showcase Asian, African and Indian objects as well (Bass-Krueger, 2018). This exhibition was opened due to multiple socio-economic reasons: The French fashion industry was growing rapidly in the nineteenth century; the rise of department stores selling ready-to-wear garments; interest in past fashions and the history of fashion; the fashion industry benefitted from the rise of print and media culture (fashion plates, drawings, catalogues); and finally, the rise of the museum experience as a “mass cultural phenomenon” (Bass-Krueger, 2018, p. 414) and the desire for exhibitions to appeal to a mass audience.

Nearly two decades later, in 1892, a second exhibition in Paris focusing on fashion premiered, titled “Costumes Anciens” which proved to be even more successful than its predecessor, featuring both contemporary and historic fashion documents: garments and other textiles, wax displays, and dioramas. This exhibition excelled in showcasing the “innovative types of visualization for fashion display” (Bass-Krueger, 2018, p. 422). Less than a decade later in 1900, the “Exposition Universelle” was unveiled, and became the most popular fashion exhibition to date. During this period of the nineteenth and into the twentieth centuries in France, collections of garments and other fashion related accessories grew in popularity due to private collectors, the industrial and decorative arts and the push of fashion into the visual realm via exhibitions (Bass-Krueger, 2018).

Through the 1970’s, fashion was seen as being “low status,” and contemporary objects (those being less than fifty years old) were rarely collected or exhibited at this time (De La Haye, 2023). Valerie Steele, of the Museum at FIT, has stated that the place of fashion collections “replicates the traditionally low status of fashion within academia” (Blechman, 2013). New York’s Metropolitan Museum of Art held the 1983-84 Yves Saint Laurent exhibition, which is considered a “groundbreaking endeavor presenting current fashion rather than historic costume” (Blechman, 2013). By the end of the decade, The Met with Diana

Vreeland at the helm curated a dozen fashion exhibitions which were deemed to be some of the most successful exhibits (Morris, 1993). The Louvre in Paris went on to add a permanent fashion collection in 1986, recognizing the significance of casual and contemporary fashion within the French identity and the need to reflect this in cultural heritage displays (Canbakal Ataoglu, 2023).

Fashion-based exhibitions and collections have become increasingly popular since the late twentieth century. We can see that, “during the last 20 years, there have been more than 200 exhibitions which have fashion as the subject or central theme and these have attracted a large number of visitors and a good deal of attention from the media” (Neira García, 2018, p. 64). It has been designers especially that have influenced the twentieth century that we have seen become the focus of museum exhibitions, designers such as Coco Chanel, Christian Dior and Jean-Paul Gaultier, especially in the last ten years or so (Wallenberg, 2020, 7). The ‘Dior: Designer of Dreams’ (February 2019-September 2019) exhibition at the Victoria and Albert Museum in London, England set records with the attendance of the special exhibit. Over half a million visitors were recorded as visiting the museum in order to view the exhibition especially (Wightman-Stone, 2019).

State run and independent institutions are not the only establishments interested in collecting fashion pieces and collections. Luxury fashion houses, such as Gucci and Valentino, also established their own museums to feature the history and archives of their house. This is because, “corporate museums and archives are places of memory that are concerned with the preservation and collection of documentation, the valorization of the historic heritage of a company or a particular industry sector, whose objects is not only to document and collect information about the product but also on the design and production processes that have characterized its production” (Vacca, 2015, p. 275).

Despite their cultural and historical significance, fashion information resources have historically been underrepresented in institutions like libraries, archives, and museums. Fashion information resources and their collections have a unique history, in that although fashion pieces and other documents hold great information and cultural history and significance, they were not promoted and exhibited often in institutions such as libraries, archives and museums.

## 1.6 Current Fashion Document Collections

Institutions such as libraries are responsible for curating collections that are deemed useful for the demographics of users and visitors. These establishments are offering online and digital components for their users, either adapting with what they already had established, or creating new online/digital spaces. In this section, I will outline current fashion information resource collections, where these collections are located, and if they are easily accessible to students. I am outlining these collections to demonstrate the current state of fashion resource collections and their strengths and limitations, and to map out the availability of these collections to current fashion students.

Fashion information resource collections are overseen, managed and curated by information professionals. It is the duty of the librarian and other information professionals to provide a wide variety of information resources and visual media to their users (Hall, 2021). Fashion librarians are furthermore tasked with curating collections of fashion documents that are diverse in foci and mode, making sure there are adequate resources in all forms. These collections also require specific documents to support these students, as “fashion, as a business and industry, produces large volumes of visual media, from magazines to street-style blogs, which can be as important to students as scholarly literature” (Hall, 2021, p. 52).

Libraries must maintain up-to-date collections by managing both digital and physical resources, including specialized databases and digital libraries dedicated to fashion. To do this, librarians must manage their collections to remove resources that are obsolete and no longer useful, and to have the space for relevant resources (Filson, 2018). This includes developing and managing digital and physical information resources. Fashion in particular has many databases and other related digital libraries that provide access to fashion resource collections.

The Berg Fashion Library (BFL) has established itself as an invaluable resource for fashion students, researchers, and professionals alike. The BFL was founded with the mission to be a “creative, entrepreneurial, independent publisher of books, audiobooks, and digital content of excellence and originality and to bring these works to a worldwide audience” with the purpose of informing, educating and inspiring all who use the resource. Users of this resource include fashion scholars, students, librarians, journalists, and “overall fashion enthusiasts” (Pecorari, 2012). The resource is vast, featuring a fashion photography archive, costume archive and fashion business cases to name but a few of their available collections. The design and navigation of the BFL is similar to most other databases that are available to students, with a clear design signposting the available collections (Su, 2015). The BFL includes all aspects of fashion, and its resources are global, and not simply featuring those from only the western world (Pecorari, 2015). Fashion scholar Pecorari finds that “the BFL represents an important tool for preliminary investigation but is also a useful confirmation device” (2012, p. 85), which is important in aiding students in their research process. The BFL is available via subscription to institutions around the world. Students may access the library through an institutional login. There is an option to purchase an individual subscription, but this comes at a premium cost.

Another example of these collections is The Special Collections and College Archives (SPARC) at FIT. This is a highly specialized repository of rare and other primary sources and research materials that are relevant to the fields of fashion and many other creative types of industry (Trivette, 2017). The collection is described by Trivette as, “a rich resource for the fashion industry and scholars of design history, certainly including and not limited to students and faculty in FIT’s own design-centric graduate and undergraduate programs” (2017, p. 140). This collection is bountiful, featuring fashion resources of all kinds, holding resources such as monographs, periodicals, oral histories, designer scrapbooks,

designer sketches, garments, shoes and accessories and manuscripts (Trivette, 2017). The collection is also as large in quantity as it is in variety. The resources provided by this collection exhibit the wide range of fashion documents that students are using to research and to complete their assessments. Holdings in the library have aided in the pursuit of researchers in their acquisition of new information (Trivette, 2023).

According to Trivette, less than a generation ago, researchers were bound by the anchors of “physical efforts, places and resources” (2023, p. 527). During this time a researcher would have to physically go and acquire resources, although with limited access to what was available at that time. This access could also be limited due to unfamiliar classification schemes, limited copies available, and restrictive viewing and borrowing practices (Trivette, 2023). The theme of limited access continues regarding the SPARC, as although there is an online presence, the main collection is best used in person. As FIT is in New York City, this has become a barrier for students in other geographic locations.

Documents of different formats make available new information for the information seeker. Photographs, oral histories, videos of fashion and runway shows and books each serve a purpose in information resource collections, and it is important for librarians to make as many of these resources available for their students. This is the main prerogative of information professionals, as Trivette contends that “the success of any information professional-archivists, librarians, or cultural heritage stewards otherwise-is measured in part by how much information they can give away, whether it is a single datum, collective information, memorable knowledge or shareable wisdom” (Trivette, 2023, p. 538).

The University of the Arts London (UAL) offers a diverse range of fashion and creative resources across its campuses. The University of the Arts London (UAL), consists of six different creative-based colleges, including the London College of Fashion and Central Saint Martins. Library services are university will, consisting of the six college libraries, three

learning zones and the University Archives and Special Collections Center (Crilly, 2019). The archives and special collections are available to students and researchers across the six campuses, as well as to visitors and researchers from other institutions. There is also an online component to these collections available for use. Resources in these collections span the creative arts, including fashion. The information professionals at UAL have noted their students' specific interaction with visual information and materials and find that this is a distinctive characteristic of creative-based universities (Crilly, 2019). The collections that UAL holds are vast, with over 140 collections that also include digital and visual materials and documents (Thurlow, 2020). Currently, the librarians of UAL are working to de-colonize all of their collections, by diversifying and re-contextualizing the collections that are currently held, and continuing to expand their new acquisitions (Crilly, 2019).

The university is also improving their work on preservation and access to their growing digital format collections (Thurlow, 2020). The university acknowledges that the digital environment changes quickly and understands that these documents need to have a secure environment. To do this, the university is enacting multiple methods to do so. They are integrating new digital preservation systems within their existing catalogues and using these systems to digitize their physical collections and curate their born-digital materials (Thurlow, 2020). The collections are expanding, to complement the current trends and courses at the university, and are now including and increasing use of photogrammetry, 3D imaging and VR and AR technologies in their holdings. The collections feature an incredible range of materials, featuring: past work of students and alumni; materials representing the development of UAL as an institution; visionaries; zines; rare books; journals; materials that "reflect the full fashion life cycle;" (Thurlow, 2020) collections that trace the history of London as a fashion city; rare, historical and contemporary resources covering fashion and costume; textile samples; oral histories; and teaching materials.

In the last third of the nineteenth century Berlin was the capital for the German clothing and fashion industry. Publisher Franz Lipperheide and his wife Frieda specialized in the publication of fashion-related newspapers and magazines, textbooks and pattern books used for crafts. The economic success of the Lipperheide's publishing house allowed for the couple to curate and collect an extensive private collection that reflected their interests in textiles and fashion. Their collection featured: source material for the study of costumes, which is now known as the "Sammlung Modebild- Lipperheidesche Kostumbibliothek" (Fashion Image Collection- Lipperheide Costume Library) (Rasche, translated Skorupa, 2017).

The Lipperheide's curated their collection to provide the most comprehensive collection of documents that was required for specialist studies of fashion, dress and costume. The collection has continued to acquire resources since being made accessible by the public, and now holds: 25,000 monographs, 25,000 journal volumes, 150,000 prints, 20,000 drawings and 50,000 photos. The Library is in Berlin, Germany and is open to students, researchers, and the public. The resources within the library and the navigation of the physical library are presented in German. There is an online component to the library, but this is limited. Although the online library portal can be translated into English, a great deal of the information and navigation instructions get lost in translation. This resource is an invaluable asset to those who use it, access to its collections is limited, due to its location and the rather outdated online website and library catalogue.

While fashion information collections vary in scope, ownership, and online accessibility, they each come with unique limitations and biases that can impact their reach and inclusivity. The above collections each feature a unique range of fashion information resources and come with their own limitations and biases. Some fashion resource collections are housed within universities, while others are sponsored by publishing houses or owned

privately. The online presence of these institutions also varies, with some collections having no online component at all. These institutions are located throughout the world, which presents a language barrier for exclusive English speakers. Although university collections are available to their students and external researchers, this does limit the collections' access to the public.

## 1.7 AR and VR in Fashion Education and Industry

Fashion, both as a subject and as an industry, is constantly changing due to technological innovations entering the fashion and educational sectors. VR, AI, AR and other 3D and new technologies integration will prompt more flexible business, mobile, social and collaborative business models and practices and change behaviors in different sectors, including the fashion industry and fashion education (Guedes & Buest, 2018). These innovations have provided a basis for the rapid development of digital fashion technologies and the concept of digital fashion (Fu & Liang, 2022).

The fashion industry has been revolutionized due to the reshaping of communication, marketing, education, and creative practices, with the emergence of digital fashion at the forefront of this shift. Digital transformation has affected all aspects of fashion, producing a shift in fashion communication and marketing tools and models, influencing higher education and the teaching of fashion at this level, changes to design approach and to the forms of artistic creation and expression (Zou et al., 2022). The emergence of digital technologies into the fashion industry has introduced the concept of digital fashion. The term digital fashion was introduced in an unspecified year in the twenty-first century with the rise of e-commerce (Baek et al., 2022). Currently,

“the definition of digital fashion continues to evolve and become more complex, as fashion brands are entering the Metaverse and begin to experiment with NFTs, gaming and artificial intelligence (AI), and augmented reality (AR)” (Baek et al., 2022, p. 2).

US investment bank Morgan Stanley has stated that the digital fashion industry could potentially be worth \$50 billion by the year 2030 (Holden, 2022).

Virtual reality (VR) has recently been embraced by the fashion industry and has been defined as being a computer-generated simulation system that detects user behavior and

provides a feeling of being present and embodying a virtual space, which is based on multidisciplinary feedback (Lee et al., 2021). Specialized equipment is required to use these types of devices. Currently, the devices needed most are headsets or multi-projected environments, which are often used in combination with physical environments to produce realistic images, sounds and other senses to simulate the user's physical presence in a virtual space (Pavelka jr. and Raeva, 2019). These headsets are what takes us from the real world to virtual reality. The first of these breakout goggles were released in 2016 (Pavelka jr. and Raeva, 2019). In the years since, there have been many developments in these goggles, making new strides in the technologies and availabilities.

As an industry, fashion is experiencing an influx of generations who are using technology on a larger basis than previous demographics (Tepe & Koohnavard, 2022). To appease this new demographic, current fashion brands and higher education institutions have had to adapt and develop (Tepe & Koohnavard, 2022). Digital fashion sees the overlap of traditional fashion practices and information communication technologies (Baek et al., 2022). These technologies can include 3D printing, body scanning, and virtual design (Baek et al., 2022). The increasing digitization of the field of fashion has challenged both industry and educational institutions to develop new parties for designing and sharing digital fashion related outcomes (Tepe & Koohnavard, 2022). The use of digital fashion technologies

“optimizes the production of physical garments during the design and fitting processes through accurate scanning of the body for improved garment fit, virtual try on, size forecasting, and digital pattern making technologies such as CLO 3D” (Baek et al., 2022, p. 8).

These types of technologies are becoming more prevalent within the fashion industry. High-end fashion houses and fashion brands have begun to integrate digital into their practices. Jewelry brand Bulgari has begun to utilize these technologies. Beginning in 2021,

the brand debuted an AI installation, the first of its kind as it featured both AI and NFT involvement (Joy et al., 2022). The installation was ambitious in nature, a multimedia display featuring over 200 million images (Joy et al., 2022). AI algorithms were then trained on these images, producing streams of vibrant dreamscape (Joy et al., 2022). The use of AI within the fashion industry is expected to continue as these technologies continue to advance. Using AI technologies in the fashion sector allows for the streamlining of the manufacturing process, aids designers with the creation of designs, helps with the developing of marketing campaigns to target audiences, gives insight into the understanding of consumer behavior and preferences, and can provide a customizable and personalized shopping experience to consumers (Ross, 2023).

Digital fashion sees the overlap of traditional fashion practices and information communication technologies (Baek et al., 2022). New technologies associated with digital fashion such as these are showing a lot of promise for fashion design, as garment development is seeing AI integrated fully in the design process (Choi et al., 2023; Choi, 2022). AR technologies can also easily be implemented into fashion design and into fashion education (Elfeky & Elbyaly, 2018). Findings in a 2018 study found that AR technologies were effective in promoting and developing the design skills of a set of fashion design students (Elfeky & Elbyaly, 2018). Digital and 3D design are being integrated as a tool for zero or reduced waste fashion design within the industry (McQuillan, 2020). The introduction of wearable computers is currently emerging, with the popular use of wristwatch and glasses changing the fashion and tech industries (Han et al., 2020). E-textiles are also emerging in the fashion industry, referring to clothing that is embodied with microcomputers and other digital components, which are used in the fashion industry (Han et al., 2020). Within the fashion industry, digital narratives are enhancing the technological and aesthetic effects of tangible garments and their alternatives (Choi, 2022). These technologies are used by fashion

designers to work on garments with increased fidelity, in more detail and on a bigger scale, which produces more realistic virtual garments (Balsara and Gomez-Zara, 2024). 3D sketchbooks, brushes and color pallets can be used in real time, impacting this sector positively.

Virtual Reality (VR) and Augmented Reality (AR) technologies are increasingly shaping the fashion retail experience, requiring students to understand their impact on the industry and customer interaction. VR and AR technologies are having a growing impact within the fashion retail space, and as they are infiltrating into this aspect of the fashion industry, students are required to understand these technologies in this context (Wu and Kim, 2022). These technologies allow for fashion products to be “tried on,” which can give customers a similar shopping experience as in a physical store (Wu and Kim, 2022, p. 2).

The COVID-19 pandemic also aided in the reshaping of the retail landscape, accelerating the pace of further digital transformation (Lau and Ki, 2021). To adapt to the new normal in 2020, retailers began to shift their focus to mobile commerce (M-Commerce) operations, which refers to the completion of a transaction using a mobile device or app (Lau and Ki, 2021). AR and VR technologies are being applied in fashion-based mobile apps. Post-2020, the majority of online fashion sales are made on mobile devices, particularly through these apps. Consumers are adopting these apps and technologies into their everyday routines. Due to this growth, the wide-spread adoptions of fashion marketers and retailers, academic researchers are devoting much time and attention towards these technologies (Lau and Ki, 2021).

The emergence of these technologies into the fashion industry greatly affects those who enter the field upon graduation from university. To keep up with what will be expected of them upon entering industry, students will need to become familiar with these technologies and their uses and relevancies in fashion. Graduating students are the next generation of the

fashion industry, and it is important to prepare them as best as possible to enter the field and succeed. Digital platforms have helped open dialogue on accessing fashion information resources (Trame, 2023). Using these technologies within the higher education sector gives students a new perspective and the opportunity to learn new skills (Zhao, Ren and Cheah, 2023).

Virtual reality, augmented reality, and artificial intelligence have entered the higher education sector. Recent studies have shown the potential that VR and other similar technologies have in the higher education sector to enhance the learning experience for students (Fabris, et. al., 2019). VR has also been shown to improve the long-term retention of knowledge gained in the higher education environment (Fabris, et. al., 2019).

AR technology can easily be implemented in fashion courses and education, especially those that focus on design (Elfeky & Elbyaly, 2018). Findings in a 2018 study found that AR technologies were effective in promoting and developing the design skills of a set of fashion students (Elfeky & Elbyaly, 2018). In this instance, AR technology was also successful in adding value to the aesthetic value of the students' designs (Elfeky & Elbyaly, 2018). For the benefit of fashion students of all types, fashion educators and information professionals need to keep the emphasis of fashion programs on the quality of the education, focusing on critical thinking and learning in response to the dramatic transformation, new innovations and challenges of the industry (Yick et al., 2018). Due to these changes, the library and information resources must also be kept in mind as well. Librarians must be knowledgeable about "a variety of research methods in order to assist fashion students and their unique educational needs" (Warschaw, 2021, p. 3). The resources and documents fashion students need available to them via the library are vast. Fashion as a subject is broad, with many focuses available. Due to the wide range of students studying fashion, resources available need to reflect this.

The fashion industry and fashion higher education can benefit from the use of these new technologies, as “...fashion brands capitalize on co-creation, personalization through data analytics, artificial intelligence (AI) or virtual reality (VR), on product quality and sustainability through 3D technology...” (Guedes & Buest, 2018, p. 1). Fashion and its industry, although inherently personal, can still benefit from the use of technology. The use of human sense or intuition can be used by human designers to enhance the AI based design process (Choi et al., 2023). A 2023 study shows that the use of AI based technologies was extremely beneficial in the fashion industry, in conjunction with human processes (Choi et al., 2023). While AI cannot fully comprehend intentions and intuitions the same as fashion professionals, the tools can assist effectively, especially in the design process (Choi et al., 2023).

### 1.7 .1 Fashion and Social Media

The fashion industry and fashion students are using social media at rising rates, for business, leisure, inspiration and assessments. Through the use of social media, fashion is being marketed differently, especially with the rise of social media influencers. This new focus is demonstrated in influencer and social media marketing, where brands and influencers are collaborating with the usage of social media posts (Lee, Mull and Agnew, 2023). Due to these new concepts of fashion marketing, students are being taught new strategies in the classroom, using examples such as Instagram (Lee, Mull and Agnew, 2023). These new strategies in the classroom translate to the fashion industry, as “fashion professionals must be digitally literate and properly educated on social media techniques to effectively market demands” (Lee, Mull and Agnew, 2023, p. 294).

A 2014 article studied a class of fashion design students by using a project-based assignment to illustrate a learning approach that encourages collaboration of the students and

young professionals in a social media environment, using Pinterest as the example (Lapolla, 2014). The objective of the study was to study and demonstrate the use of social media in the classroom, as students use these apps and sites frequently (Lapolla, 2014). There has been a severe increase in the use of social media for students in higher education. By 2013, nearly 95% of high school seniors spent time using social media. By the time these same students enter university, social media is completely intertwined with their everyday lives. Lapolla argues that social media is a driving force in the sharing of knowledge and can encourage students to apply cognitive skills for problem-solving when in a digital environment. The current generation of students thrives in an online environment, making it so that “increasing social media use is changing higher education learning specifically for the creative arts disciplines” (Lapolla, 2014, p. 176). These design students were tasked to create an explorative learning environment using the website Pinterest. The designs the students create would be posted online to the site, and customers would then comment on the designs and suggest revisions, this way customers can give their opinions and the students and tutors can share in making the process better serve customer’s needs, which came to them directly thanks to the use of social media.

The application TikTok has been making waves since its conception in 2018, with over 1.9 billion users globally, with users ranging in age. Along with dance trends and recipe videos, fashion has also taken over the app. This is because, according to Maryanne Grisz, the president and CEO of the Fashion Group International has stated “TikTok is a cultural driver for discovery” (Feitelberg, 2025). Luxury fashion brands are increasingly turning to TikTok to engage with their consumers with the success of this is due to influencer marketing (Ross, 2023). Major brands such as Ralph Lauren and Nike use the app to connect with their consumers, influencers use it to market and show their new products (Feitelberg, 2025). Luxury fashion brands are also turning to TikTok to adapt their content and marketing

strategies to accommodate to the app's users; with particular interest to the Gen Z audience, by creating and engaging with authentic content, collaborating with influencers, and participating in trends. These brands have been able to dominate the digital fashion landscape (Ross, 2025). TikTok contributed greatly to the media impact of fashion weeks. The app launched its own fashion month initiative and invited its users to share content with the hashtag #TikTokFashionMonth, with nearly a billion users interacting with this hashtag (Zargani, 2021).

## 1.8 Conclusion

A range of fashion-related materials can be understood and seen as documents. Therefore, libraries and other institutions such as archives and museums need to collect and catalogue these information resources to understand them. When using the library and information science theory of document theory, a range of objects and documents of many formats can be seen as documents, because they are informational and communicate information. Documents have changed with the available technologies, and digital resources are prevalent. The fashion industry is also experiencing a change with the emergence of available technology, which will continue to evolve. Due to this, fashion related resources and documents will continue to evolve as well. Fashion higher education will also be required to adapt to these changes, in order to best educationally prepare students for a future in the fashion industry. To do this, libraries catering to these students need to have the most adequate and advanced collections available. Specialist fashion libraries demonstrate the wide range of fashion information resources, and the need to provide fashion students with the most diverse and adequate fashion document collections. In the context of this thesis, “the library can be seen as a device to reorient an understanding of fashion beyond the garment alone and will ace to redefine several hierarchies of materials that are currently at stake in the fashion system” (Trame, 2023, p. 6).

# Chapter Two Information Behavior Literature

## 2.0 Introduction

This chapter will shift focus to the literature on information behavior, exploring its evolution, key models, and the specific information-seeking behaviors of fashion students to identify the gap this thesis aims to address. Following the literature review focusing on LIS document theory and fashion documents and information collections, I will now turn towards the literature defining the term “information,” the origins of information behavior and information seeking behavior, and the limited literature relating to the information behavior of fashion students. I will also explore studies on the information behavior of students, and other literature focusing on fashion students, and how these studies align with and differ from my own.

## 2.1 The Concept of Information

To understand information behavior, it is essential to first define the term 'information,' a concept that is complex and varies across disciplines, as explored in this section. Here, I will define the term “information” and how the library and information science field regard the concept. The term itself has been used for several different concepts and adopted by many disciplines. This makes it difficult to formulate a definitive term that condenses the many uses and meanings into one principal designation (Buckland, 2017). The definitions of “information” as presented by information science theorists will be examined in this section and will demonstrate the complexity of defining and studying information.

Information has many definitions, with some defining it as a fundamental pattern of the organization of matter and energy. Information scientist Marcia Bates (2006) describes information as the pattern of organization of the matter of the earth, plants, animal bodies or of the brain. Information, then, is also the pattern of the organization of the energy of speech moving through the air, or of the earth as it shakes in an earthquake. She argues that information exists independently of living things within the structure and arrangement of matter and patterns of the universe, and information would continue to do so whether living beings were present to experience it (Bates, 2006). Therefore, all information is natural, as it exists in the material world of matter and energy (Bates, 2006).

The concept of “information” has evolved over time, with varying definitions depending on context, from technical terms used by engineers to broader interpretations encompassing human experience and communication. As a result, the meaning and use of “information” has gone through a transformation. By the middle of the twentieth century, the word was used as a technical term, used especially by engineers in their calculations (Buckland, 2017). Within this context, “information” is commonly referring to “bits, books, and other signifying objects,” with LIS scholar Michael Buckland classifying these objects as

“documents,” using a broad sense of the word (2017, p. 21). Yet, a technical or mechanical definition is not always appropriate when using the term “information” in a different context. Information also relates to everyday human experience and the complex nature of documents, and the difficulties in finding the most relevant resources (Buckland, 2017). In essence, Buckland’s “information” has two meanings: “(1) what we infer from gestures, language, texts, and other objects; and (2) material forms of communication-bits, books, and other kinds of physical messages and records” (2017, p. 6). Within this thesis, I will be using Buckland’s definition of information that relates to human experience, as this is central to this thesis.

Luciano Floridi emphasizes the complexity of defining “information,” noting its diverse uses across disciplines and its transformation from raw data into meaningful content through analysis and context. Floridi has written extensively on the complexity of the concept of defining information. In his attempts to highlight the terms usage in several concepts and contexts, Floridi states that;

“the central difficulty is that the word ‘information’ has been used to denote several different concepts. The adoption of the term by multiple disciplines is part but not all, of the problem. The same term has been used to refer to, among other phenomena, sensory stimuli, mental representations, problem solving, decision making, an aspect of human thinking and learning, states of mind, the process of communication, judgements about the relevance of information to information needs, the content of subject specialties, recorded knowledge, and particular objects that carry information such as documents”

(2010, p. 49). Therefore, Floridi argues that information is data that is rendered to be meaningful via analysis and context (2010; 2014).

In LIS, information serves as both evidence and a tool for learning, with documents playing a crucial role in transforming external information into internal knowledge. Therefore, information is used as evidence of learning and perceived through all the routes of understanding. The essence of evidence is that a person's view of it can change their beliefs and knowledge (Lantham, 2012). Information can come in many different forms and mediums as; documents and information go hand in hand. We gain information through documents, which provide evidence. This evidence quickly translates proof into knowledge. Knowledge refers to beliefs as well as procedural and factual knowledge (Ford, 2015). Therefore, knowledge is what a person knows, and is internal to them, whereas information is external (Ford, 2015). Information becomes part of a person's knowledge when it is processed and integrated into their existing understanding (Ford, 2015). The information that we encounter and use to shape our lives and perceptions play a significant role in our lives, as documents pervade our social world (Lantham, 2012).

## 2.2 Types of Information

Library and Information Science scholars have expanded the concept of information into various types and theories, emphasizing the importance of information quality.

Information scientist Nigel Ford states that information is the intellectual equivalent of food. And as with our eating habits, the nutritional value can be good or bad - so the quality of the information humans acquire and the effectiveness with which it is processed directly affect the quality and effectiveness of the intellectual health of society (Ford, 2015). Theorists have refined the concept of information, sorting different types into subdivisions. Discussed below are theories and types of information that are prominent in the LIS field.

Brenda Dervin's "Sense Making Theory" offers a framework for understanding how individuals process and bridge gaps between internal and external information. Dervin, of Ohio State University developed this theory of information, publishing it twice, first in 1976, and again in 1992. Dervin's objective was to distinguish types of information within the LIS profession (Case, 2009). The theory is broad in scope and seeks to explain the underlying process of learning and problem solving, and more generally coping with everyday life and making sense of the world (Ford, 2015). Dervin defined three types of information, which she based on the writings of philosopher Karl Popper (1972). These three types being classified as objective, subjective, and sense making. Objective information, which she categorized as external, is information that describes reality, but not completely (Dervin, 1992). Subjective information is internal, and represents the cognitive map of reality, and the structures that we impute into reality (Dervin, 1992). Dervin's last type of information, sense-making information, reflects upon the procedures and behaviors that allow us to move between internal and external information to understand the world and to act on that understanding (Dervin, 1992). Dervin argues that not everything is connected, and things are constantly changing, so reality is characterized by gaps. Therefore, we are constantly trying to bridge

these gaps to make sense of the world around us (Ford, 2015). According to Dervin information does not exist independently of humans, as it is the product of us observing the world (Ford, 2015). Through her research, Dervin finds that information seekers consult friends and family for information more so than seeking aid from formal information sources, such as books (Case, 2009). Information scientist Donald Case defines the sense making theory as being intrapersonal, abstract and process oriented (2009). The sense making theory introduces different ways of thinking of communication in practice and design in the LIS discipline. Although Dervin's sensemaking information theory is relevant to students, I decided not to use this theory of information in favor of Buckland's, due to its relevance to all aspects of the human experience and human knowing.

Writing in the early 1990s, Maureen McCreadie and Ronald Rice identified four distinct "conceptualizations" of information, which offer detailed distinctions (1997). McCreadie and Rice define these conceptualizations as complex entities regarding the multiple understandings of information (1997). This theory is similar to Buckland's; it takes two of his categories of information, information-as-thing and information-as-knowledge and breaks them down further into three overlapping concepts of information (Case, 2009). The first of these conceptualizations is information being a resource or commodity. Under this identification, information is something that can be "produced, purchased, replicated, distributed, sold, manipulated, passed along, and controlled" (Floridi, 2010, p. 51; McCreadie and Rice, 1997). McCreadie and Rice's second conceptualization of information can be characterized as data within the environment, which can include objects, sounds, and events taken from the environment (Floridi, 2010). This accounts for the possibility that not all communication is intentional, although according to McCreadie and Rice, this is an easy assumption to make (1997). The third type of information concept is expressed as a representation of knowledge, such as in documents, books, and periodicals (Floridi, 2010).

They state that originally, the third type of information identifies with physical and text-based documents but did extend this to documents available electronically (1997). Finally, the fourth type of information is conceptualized as being a part of the communication process between people. In essence, information is “meaning(s)” that have been created as people go about their lives and try and make sense of the world around them (Floridi, 2010). McCreddie and Rice’s four conceptualizations of information make finer distinctions than Buckland’s three categories, as they regard possible examples of information more specifically, naming books, documents and periodicals as their examples, with Buckland denoting his examples of information as “things” (Case, 2009). Although these conceptualizations are similar and more specific than Buckland’s I did not choose McCreddie and Rice’s types of information for this thesis, as Buckland’s theory of information, discussed below, is clearer, and as I am also using his definition of a document, I find that the threads of thought are more streamlined.

The final theory of information showcased here is Michael Buckland’s categories of information. Buckland’s theory of information is moderately similar to Dervin’s in that it is broken down into three categories (Case, 2009). Buckland’s definition of the term information is concerned with human knowing (Buckland, 2017). In 1991, Buckland, addressed the multiplicity of the use of the term by developing three categories of information:

1. Information as *knowledge*, meaning the knowledge imparted;
2. Information as *process*, which is the process of becoming informed and;
3. Information as *thing*, which denotes bits, bytes, books, and other types of physical media.

In effect, this is the most common use of the term and includes any material thing or physical action perceived as signifying. In this sense of information-as-thing, “*information*” then becomes a synonym for a broad view of “*document*” (Buckland, 2017, p. 22).

Category one, information as knowledge, contends that knowledge is imparted through communication. Buckland has argued that the central characteristic of knowledge, and “information as knowledge,” is that it is intangible and cannot be touched or measured. To communicate, it needs to be expressed or represented in some physical way, as a mark, signal, text, or communication (Buckland, 1991). The second category focuses on information as process, as in, the process of being informed. This category has been identified by Buckland as information that someone previously knows changes when they become informed (Buckland, 1991). The third category is that of information as thing. Buckland identifies this definition as the most common use of the term (Buckland, 2017, p. 22). One of the best representations that stems from this category is Buckland’s example of the sixth century battle between the Welsh and the Anglo-Saxons which I discussed in the previous Chapter (see section 1.1). In this instance the leek is used as a physical, non-textual document that communicates the information that the wearer of this leek is Welsh, and not foe. This emblem conveys a message in the same way in which a textual label would. While using Buckland’s theory on the multiplicity of information,

“it is reasonable to consider any object that has documentary characteristics as a document, but, of course, that does not mean that it should always be considered and only this way. A leek is not always, and only an emblem of Welshness. The same is true in reverse: even an archetypal document, a printed book, can make a convenient doorstop, a role that depends on its physicality, not any documentary aspect” (Buckland, 2014, p. 185).

But the idea of information as thing is situational, and in turn is contextual (Buckland, 1991). The context in which a document is relevant or not is dependent on what documents/other resources have already been selected to use, or are relevant to one person but not another, or at one time and not another (Buckland, 2017). For this thesis, Buckland’s

three aspects of information will be the main theory used when defining information, with particular emphasis on Buckland's category of "information as thing." This is due to the wide range of documents and resources involved in fashion library collections that contemporary fashion students are using to conduct their research. Buckland's three categories are used in this thesis due to the broad nature of the categories, which, although complex, are easily understood. Buckland's research into "information as thing" is extensive and features information as being tangible. This is relevant to my research, as fashion students use tangible knowledge extensively.

## 2.3 Origins of Information Behavior

Humans have been engaging with information in various ways for centuries, from seeking and using it, to avoiding it, reflecting the complexity of information behavior across different contexts and demographics. This is to say, we have informationally behaved for centuries, and there are nearly limitless ways in which we can do so. Noticing the change in the weather forecast, deciding to visit another city and plan a holiday, and checking the dates to buy an airline ticket are all examples of information behavior, as one is noticing an information need, and seeking to address it (Case, 2009). Human beings interact with information in a variety of different ways, from an informal exchange amongst friends, to online browsing and actively searching for information, to even active avoidance of information (Jaeger and Burnett, 2010).

The study of information behavior, which has been evolving since the mid-20th century, helps us understand the personal and diverse ways in which individuals seek, interact with, and sometimes avoid information (Bates, 2010). David Bawden and Lyn Robinson argue that information behavior is inherently personal (2012). This is due to the uniqueness and individuality of each person, which should not be minimized when studying information behavior (Bawden and Robinson, 2012). Within information studies, the theory of information behavior has been in use since the mid-1960s, with the term being coined and used widely by the 1970s (Savolainen, 2007; Bawden and Robinson, 2012). Tom Wilson, one of the most cited and studied scholars of information behavior, has stated an even earlier date of conception, suggesting that information behavior research was discussed at the Royal Society Conference as early as 1948. By the 1990s, information behavior began to garner a large following of theorists and theoretical activity, including more research into information behavior within the arts and humanities (Savolainen, 2007; Bawden and Robinson, 2012).

Research in information behavior has grown immensely since its beginnings in the twentieth century. These developments came from the western world, mainly in the United States, United Kingdom and Europe (Gonzalez-Teruel, 2023). This is due chiefly to the writings and the models of information scientists Tom Wilson, David Ellis, Carol Kuhlthau and Marcia Bates. These researchers represented a style of research that allowed for the introduction of social research being applied to LIS problems (Gonzalez-Teruel, 2023). The interest in information behavior developed out of several avenues within several different fields and sectors. Librarians wanted to better understand their users, government agencies wanted to understand how scientists used technical information to promote research results, and social scientists were generally interested in the social uses of information in a variety of senses and contexts (Soergel, 2017). There is now a much deeper, more complex understanding of how people interact with information. Information behavior is described as

“the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking, and information use. Thus, it includes face-to-face communication with others, as well as the passive reception of information as in, for example, watching TV advertisements, without any intention to act on the information given” (Wilson, 2000, p. 49).

The use of models in information behavior research provides a more focused and concrete approach to addressing specific problems compared to broader theories. When studying information behavior, it is common to represent theories and rationale via the use of models. This is due to models focusing more on specified problems than theories, which make the content more concrete (Savolainen, 2016). The 1980s and the 1990s are what could be considered the golden age of the classical frameworks of information behavior that were introduced and developed (Savolainen, 2016). This is due to the increased level theoretical activity and research within this sub-discipline of library and information science.

Within information behavior come the sub-categories of information needs, information seeking, information avoidance and information motivations and use (Case and Given, 2016; Ford, 2015). The concept of information seeking is analyzed and discussed in more detail in section 2.4 of this Chapter.

## 2.4 Information Seeking Behavior

The complex interplay of personal, social, emotional, and environmental factors significantly influences the ways in which individuals engage in information seeking behaviors. Information seeking behavior is a concept that sits within the basic model of information behavior developed by information science researcher Tom Wilson (1997). Information seeking behavior can be defined as specific actions that are then taken by a person in order to specifically satisfy their information needs (Savolainen, 2007). There are other factors that become relevant in information seeking behaviors, including personal characteristics, emotional and educational variables, environmental and economic factors as well as demographic and social variables (Wilson, 1997).

This thesis focuses broadly on the information behavior and more specifically, on the information seeking behavior of fashion students in the UK, by using the Information Search Process model developed by Carol Kuhlthau (2003). The scope of this study is wide, as the resources and documents students use are vast and largely available outside of the library. The demographic that is being studied uses document collections of resources of all formats, with an emphasis on digital and non-traditional documents.

## 2.5 Information Behavior Literature

How we, as humans, informationally behave is never ending. Technological advances which affect the scope of a document also affect how information seekers interact with documents, which in turn has a direct effect on information behavior. The changes of information technology over the last sixty years have meant that a high percentage of information behavior research has been concerned with the impacts and reactions to the interactions people experience when using new technologies and resources (Soergel, 2017). Today, research into information behavior is largely dominated by the large variety of online and electronic resources (Wilson, 2006). Access to information now comes from portable devices, and the ability to access vast amounts of information from almost anywhere in the world will of course also affect information behavior (Greifeneder, 2014). Before the internet, the only information that was available was located in books, journals, radio, and eventually the T.V., (Case and Given, 2016). But, seeing as all resources were divided by source, location, person, type of resource and by channel, the process of locating and examining information was difficult (Case and Given, 2016).

The rapid advancement of technology and the internet has significantly transformed information behavior, particularly in how individuals access, search for, and evaluate information in the digital age. How we store large amounts of data also affects information behavior, and this coupled with greater access has changed the ways in which information is disseminated and searched for, thus affecting information behavior. (Greifeneder, 2014; Wilson, 2006). New and emerging technologies will shape information behavior currently and, in the future, especially for the younger generations (Greifeneder, 2014). Electronic systems and technological devices are more commonplace now than ever before, and this new generation is more accustomed to finding information through the use of these systems.

Due to this, their information behavior is formed by the tools they use to find information (Wilson, 2006). With all the technological advancement, “accessing information is now about more than simply locating a book on the library shelves; it is now about knowing how to access services remotely and evaluating those sources” (Brown and Simpson, 2012, p. 44).

## 2.7 Why are there no Studies on the Information Behavior of Fashion Students?

Recent studies in library and information science have focused on the evolving information behavior of students, driven by new technologies like AI and AR, as well as changes in how they access and engage with information. Countless studies have been conducted on the information behavior of various demographics within library and information science literature. The information behavior of students has become of great recent interest, especially due to concerns over the amounts of plagiarism and the over-usage of web resources (Nicholas et al., 2009). Students are accessing information in new ways, especially with the emergence of AI and AR becoming commonplace in everyday life as well as the classroom and within higher education. With students gaining more access to information through the library and elsewhere, and collections expanding resources and formats of documents, their information behavior is changing. In this section I will analyze the published studies of information behavior that are related to this study, detailing their main demographics, objectives, if these studies differ from this research on fashion students and the similarities, if any.

Research on student information behavior, particularly the study by Nicholas et al. (2009), highlights the evolving ways students engage with digital resources. Researchers Nicholas et al. (2009) are debating the information behavior of students, due to widespread concerns of the mass availability of information, plagiarism, and the over usage of unverified resources. Their study investigated the digital information seeking behavior of students. Log analysis, surveys and interviews with students were the methods used for this project. The results concluded that students actively used the online library, with particular use of the online journal selection and E-books, and undergraduate and postgraduate students were

gaining better skills when web-based researching. The researchers predicted in the concluding paragraphs that the use of social media sites and the popularity of blogs would play a role in shaping the future of student information seeking behavior. Although this study is concerned with the information behavior of UK-based university students, it was conducted over fifteen years ago, before the use of online resources, social media and the online library were as widespread as they are currently. These students in this study are not defined by their degree course, only their level of higher education. My study on the information behavior of fashion students concerns current students within the UK higher education sector, directly addressing information seeking in a digital environment.

Dresang's 2005 study on youth information seeking behavior in the digital environment highlighted the impact of interactivity, connectivity, and access, although its focus on children and the rapidly evolving digital landscape of the early 2000s limits its relevance to current student information behavior research. She undertook an investigation into the digital principles of interactivity, connectivity, and access on youth information seeking-behavior in the digital environment, using the theory of Radical Change. Dresang's study focused on children that were "digital natives" a term that is scarcely used in the current LIS climate. The study concluded that during this time, an abundance of research on children's information seeking behavior was published, with youth's using computer and internet research more often, and doing so socially. At this time, public libraries struggled to update their collections and provide access to digital information. Despite being a frequently cited study on information behavior, this study is outdated, as it was undertaken twenty years ago. The developments of collections and documents have undergone transformations, and the use of online resources is now more commonplace. This study is also focused on children, and not necessarily students at any level. Although this study addressed the changing nature

of information seeking behavior, the study may be outdated, and not relevant to the current climate of information behavior research.

Ali and Jan's 2020 study on the information seeking behavior of postgraduate students studying at Kashmir Government Polytechnic revealed limited use of e-resources, with a preference for physical textbooks and a general dissatisfaction with library services, although the study's narrow focus and lack of course-specific recommendations limit its broader applicability. Ali and Jan presented a study in the attempt to offer insight into the user perception of the library collection and overall library services at Kashmir Government Polytechnic College. The researchers discovered the limited usage of E-resources used by the students, with their preference for physical textbooks the prevailing theme. Most of these students visited the library daily to check out books and use the internet services. It was observed that the students had a lack of awareness when browsing the library selection and overall found their library's collection and services to be inadequate. This study is limited in its scope, focusing only on the postgraduates at the same university. Library collections at the university are limited, but as there are no distinctions between which courses the students are enrolled in, no collection or service development recommendations can be offered specifically. This study also features students who have limited internet services at home, and rely heavily on the library's physical resources, which contends with my study on fashion students, who prefer to use online resources. It should be noted here that the reliance on physical resources is likely due to budget restraints that impact the online library of this university.

The COVID-19 pandemic changed higher education and its practices for years, with lockdowns and the switch to online working. This has brought new studies on the information behavior of students in different contexts. These contexts include how the mass and social media affected the information seeking behaviors of medical based science students (Amiri et

al., 2022), the information behavior of university students in China during the crisis (Shi, Li and Lou, 2021), and university students' information seeking behavior about vaccine awareness in relation to COVID-19 (Zhou & Roberto, 2022). There is a large amount of literature published that is centred around the information behavior of a group of students (Howard, et. al., 2023; Friday and Motu-ere, 2022).

Amiri et al. investigated the information seeking behavior of medical science students regarding the COVID-19 pandemic and availability of social media at Kerman University in Iran in 2022. A sample size of 203 students participated in this study by taking a questionnaire. The researchers discovered that these students obtain a majority of their information about COVID-19 through social media platforms, such as WhatsApp and Instagram. They determined that as these students used these platforms the most to obtain health-related information, the impact these social media sites had on their willingness to take the pandemic seriously was negative. Although this study does feature a specific type of student as the main demographic, the study is not concerned with resources for coursework or assessments, but only information that deals specifically with COVID-19. This study is also not concerned with UK universities or students. Although my study was conducted during the pandemic and the effects of COVID-19 are reflected here, the focus of the study was not directly how these students' information behavior shifted due to the pandemic.

Friday and Motu-ere's 2022 study on the information behavior of undergraduate students in Nigeria during the COVID-19 pandemic highlighted challenges such as limited internet access, library closures, and financial constraints, with students relying on informal sources like friends and family for COVID-19 information, and the researchers recommended solutions like free Wi-Fi and digitized library resources to address these barriers. The sample size of this was 369 students, stemming from the departments of education, humanities, social sciences, natural sciences, and engineering. The students participated by taking a

questionnaire, which they were given upon entering the university's library. The results from the study determined that these students relied upon their friends, families, course mates, and the internet for COVID-19 related information. The data presented from these questionnaires also indicated that poor internet service, lack of funds to purchase subscriptions and resources, library closures, and poor power supply, all contributed to the challenges these students faced when searching for information. The researchers produced recommendations to combat these issues, including: The university making Wi-Fi free to their students and the digitization of library resources, so they are accessible online. This study is larger in scale and only has responses from undergraduate participants. The degree course these students are on is not specified. Although this study is large, only one data collection method was used. These students also faced additional challenges that affected their information behavior. Again, this study was not concerned with assessments or the resources students used to complete their university obligations but instead focused on students' search for COVID-19-related information only.

Howard et al.'s 2021 study found that COVID-19 increased students' reliance on peer conversations and social media for information, suggesting the need for libraries to support students in evaluating diverse information sources. Howard et al. undertook a study aiming to determine the impact that COVID-19 had on the information behavior of students at a large university located in the Midwestern United States. This study was conducted in 2021, after the lockdowns had lifted in the US. The methods used here were mixed, using both surveys and follow-up focus groups. These focus groups were conducted via Zoom meetings. The researchers took into consideration multiple aspects of these students, including Student use of new sources; social media sources; and political affiliations. The researchers also addressed changes in the frequency of use and the types of information resources used by the students. A total of 330 students started the survey, with 166 completing the survey. These

students were both undergraduates and postgraduates, with over 30% being first year undergraduates. Over 50% of survey respondents identified as female, with most students (38%) identifying their political affiliation as either “liberal” or “very liberal” (p.3). Ten students participated in the focus groups spread across five different sessions. Several students who signed up as a participant for these groups did not attend, making for a smaller sample in this regard.

40% of survey participants responded that their information gathering through talking with their peers had increased since before the COVID-19 pandemic, with 35% of these students also stating they had an increase in television consumption. Most participants did not feel that their usage had changed at all in terms of which information resources they consulted. It was determined that some students did experience changes in their information behavior because of the pandemic, but these changes were due to shifts in their environments, interpersonal factors and an increase in free time due to lockdowns. These students found that they began to rely on the internet and social media as their news sources, due to an increase in daily screen time. The results of this study also showed 20% of students became more concerned with the accuracy of the information they were encountering. The researchers concluded that most of the students started their search for information with a Google search and were surprised that the students’ frequency of information sources did not change much after the pandemic, but they did converse and share information with their peers more often. These results have important implications for this university’s library service. Since students are relying on their interpersonal connections as information sources, it would be valuable for library staff to speak with students on the proper ways to gather, evaluate and use information from human sources, as well as traditional sources that come from the library. The students featured in this study were asked to indicate their political affiliation and sex, although their course subject was not mentioned. The library services and information literacy curricula

were limited, and the researchers reported the lack of change of resources used post-COVID-19, then pre-pandemic. This study more closely relates to my study on fashion students in the post-COVID-19 world in that it focused on library resources and information literacy but differs in not concentrating on a specific cohort of students but instead on different attributes, such as sex and political affiliation.

Shi, Li and Lou present research into the impact of COVID-19 has brought a surge in the publication on its effects on the information behavior of students. In the case of fifteen Chinese students from a midsize university located in the Shanxi Province of China, the shift from in-person classes to completely online posed a major challenge for these students, as most did not have adequate access to laptops and internet at home. Pre-COVID-19 Chinese higher education institutions rarely offered any type of online education and were unprepared for this transition. This study was conducted to aid academic libraries in their development of understanding their students' experiences, and how they expect their on-campus libraries to support them by investigating the information behavior of these students and their library needs during the pandemic. Li and Luo argue that along with the pandemic, students today are also in an "infodemic," which is defined as an overabundance of information, some of which is accurate, and some is not, which makes it difficult for people to find trustworthy sources and reliable guidance. This infodemic therefore adds another challenge to college students trying to navigate what is already a turbulent time. During their at-home education, the students sought information to complete their assessments, complete research tasks, to write their thesis, to study for Chinese standardized tests, to enrich their personal interests, and to assist in their career planning and future job seeking. Of these students, thirteen used their libraries databases to aid them in their search for information but found that this experience was unsatisfactory 50% of the time. These participants also struggled with not finding resources that fit their needs, due to a lack of awareness and understanding of library

resources and services. The study suggests that the library needs better outreach for students studying at home and should consider department and/or cohort level communication channels, with the aid of liaison librarians. The researchers also suggested that the librarians weed through their collection and develop it with the aid of academic staff needs and student wants. Although this study does focus on library resources and services, and the overload of information that students may encounter, these aspects are only studied in connection with reactions to COVID-19.

The existing literature on student information behavior provides valuable insights, but it lacks focus on fashion students in the UK, whose unique academic needs and access to resources set them apart from the general student population. This selection of literature presented above, although presents studies on the information behavior of students, library visitors using digital documents and the online library, and students in the post-COVID-19 environment, these studies do not align with the subject or findings of my research into the information behavior of fashion students in the UK. None of the studies presented feature UK-based universities, with some of the higher education institutions having limited library resource collections and access. The studies also did not feature fashion students, or any students that have a creative element to their degrees.

### 2.7.1 Information behavior of creative students

Although literature on the information behavior of students in creative fields exists, there is a notable gap when it comes to the specific information behavior of fashion students, a demographic that presents unique challenges and needs. When reviewing the literature in this area, I found some literature that features students in art or creative based programs, but no literature that focuses specifically on the information behavior of fashion students. The study of information behavior is a multidisciplinary concept, and it is applicable to a wide

range of fields outside of LIS (Wilson, 1997). The initial focus of information behavior was concerned with the sciences, although this has changed to reflect interest in the study of the arts and humanities. The topics of information behavior are expanding far beyond the initial focus of the concept and have updated with the times and resources in multiple different areas of study. The digital age affects all aspects of life, especially the formats in which our documents and resources present themselves. With new forms of documents and a more interdisciplinary mind set in academia and research, comes different and interesting information behavior. It is easy to find research on the information behavior of chemists (Gordon et al., 2018), art historians (Rose, 2002) and lawyers (Williams and Zaccheus, 2021; Makri, Blanford and Cox, 2008; and Kumar and Kumar, 2019). But what is not so easy to find, is the information behaviors of those in the fashion field (Detterbeck, LaMoreaux and Sciangula, 2014). A South African case study has been published featuring undergraduate art students' information behavior within a specific curriculum that follows a multidisciplinary approach and how students interact with it, to discover their information behavior in this context (Du Toit et al., 2019). The students studied for this research were creative based students, but these students were traditional arts students, and not fashion or design students.

A growing body of literature on fashion-related information behavior has been published in other fields, such as in the fashion and textile (Cho and Workman, 2015), fashion retail (Singh, 2024; Siregar, et. al., 2023), business and marketing (Hood, Thoney-Barletta and Rothenberg, 2023), and sociology (Clarke, 2022) fields. There is a vast amount of published literature that focuses on the information behavior of fashion consumers, to aid the marketing teams that advertise for fashion brands. In a study on undergraduate university students as fashion consumers conducted by Cho and Workman, they argue that women and men both prefer to process information verbally, but women were reported to have a greater preference for visual information than men when shopping for apparel. Their study finds that

both college-aged men and women preferred visual information over verbal information, confirming a previous study's findings that showed, in general, visual information processing is preferred (Cho and Workman, 2015). Cho and Workman argue that fashion consumers tend to use multiple sources of information when searching for fashion related information (Cho and Workman, 2015). Although consumers use many different sources of information, the combination of the sources of information will affect everyone differently, in the ways in which the information is absorbed (Cho and Workman, 2015). The results of this study provide helpful insights for apparel marketers and their strategies for fashion marketing platforms and campaigns (Cho and Workman, 2015). Although this literature focuses on fashion university level students, it seeks to understand consumption, where the students in the study are seeking information to buy and consume fashion products, rather than in relation to their studies or higher education.

Understanding the impact of information related to animal-based materials on consumer behavior is essential for fashion companies, as it can guide the development of targeted advertising strategies for ethical consumers. To address this, there is literature regarding the consumer behavior of the purchasing of fur and other types of animal-based fashion products. Lee, Karpova and Baytar argue that consumer's attitudes are affected by the bias that is present in the information, subjective norms and purchase intentions of fur, leather and wool. The use of fur and other animal products being used in fashion has become taboo, greatly due to the opposition from animal rights advocates (Lee, Karpova and Baytar, 2019). The purpose of this specific study focused on the buying power of those who have graduated from college and have now become young professionals, and how different types of information related to fashion products made of animal materials and how it might affect this age group's intent to purchase these products (Lee, Karpova and Baytar, 2019). They state, "it is important to explore whether and how different types of information about animal-based

materials might influence young people because this group of consumers grew up during times when the animal right's movement became prominent” (Lee, Karpova and Baytar, 2019). The information that comes from this study of consumer information behavior is again helpful for fashion companies when developing advertising and other promotional materials (Lee, Karpova and Baytar, 2019). This study is fashion-related, but is again focused on the behavior of consumers, and not on the information behavior of university level fashion students.

While not centered on information behavior, McKinney and Dong's research sheds light on how fashion design students self-assess the role and value of sketchbooks in their creative process. They conducted a study to discover how fashion design students use, evaluate, and understand design research using sketchbooks. This study focused on how design students specifically use sketchbooks to conduct their research for design ideas (Dong and McKinney, 2022). Information behavior was not the center of this study, instead, this research focuses on students self-evaluating the use and value of sketchbooks in their creative practice (Dong and McKinney, 2022).

Zhao, Davis and Copeland, published a 2018 study on the future intentions within the fashion industry of fashion entrepreneurship and education students in the United States. This research on fashion students' entrepreneurial intentions underscores the importance of adjusting higher education curricula to better prepare students for future opportunities in the evolving fashion industry. There is limited published literature on the entrepreneurial intentions of fashion students. The authors aimed to discover what factors were important for cultivating these intentions among fashion students. Copeland, Davis and Zhao argue that due to the new shopping patterns of consumers and emerging technological developments creating new opportunities, it is crucial for the future of the fashion industry that the future intentions of fashion entrepreneurship students must be studied. The study's main objective

was to determine how fashion students self-identify opportunities to cultivate entrepreneurship. This study was also concerned with curriculum development for higher education courses, and how these can best be improved to allow the students to succeed academically (Zhao, Davis and Copeland, 2018). Copeland, Davis and Zhao conclude that these students must be resourceful, creative, confident and imaginative, and their curriculum needs to reflect this (2018). This study used in-depth interviews with open-ended questions as the data collection for this project. The interviews took place from September of 2016 until December of 2016. The study uncovered internal and external factors that contribute to fashion students' entrepreneurial intentions. The internal factors include personality traits; creativity; and artistic talents. The external factors of these fashion students include social networks; influence from friends and family; and the entrepreneurship education the student receives. These findings provide insights to fashion educators to better support their students to pursue entrepreneurial success. Although this study does directly involve fashion students, it does not focus on their information behavior. Instead, it is targeted to fashion educators and not necessarily librarians, nor the resources fashion students use.

This study on South African undergraduate art students emphasizes the dual purpose of their information-seeking behavior, where students gather information for both academic success and artistic inspiration. In what may be the most relevant to my research on fashion students, is the study of the information behavior of undergraduate art students at a university in South Africa by du Toit, du Preez and Meyer. This is because, "what makes arts students' information-seeking behavior so unique is that apart from seeking information to ultimately become proficient in their practical and academic coursework, they also seek information for inspiration and to enhance their creativity" (p. 5). This undergraduate art students' curriculum consists of a theoretical research component as well as a practical component. For the theoretical component, the students must submit written assessments and take theoretical

exams, with the practical component having the students complete “practical projects,” which requires them to use visual sources. In this context, visual sources include drawings, paintings, photographs, videos, films, graphic animations and virtual reality displays. At this institution, the library has stated that it is their mission to provide for all of its students. Therefore, the library has an extensive collection of books, articles, films and other visual resources. During library hours, the students also have access to the internet and library computers. The library also sponsors, and the information literacy program is part of the first-year students’ curricula and is mandatory. Here, the library’s catalogue was not online, and the librarian was the only person to have access to it, with the students needing to ask to look up their enquiries in the catalogue. When interacting with the students, the librarian noticed their reluctance in reading and their poor understanding of written resources, such as scholarly articles and other texts, and that they found it difficult to differentiate relevant information.

Eleven students were featured in this study, three first years, four second years, and four third years. Semi-structured interviews with open-ended questions were used to collect the data. The findings of this research concluded that a variety of factors played a role in the information behavior of these students, such as personal dimension, context and the availability of information sources. Their needs vary according to their course assessments and their level of education (year of university). These students were motivated to seek information for their theoretical and practical assessments. For their practical assessments, the students needed resources for inspiration and creativity and to comply with their briefs. They used a wide variety of resources, ranging from books, magazines, visual imagery websites, nature and their own life experiences. These students preferred to use the internet to gain information, due to ease of use and instant access, with a Google search being the most popular. Social media sites stood out as a preferred resource, especially for practical

assessments, with Pinterest being cited in particular. One-to-one tutorials helped the students understand their resources and content within, because they relayed step-by-step aid. Due to the information literacy curricula, the students had a good understanding of the resources and their content but were very much dependent on formal mediators (lecturers) and the researchers conclude that the library needs to consider closer relationships with the academic teaching staff to accommodate the students. Although this study is similar to my research, the findings presented do not completely align with the results of mine. The art students have comparable library needs, such as for both practical and inspirational needs and the use of a variety of visual resources but they rely upon the use of formal mediators, which fashion students in the UK are reluctant to seek out. The librarians at this South African institution do not collaborate with the university's teaching staff. This may hurt their collection development and the relevance of the resources they already have available.

Despite the extensive literature on fashion and higher education, there is a notable gap in research from the Library and Information Science (LIS) perspective regarding the information behavior of fashion students. From the literature presented above, there is no literature within LIS and fashion higher education studies published that directly investigates the information behavior of fashion students. The studies concerned with fashion students are not from an LIS viewpoint, and do not align with the research questions this thesis seeks to answer. The study investigating the information behavior of arts students has few similarities, but again the main demographic is not fashion students, nor are these students studying at a UK higher education institution.

Understanding the information behavior of specific demographics is crucial for improving information systems, services, and training tailored to their needs. It can show researchers a variety of different things such as: the effectiveness of the roles of information professionals, the designing of information systems, the ways in which information is

organized and managed, the training and education that helps people learn to find, evaluate and use information according to their own specific needs, and the way in which information is communicated by authors and other information providers (Ford, 2015).

### 2.7.2 The information behavior of students in the UK

Current research on the information behavior of students attending UK higher education institutions remains limited, with only a few studies focusing on specific groups such as PhD and online learning students. There is limited published research that researches the information behavior of students studying at UK higher education institutions. The two published studies analyzed below discuss PhD students and online/distance learning students at UK-based universities.

Researching students at a UK- based university, Mudaliar's PhD thesis focuses on online doctoral students, stating that their information behavior is drawn from their experiences in the information behavior process cycle, learning at the PhD level and the usability of their information support services. This study is based on Wilson's 1997 conceptual framework of information behavior. This was a single case study with nineteen participants- fourteen students and five faculty members. Results showed that these students have a high level of "social-ness" through their information-sharing activities. Mudaliar found that these students undergo the information behavior iterative process cycle, where a "transformation" occurs. The students acquire knowledge and skills which change their mental and emotional structures, with Mudaliar concluding that PhD level learning is a transformative experience, with students experiencing an ontological, epistemological and methodological shift in "self." These findings expand Wilson's framework, by adding information-sharing as a new component. This study also concluded that the process of information behavior is not a linear or sequential process, with the informational support

services offered to students had a significant influence of these students' information behavior in terms of their experience in the learning environment. Mudalair's thesis and mine offer similar conclusions, with the learning and research process not being linear, but this is where the similarities end. This research does not focus on a particular demographic, and only includes students studying at the PhD level, which is a degree of higher education I do not investigate.

A PhD study on the information behavior of distance learners studying through a London-based university was published in 2014 by Sandra Tury. The study was undertaken to gain more understanding of the information needs and information-seeking behavior of distance learners in the international programs of the University of London. The students that participated in this study were spread over multiple countries and continents, who depended on the online library via the University of London. Tury concluded that there were no models of information behavior that have been devised specifically for distance learners, nor had any of the existing models in the field had been applied when studying the information behavior of these students. To combat this, Tury extended Wilson's 1999 model of information behavior. The study featured a mixed methods design. The results of this study conclude that distance learners have a complex information behavior, with the aspects of ease and speed of access and the familiarity of resources were seen as more important than the quality, reliability and comprehensiveness of resources. The principle of least effort is as important for distance learners as for other groups. Tury stated that the extended version of Wilson's model should be a basis for further investigation of the information behavior of distance learners. Although this study investigates students studying at a London-based university, these students are not all physically located in the UK. Due to this, the only library-provided resources they had available were via the online library.

## 2.8 Conclusion

The information behavior of fashion students remains an under-researched area, and addressing this gap is crucial for librarians and information professionals to better understand and serve their students' information needs. Information behavior studies relating to fashion based is rarely, if ever, from a library and information science perspective. More commonly, fashion information behavior literature is coming from a consumer and marketing and advertising standpoint, or that of pedagogy of fashion education (Faerm, 2018). Fashion resources have been prevalent for centuries, changing with the times of its formats of documents and information (Anon., 2024). Fashion documents are no longer the same as they were in the nineteenth, twentieth and even the early twenty-first centuries. Previously, print based magazines were one of the most common fashion resources. In the late twentieth century, the introduction of the internet, and the revival of library and information sciences' document theory writings, documents and resources in general, including fashion resources, began to change. By the 2000s, the use of social media and blogs, online archives, among other similar digital media resources, have now taken over as lead fashion documents. These changes in fashion documents and resources are well documented in the literature. Changes in documents in turn change the information behavior of those that are seeking, needing and using these documents. Due to these changes, the investigation into the information behavior of fashion students is at the forefront of this project.

# Chapter Three Models of Information Behavior and the ISP Model

## 3.0 Introduction

This chapter introduces the concept of information behavior models, explaining the selection of the Information Search Process (ISP) model as the foundation for this research, while also addressing alternative models, and why these were not chosen. I will also introduce all aspects relating to the ISP model here, such as: the six stages of the information search process; the findings and conclusions of the original study of the development of the model; the importance of the user's perspective; the uncertainty principle; the cognitive aspects of the ISP model; the use of formal and informal mediators; and finally, the post-internet use of the ISP model. I will also discuss the published literature where the research tests the ISP model. Through this analysis, I will investigate how these studies align with mine, and how they do not.

## 3.1 The use of Models in Information Behavior

The use of information behavior models allows for a multifaceted approach to understanding information processes. Information behavior models come in different approaches and vary in form. Models may be represented in textual, mathematical, or graphic formats (Savolainen, 2016). In the context of information behavior, models are used to simplify complex realities to make them understandable (Savolainen, 2016). There are many published models, each attempting to describe different sets of phenomena and activities (Wilson, 1999b). The information behavior models that have been used in this research will be examined in this chapter, along with the models of information behavior that were consulted but not used.

### 3.1.1 The Wilson Model of Conceptual Areas

The use of models in information behavior is commonplace. In the subsequent sections of this chapter, I will detail the models used in this thesis and the models investigated but not chosen. In 1999, Tom Wilson, a pioneer in the information science community, developed the Model of Conceptual Areas. This represents a visual interpretation of the concepts of information behavior, bringing them together as a “series of nested fields” (Wilson, 1999b, p. 263). The model features information behavior as the main point of research, with information seeking and information searching as subsets of the concept as a whole. Wilson intended for this model to be an aid to researchers in various information studies to “remind themselves that the study of a particular topic needs to be undertaken in the context of the surrounding field” (1999b, p. 264). This is to say that to study one of these fields as a central topic of investigation, the researcher should also investigate their relationships and how they interact with each other. Wilson explains this with the example of

taking a slice across the circles to explore the behavior of a demographic in terms of overall information behavior, information-seeking within that broad area and information-searching when the user interacts with computer-based systems (1999b, p. 265).

The model (please see Figure One) shows the nested model of conceptual areas. This model is needed to visualize the structure and processes involved in successful information searching (Wilson, 1999a). As an example, the model demonstrates information behavior as the general area of investigation, with information seeking behavior as its sub-set, and information searching behavior as a further sub-set (Wilson, 1999a).

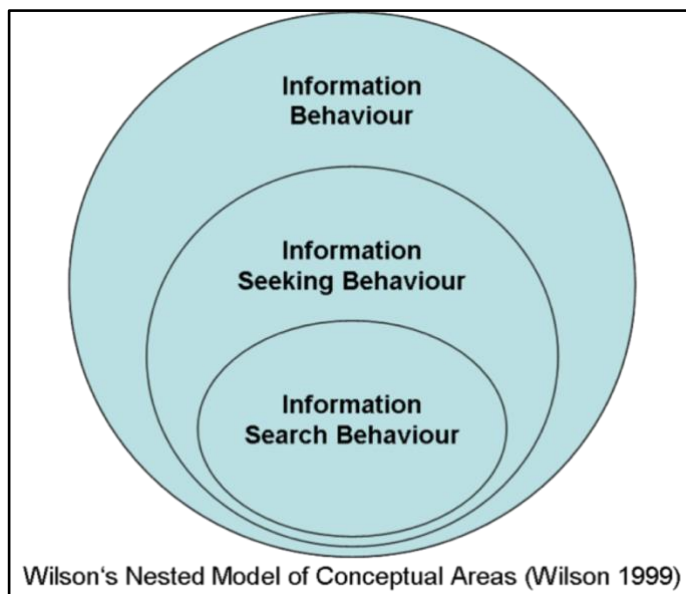


Figure One, Wilson's Model of Conceptual Areas, 1999.

Wilson's nested model was chosen for this project as a visual aid because it exhibits information behavior as a concept, and the sub-concept of information seeking behavior, which is the motions that the students featured in this thesis are going through. In this research project, I focus more on the outer two layers of this model, as these are the areas that the thesis is directly addressing. This model presented here tells the story of what level this project will be investigated at, and the level of information seeking behavior. The Wilson

model will not be used extensively but is being included here to show the conceptual areas of information behavior that are being used in this study.

## 3.2 Models Not Used

Before turning to the ISP model, I will first address the information behavior models that were not appropriate for this thesis. The model developed by David Ellis was based on information seeking within a library environment using physical resources. The original model, published in 1989, focused specifically on the information behavior of academics in a wide range of disciplines (Makri, Blandford and Cox, 2008). This model was not published in a pictorial or diagram form; rather, it was expressed textually in a series of paragraphs. Ellis's research resulted in a pattern of information seeking behavior among social scientists that include six features; Starting, which comprises of the initial search of information such as identifying resources at the starting point of research; Chaining, which follows the chain of citations that were identified during the starting feature; Browsing, which entails casually looking for information of potential interest; Differentiating, using known differences between the sources and filtering out the amount of information obtained; Monitoring, being updated on the developments in the area of study by regularly following resources; And extracting, activities associated with going through sources and selecting relevant material from those sources (Meho and Tibbo, 2003).

There have been additions to the features of Ellis's model, which include the features verifying and ending, which came from the model's republication in 2005 (Please see Figure Two) (Makri, Blandford and Cox, 2008). The Ellis model can be applied to a variety of empirical situations, most notably, in a 2005 study on Jewish Studies scholars, but there are limitations that make this model not the right for this investigation on UK fashion students. These limitations include the model not explaining the information seeking behavior, and it provides a limited scope in relation to specific contexts. Although the model is applicable to multiple different demographics revealing contrasting patterns across domains, the model is faulted for "not suggesting more explicit causation factors that might directly explain seeking

behaviors” (Case, 2009, p. 145). This model has mainly been used for professionals and scholars, not students. The model could have been adapted to fit into this project, but Kuhlthau’s ISP model was a more suitable choice.

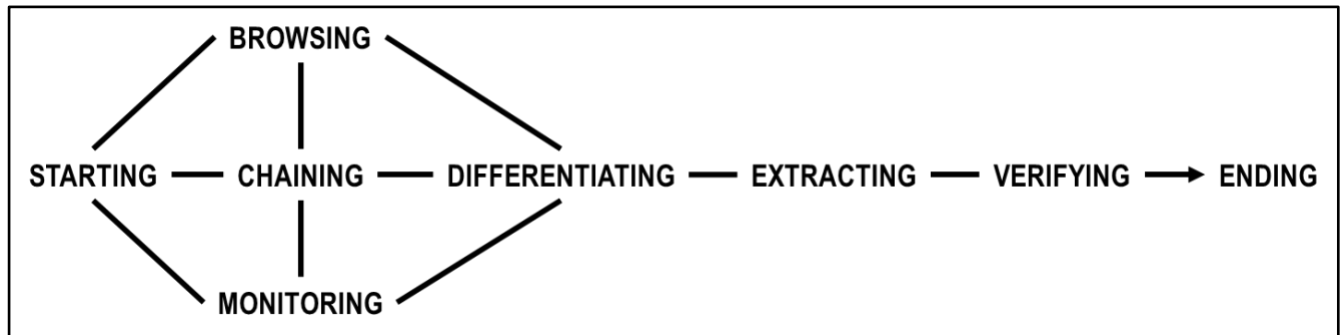


Figure Two. The Ellis model, 2005. Adapted and published by Wilson, 1999.

Another model that was investigated regarding this research was the Leckie Model. This model features six factors that are connected via arrows, depicted as flowing from top to bottom (please see Figure Three) (Case, 2009). The meanings of some of the terms featured in the model are not explained in much detail, and the model depicts information seeking behavior as a two-way arrow with a caption that reads “information is sought,” ending its results with a square labeled “outcomes” (Case, 2009, p. 147-148). The model is limited in its range, as it focuses solely on professionals. These professionals can be from a multitude of different fields, including but not limited to doctors, lawyers, and engineers (Case, 2009). This model was consulted due to its success in identifying the information behavior of a variety of professionals, which could have been beneficial due to the librarians featured in this thesis, but the main research questions focused on students, and it was decided that this model would not be the best suited due to this.

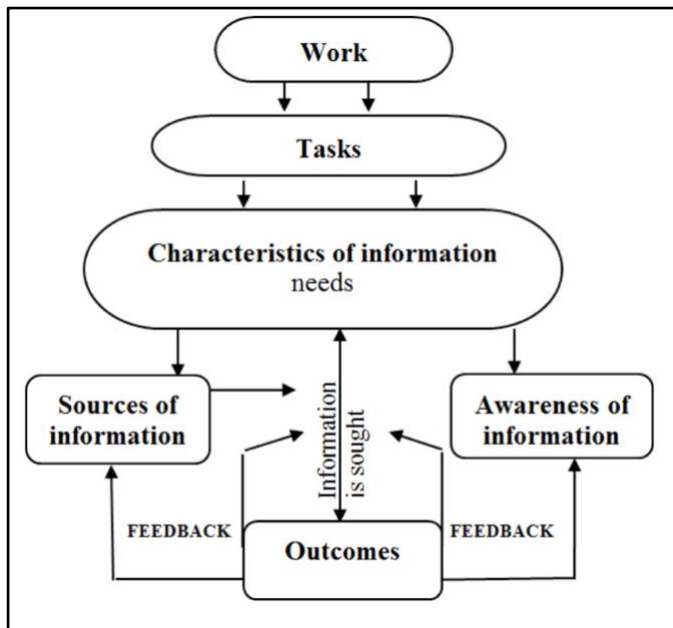


Figure Three. The Leckie model, developed in 1996. Adapted and published by Bakar and Saleh, 2013.

The final model that was considered for this project was the berrypicking model developed by Marcia Bates (1989) (please see Figure Four). The model was introduced in 1989, as an alternative to the traditional information model, focusing mainly on information retrieval (Savolainen, 2017). The model was based on the idea that when searching in real life, each new piece of information that is encountered by the user gives them new ideas and directions to follow, and after that a new conception query (Savolainen, 2017). For Bates, the starting point of an information search is derived from the user's information need, which is acquired from a broader topic (Savolainen, 2017). When describing the term "berrypicking," it is described as

“a metaphorical construct that depicts information searching as an evolving activity during the information seeker identifies and selects information objects similar to an individual picking huckleberries from a bush”

(Savolainen, 2017, p. 581). This model is not confined to focused searching, and users may engage in exploratory browsing (Savolainen, 2017). To Bates, berrypicking is a natural mode for all directed searching, while browsing is completely undirected (Savolainen, 2017). Although used extensively in the library and information science field, the Bates berrypicking model was not ultimately chosen for this research. Although this is a user-centered model, it was just not the right fit for this project as it mainly concerns itself with information retrieval, and I focus on information seeking.

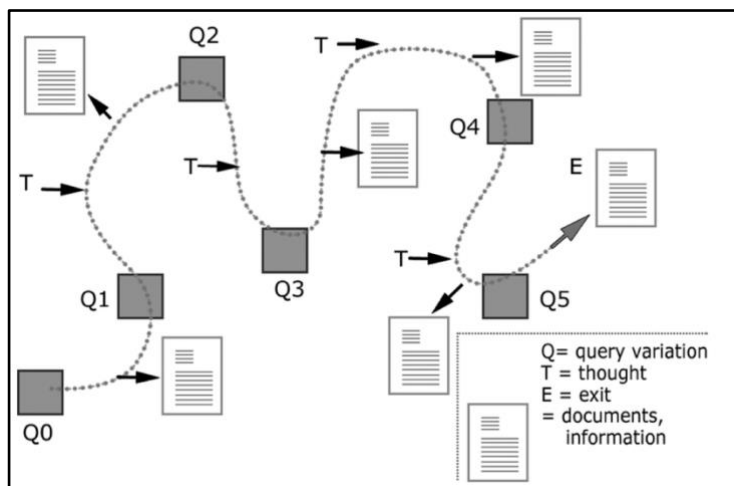


Figure Four, The Berrypicking Model, developed by Bates, 1989, published in Knight, 2009.

### 3.3 The Information Search Process (ISP) Model

The information search process (ISP) model, created by Carol Kuhlthau in the 1980s and refined in the 1990s, will be introduced as the key model for this research, with a focus on the six stages of information seeking it outlines. In this section, I will introduce the ISP model, before turning to the six stages of the information search process that the model explores. The ISP model is one of the most widely used and frequently cited models within information behavior research (Kuhlthau, 2003). It was developed by Carol Kuhlthau of Rutgers University, in New Brunswick, New Jersey, USA. The development of the ISP model was motivated by Kuhlthau's ongoing interest in investigating why students informationally behave the way that they do (Hyldegård, 2006). The need for the ISP model arose as a response to a general misunderstanding of information behavior that information seeking is systematic, rational and orderly (Kuhlthau, 2018). Kuhlthau sought to showcase that searching for information is confusing and full of uncertainty (2018.). The model has been used as a tool for understanding the information searching experience of people in a variety of information environments, most notably students (Kuhlthau, Heinstrom and Todd, 2008). This model was based on theories of learning and shows a series of cognitive and affective stages or behaviors which people move through as they find and evaluate information (Case, 2009). There are multiple aspects of the model, with Kuhlthau stating that "the model of the information search process incorporates three realms: the affective (feelings), the cognitive (thoughts) and the physical (actions) common to each stage" (Kuhlthau, 2003, p. 44). Also included within the model is the task which has been deemed most appropriate for each stage, as well as strategies which the students may use during that time in the research process (Kuhlthau, 2003). The task in the ISP model refers to the undertaking of a requirement to move the process on to the following stage, such as preparing for the decision of selecting a

general topic, actioning the selection, and gathering information pertaining to the chosen focused topic (Please See Figure Five) (Kuhlthau, 2003).

Kuhlthau has dual research interests, in both education and library and information science, following her postgraduate qualifications in these fields. Kuhlthau combined these interests when she developed the ISP model. The ISP model was originally developed by observing high school students whilst working on a school research project, using the school's library (Beheshti, et al., 2014). Since her original observation(s), Kuhlthau's model has been tested and modified in a multitude of school environments, stemming from elementary schools to university settings (Beheshti, et al., 2014). The model itself also continues to be particularly useful when applied to studies intervening with students, especially those engaging in research projects (Kuhlthau, Heinstrom and Todd, 2008). The ISP model is different to other information behavior and information seeking models, as it is completely rooted in empathy (Jefferson, Stierholz, Fontichiaro and Hoelter, 2020). This is due to feelings and emotions being central to this model, bringing new aspects to information behavior research. Through her research and the development of the ISP model, Kuhlthau concludes that information seeking behavior is a “complex learning process that involves finding meaning. Thoughts evolve, feelings change, and confidence rises as a search progresses” (2003, p. 57).

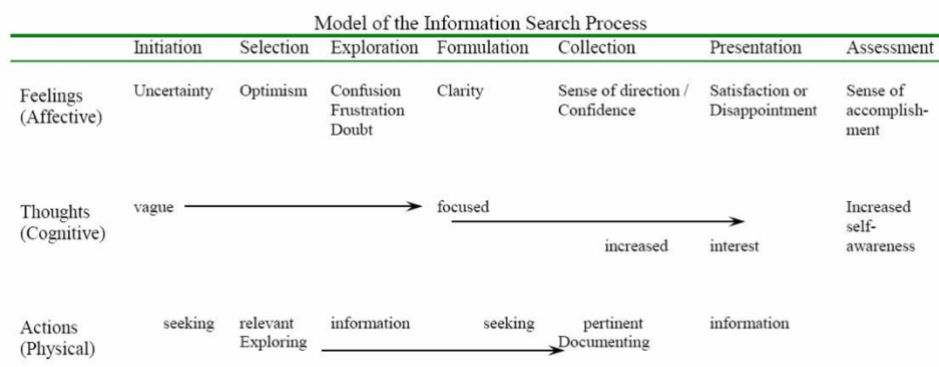


Figure Five. The ISP Model, Developed by Carol Kuhlthau, 1991.

## 3.4 The Six Stages of the ISP Model

Kuhlthau's model differs from other information behavior models in several keyways.

It focuses on a different level of analysis than others making this model helpful in understanding the user's perspective on information seeking and offering insight into the emerging problems of seeking meaning in an environment with an overabundance of information, and shows that there is a connection between emotions and information seeking (Kuhlthau, 2003; Case, 2009; Wilson et al., 2002). To demonstrate this, the model features the six stages an information seeker goes through when seeking information. Kuhlthau's ISP model does not present the factors that influence the development of the search for information but instead focuses on the process itself (Urquhart and Rowley, 2007). This model was monumental in several ways, particularly due to its attention to the role of "affect" in information behavior (Case, 2009). The information search process happens in six different stages (Kuhlthau, Heinström and Todd, 2008).

The six stages of the model are:

1. Initiation- recognizing an information need
2. Selection- identifying a general topic
3. Exploration- investigation of information in general
4. Formulation- formulating a focus
5. Collection- gathering information pertaining to focus
6. Presentation- complete research (Kuhlthau, 1993).

The first stage is where the information seeker first becomes aware of their information need, or lack of knowledge or understanding, and feelings of uncertainty and anxiety are common occurrences. At this point, the assignment or task is to recognize the need for information. This is prompted by becoming aware of an assessment or a specific task. At this stage, the students' thoughts begin to focus on contemplating the task ahead and relating this

to prior knowledge and experience. Here, actions often involve discussing possible topics and/or approaches with others, such as a friend, and informally browsing the library collection (Kuhlthau, 1993; 2003). The task for this first stage is for the student to prepare to decide or select a topic. Feelings of apprehension and uncertainty are commonplace at this stage, as they are preparing for the undertaking of researching a topic that is new.

The second stage involves the information seeker actively identifying and selecting a general topic to investigate. Typically, students at this first stage experience feelings of “confusion and anticipation of the prospective task” (Kuhlthau, 2003, p. 46). Occasionally, the feelings of anxiety, arising from stage one, can *briefly* give way to feelings of optimism or excitement, but *only* after the selection of a general topic has been made (Kuhlthau, 1993). If this selection is not made, or if the “selection is delayed or postponed, feelings of anxiety are likely to intensify until the choice is made” (Kuhlthau, 2003, p. 46). Thoughts are centering on weighing perspective topics against personal interest, the requirements of the assessment, information available and time constraints. The typical actions of this stage are conversing with others, most notably formal mediators, such as librarians (Kuhlthau, 1993; 2003). Strategies here include using general resources for an overview of information available. The task of this stage is to decide on a research topic.

Kuhlthau characterizes the third stage of the ISP model, exploration, with feelings of confusion, uncertainty and doubt (2003). Thoughts begin to center on becoming familiar with the information, to begin to formulate a focus for the research process. Kuhlthau argues that for many students, this stage is the most difficult in the information search process. The students may find this stage to be discouraging, as “information encountered rarely fits smoothly with previously held constructs, and information from different sources commonly seems inconsistent and incompatible” (Kuhlthau, 2003, p. 47). Actions then involve locating information about the general topic, becoming more informed, and relating this newfound

information to what is already known (Kuhlthau, 1993). The task here is to investigate information on the chosen topic more generally, in order for the information seeker to extend their own knowledge and understanding (Kuhlthau, 1993). The strategies of this stage include reading extensively about the chosen topic and seeking possible foci for the assessment (Kuhlthau, 2003).

The fourth stage, formulation, can be seen as the “turning point” (Kuhlthau, 2003, p. 48) of the ISP model, when the feelings of anxiety and uncertainty begin to cease and make room for more positive thoughts. During this stage, feelings of confidence start to appear (Kuhlthau, 1993). Formulation of a focus in the research process is a central and critical concept within the ISP model. A focus for the information search is confirmed by the end of this stage. The task of forming a focus from the information encountered is central to this stage. The topic in general then begins to become more personalized at this stage if construction of the focus occurs. This is because “a clear focus enables a person to move on to the next stage” (Kuhlthau, 2003, p. 48). During the selection stage, “actions may include making a preliminary search of information available, skimming and scanning for an overview of alternative topics, and talking to others about possibilities” (Kuhlthau, 2003, p. 46). Strategies include choosing a particular focus and discarding the other possibilities.

Collection, the fifth stage of the ISP is the stage is where the interaction between the information seeker and the information system functions most efficiently (Kuhlthau, 2003). Here, the task of the information seeker is gathering relevant information for the focused topic. The students’ thoughts are centered on defining, extending, and supporting the chosen focus. The actions of this stage entail the choosing of the most relevant information to the focused perspective of the topic, instead of the topic generally. The information seeker, in this case a student, now has a clearer sense of direction for the topic, with increased feelings of confidence arising and interest in the topic advancing (Kuhlthau, 1993). At this stage, the

student is predicted to feel confident in their ability to complete their assessment (Kuhlthau, 2003). Kuhlthau has identified this stage as a stage in the process where students are seeking aid from a librarian and requesting specific resources from them (2003).

Presentation is the final stage identified in the ISP model, where feelings of relief and satisfaction are common if the information search and subsequent assignment has gone well, and disappointment if it has not (Kuhlthau, 1993). Thoughts at this stage vary, due to identifying the need for additional information, time constraints, the increasing redundancy within the resources and on completion of the information search (Kuhlthau, 2003). The task here is to complete the information search and present the findings. The actions of this stage involve a search in which decreasing relevance and increasing redundancy are notable in the information that is now encountered (Kuhlthau, 1993).

## 3.5 Aspects of the ISP Model

The ISP model is made up of multiple aspects in addition to the six stages. Each stage of the model is accompanied by tasks, feelings, actions, and strategies. These additions allow for the ISP model to include the three realms the search process incorporates: the affective (feelings), the cognitive (thoughts), and the physical (actions), that Kuhlthau identifies as common to each stage (2003). The aspects of tasks, feelings and strategies are related to the six stages but are distinct. Each aspect is described in the following section in order to provide more in-depth clarity.

### 3.5.1 Tasks

Kuhlthau's ISP model emphasizes the importance of tasks at each stage, with activities such as recognizing the information need and forming a focus guiding students through the search process. The task of each of the six stages is also categorized along with the feelings, thoughts, strategies and moods the students may experience (Kuhlthau, 2003). The overall task was to form a perspective of the chosen research topic from the information that is located, gathered, interpreted, and presented (Kuhlthau, 2003). Kuhlthau uses the term “task” as what would be most appropriate to move the search process to the next stage (2003). Examples of tasks are as follows; recognizing the information need; identifying and selecting a general topic; research into the general topic; forming a focus; and gathering information related to the formed focus.

### 3.5.2 Feelings

Feelings play a central role in the Information Search Process (ISP) model, with each stage reflecting a shift in emotions as students navigate their information-seeking journey. Each of the six stages is accompanied by a feeling, as displayed in the ISP model, Figure

Five. The model demonstrates the peaks and troughs of the information search process, and the evolution of the students' feelings about themselves, the library, their assignment and their chosen topic as their understanding of these deepened throughout their search process (Kuhlthau, 2003). The feelings of information seekers are not stagnant and continue to change and deepen throughout their information search.

### 3.5.3 Strategies

In Kuhlthau's model, strategies play a crucial role in the research process, with students often relying on tactics such as talking, writing, and thinking to guide their information-seeking efforts. Kuhlthau identifies a strategy as a "tactic used to seek information or to work through a stage of the research process" (2003, p. 43). These strategies are wide in scope and can feature a mediator, both formal and/ or informal. A strategy in this instance can be a student discussing a possible focus for their assignment with a friend or consulting general resources before searching for specific resources. The students in Kuhlthau's original study use the strategies of talking, writing and thinking the most during their information search process, and were important aspects in their research process, with the students holding them to the same standard of importance as the actual resources and formal research strategies used (2003).

### 3.6 Original Study Featuring the ISP Model

The ISP model was developed and refined through a series of large-scale field studies, starting with Kuhlthau's original qualitative research on high school seniors and later expanding to include quantitative methods and broader participant groups. The ISP model was developed and tested with two large-scale field studies and was then even further verified with two more large-scale field studies that added more quantitative methods and statistical analysis (Kuhlthau, 1993; 2003). These studies were conducted within in-field situations with actual library users. Kuhlthau's original 1983 study was qualitative in nature, focusing on twenty-six high school seniors, in the United States, who were regarded as being high academic achievers (Kuhlthau, 1993). These high school seniors were assigned two research papers over their last academic year, one paper due each semester (Kuhlthau, 1993).

The original study used multiple data collection techniques throughout the investigation. Firstly, the students kept journals during their first research assignment, where they were asked to record their thoughts, feelings and actions related to their library research for the assigned essay (Kuhlthau, 1993). As for the second assignment, the students kept logs which recorded what sources they used, and if they found the resources were helpful or not. This log did not offer the students the option to record their feelings, but it did grant Kuhlthau data on the decisions made on the relevance of the sources, which in this context offered another way of looking at the progression of thoughts and actions. After the second assignment was completed and submitted, the students were asked to write a paragraph about their chosen topic. Along with the journals and logs, a questionnaire was also distributed to the students to examine six areas of library use namely, topic selection, research assignments, focus formulation, procedures for gathering information, frequency of library use, and the role of mediators. Furthermore, a case study featuring six of these students was also conducted to verify and explain the data that was derived from logs, journal entries, and

questionnaires. The students were interviewed for forty-five-minutes in taped sessions, on six separate occasions during the two research paper assignments (Kuhlthau, 1993). These interviews examined the stages of the process which the participants were experiencing at the time. An important finding of the initial study was the sequence of feelings that were commonly experienced during the search for information. This study identifies that the “students’ feelings about themselves, the library, the task, and the topic evolved as their understanding of their topic deepened” (Kuhlthau, 2003, p. 41). Throughout the analysis of the data collection methods, here the six stage ISP model was created based on the finding that uncertainty, an emotion in which is natural and expected at the beginning of a search process, causes discomfort and anxiety which can turn into problems when judging relevant sources. Consequently, “these findings were in accord with the theories which provided the framework for this research and became the hypothesis for further investigation” (Kuhlthau, 1993, p. 364).

A second study was conducted to address if the same students’ perceptions of the information search process changed after four years of university, and if and how they compared with the ISP model (Kuhlthau, 1993). The same questionnaire that was featured in the first study was used again, with twenty of the twenty-six original participants responding (Kuhlthau, 1993). The responses to the questionnaire the second time around were then compared with the first responses that were administered years earlier, which were then statistically analyzed through *t* tests (Kuhlthau, 1993). Four of the six original case study student participants sat for interviews, each sitting for a one-hour session, which again were compared with the interviews that were completed when the students were in high school (Kuhlthau, 1993). The results garnered from further questionnaires and interviews showed that the ISP model held up over time with this group of students (Kuhlthau, 1993). The results

of this showed that the students' information search activity changed during their university experience.

The model indicates feelings of increased interest in the topic that is being researched. These students were now expecting this change to occur and looked for this change to increase their motivation. Student perception of formulating a focus also changed during this study, which aligned more with the model. By the time the students were researching at the university level, they came to expect changes during the research process, and to expect a focus to form when researching (Kuhlthau, 2003). During this study, there was no change in the perception of formal mediators, where the students only saw librarians as a last resort and were reluctant to seek their advice, which Kuhlthau identified as a “shame” (2003, p. 84).

### 3.7 Constructivist Theory

The ISP model and its subsequent studies are grounded in a constructivist theory approach which holds that the student or information seeker constructs new knowledge by combining the newly gained information with their prior knowledge (Beheshti et al., 2014). Kuhlthau used the theories of constructivist theorists, most notably George Kelly (1980), John Dewey (1944), and Jerome Bruner (1973). Their teachings are examined in more detail in Chapter Four. The ISP model was based on the idea that learning is active and engaging, as, “Kuhlthau’s model postulates that the search process is an active process, engaging the cognitive processes of the information seeker” (Ikoja-Odongo and Mostert, 2006, p. 150). The constructivist theory describes the experience of the individual when constructing meaning from the information they encounter.

## 3.8 Cognitive Theory

By focusing on the cognitive processes involved in information seeking, Kuhlthau's ISP model stands out in information science, which has long been concerned with the interaction between human cognition and the information they process. The ISP model was based on theories of learning and shows a series of cognitive and affective stages or behaviors in which people move through as they find and evaluate information (Case, 2009). Kuhlthau's model is different than other information behavior models due to these contributions. Information science has long taken an interest in a cognitive viewpoint (Belkin, 1990). The essence of the cognitive viewpoint in library and information science is that it "explicitly considers that the states of knowledge, beliefs and so on of human beings (or information-processing devices) mediate (or interact with) that which they receive/perceive or produce" (Belkin, 1990, p. 11-12). In this context within information science, the cognitive viewpoint typically means considering its scope as being concerned with some sort of human communication system, and of individuals within that system (Belkin, 1990).

Wilson has also taken on the cognitive view of information in his research and models. He focuses on human information behavior, fixating on the concepts of understanding and meaning within this viewpoint (Belkin, 1990). Wilson furthermore suggests that a cognitive view of information-seeking behavior and information use implies the understanding of relationships between peoples' everyday lives and the information which may have relevance (Belkin, 1990).

It should be noted that Kuhlthau's model does not consider some factors that are generally considered in information seeking research, such as the type of need, and what type of information might satisfy that need, or the availability of information resources and their characteristics (Case, 2009).

### 3.9 User's Perspective

Kuhlthau's user-centered approach revolutionized information studies by including the affective aspects of information seeking, alongside the cognitive and physical, in order to better understand the complexities of the user experience. In the 1990s, there was a shift in the conceptual approach to information studies, that being one that focused on the user's perspective (Kuhlthau, 1991). This approach was intentional, as Kuhlthau argues that "we need to understand the user's perspective to design a more effective library and information services (2003, p. 13). From this viewpoint, information seeking is seen as a holistic experience. This experience comes with it "thoughts, actions, and feelings interweaving in a complex mosaic rather than as separate, distinct entities" from the user's perspective (Kuhlthau, 2003, p. 93). During this time, Kuhlthau's work focused on the experience of users within the stages of the information search process, as they move from "ambiguity to specificity" or what she calls, "uncertainty to understanding" (1991, p. 340). Kuhlthau's user-centered research was the first to include the affective perspective in information seeking as well as the cognitive and physical aspects (Kuhlthau et al., 2008). The constructivist framework was applied in this context to explain the role of information in the individual user's process of problem solving or finding new information (Kuhlthau, 1991). A constructivist approach to information seeking reveals that the early stages are commonly filled with uncertainty and confusion. This principle of uncertainty is "indicated in the underlying conceptual framework for information retrieval and provision" (Kuhlthau, 1991, p. 344).

In the context of information seeking from the user's perspective, information seeking is looked at as a process of sense making, when a person is forming an opinion (Kuhlthau, 1993). In this situation, the person is actively involved in seeking meaning that fits in with what they already know, making sense within a personal frame of reference. As people, we

are actively and constantly constructing our own views of the world by assimilating and accommodating new information with what we already know or what we have previously experienced (Kuhlthau, 1993).

### 3.10 The Uncertainty Principle

In her work on the ISP model, Kuhlthau has directly tackled the issue of uncertainty and the emotion that it brings within the research process, addressing this issue as the “uncertainty principle” in her work. This notion is a key component in all of Kuhlthau’s research (Ruthven, 2019; Case, 2009). Kuhlthau has defined the term “uncertainty” as a “cognitive stage which commonly causes affective symptoms of anxiety and lack of confidence” (1991, p. 347). In the 2003 publication of her research on the ISP model, Kuhlthau stated that “uncertainty is a necessary, critical element in any process of construction” (2003, p. 7). The uncertainty principle offers a basis for a process approach to intervening with the researchers and users of library and information systems (Kuhlthau, 2003). When viewing the information search process in this light, feelings of doubt, uncertainty and anxiety are anticipated and often expected to be present as part of the process (Kuhlthau, 2003). This uncertainty is different for each user, and “may include the uncertainty of choices of each individual user within a search for information” (Kuhlthau, 2003, p. 8). The ISP considers uncertainty to be a natural emotion that is central to the process of information seeking and constricting knowledge (Kuhlthau, 2018). She begins by stating that early in the information search process, emotions are generally more negative, while emotions in the later stages evolve to be more positive (Ruthven, 2019).

Kuhlthau's ISP model highlights the significant role that emotions, particularly uncertainty, play in the information-seeking process, with feelings of anxiety and confusion prevalent during the early stages of research. Due to approaching the model with a constructivist approach, Kuhlthau identifies the role of feelings within the information process. The emotion of uncertainty became a focus of the ISP model. Kuhlthau identifies that feelings of anxiety and uncertainty are present in the information seeker, usually during the first three stages, identified earlier as initiation, selection and exploration, and are present

during the information search process. Due to these feelings of uncertainty, information seekers can oftentimes feel overwhelmed as they search for information. This unease associated with the research process has not lessened due to the expansive resources available. The advancements in technology have opened access to large amounts of resources, which has not helped in the reduction of uncertainty, instead creating new instances which may cause these emotions (Kuhlthau, 2018). Kuhlthau expressed the need for mediators, such as a librarian, in these instances. Kuhlthau discovered through multiple studies that researchers generally begin their research process with feelings of anxiety, which leads to them feeling lost and overwhelmed. The concept of mediators during the information search process is discussed in section 2.17. By the time the research process is over, the researcher completes their research experiencing feelings of relief, joy, confidence, and sometimes disappointment.

### 3.10.1 The Six Corollaries of the Uncertainty Principle

By establishing the uncertainty principle and its corollaries, Kuhlthau offers a framework for understanding the cognitive and emotional stages users go through during their search for information, from uncertainty to clarity. When focusing on the user's perspective of the information search process, the uncertainty aspect that is so prevalent in the earlier stages of the ISP model is commonly associated with vague and unclear thoughts about a topic. As the researchers' knowledge of the chosen topic increases, thoughts begin to shift to being clearer, and the confidence in the researcher's thoughts grows. Satisfaction and relief, or sometimes disappointment, are common at the end of the research process for most students (Kuhlthau, 1993). The uncertainty principle is supported by six corollaries, which are listed and explained below. A corollary is defined as something that results due to or from something else (CED, 2024). In conjunction, "the uncertainty principle and the six corollaries

propose a theoretical view of users in their search for information to gain understanding” (Kuhlthau, 2003, p. 105).

| <i>Corollary</i> | <i>Definition</i>                            |
|------------------|----------------------------------------------|
| Process          | Constructing meaning and uncertainty         |
| Formulation      | Forming a focussed perspective               |
| Redundancy       | Encountering the expected and the unexpected |
| Mood             | Assuming a posture or attitude               |
| Prediction       | Making choices based on expectations         |
| Interest         | Increasing intellectual engagement           |

Figure Six. The Uncertainty Principle Corollaries, Kuhlthau, 2003.

The six corollaries are listed here:

1. the process corollary;
2. formulation corollary;
3. redundancy corollary;
4. mood corollary;
5. prediction corollary and;
6. interest corollary (Kuhlthau, 1991).

The first of the six corollaries is the process corollary. Within the process corollary, information seeking is a process that involves construction wherein the user actively pursues new knowledge and understanding from information that is encountered (Kuhlthau, 1991). The process involves the “total person,” including the thoughts, feelings and actions within the dynamic of learning (Kuhlthau, 1991).

The second corollary is the formulation corollary, with formulation in this context being defined as “thinking, developing as understanding, extending and defining a topic from

the information encountered in a search” (Kuhlthau, 1991, p. 348). Here, formulation of a focus is critical within a search, as the general topic becomes much clearer, and a particular perspective is formed. Formulation is a central task in the search process, as identified previously (Kuhlthau, 1991).

The third corollary, the redundancy corollary, states that redundancy in information and information searches confirms or reinforces to the information seeker what they already know (Kuhlthau, 1991). Here, redundancy fits next to relevancy, as redundant information fits into what is already known by the information seeker (Kuhlthau, 1991). Typically, redundancy can increase as uncertainty is reduced, and it is then up to the research to decide what is needed, or what is to be discarded.

Fourth is the mood corollary, which Kuhlthau interprets its meaning as being a stance that the information seeker assumes which either opens or closes the range of possible information resources in a search. A user’s mood may change or shift during the information search process, as it is not stagnant.

What Kuhlthau identifies as the fifth corollary is the prediction corollary. The search process is a series of choices based on predictions of what will happen if a particular action is taken. Predictions, therefore, are based on expectations derived from past constructs and experiences (Kuhlthau, 1991). During the information search, users predict what will be useful from their prior experience, which brings to light the issue of judgement of relevance (Kuhlthau, 1991). This concept is likely to vary, as it is not exact, especially in accord with where the information search user is in their information search process.

The sixth and final corollary is the interest corollary. This corollary is closely related to the mood corollary. Kuhlthau identified that “interest increases as the exploratory inquiry leads to formulation in the information search process” (1991, p. 352). The information seeker’s interest has been reported to increase after the formulation of the focus in the

information search process. The uncertainty principle and the six corollaries it is supported by propose a “theoretical view of users in their search for information to gain deep understanding” (Kuhlthau, 1991, p. 352).

### 3.11 Emotions, Thoughts and Feelings and the ISP

Kuhlthau was the first in the library and information science field to describe emotions as a natural part of the research process. She noticed that feelings and emotions are just as important as thoughts and actions during each stage of the research process (Kracker, 2002). Along with the previously described uncertainty principle comes the concept of anxiety. According to Kuhlthau, there are several published studies that identify anxiety can accompany information seeking (Kuhlthau, 2003; Youngmann and Yom-Tov, 2018; Kuang and Gettings, 2021; Smith and Brinkman, 2021; and Khan, Naveed and Anwar, 2023). The emotion of anxiety in some instances may be an integral part of the information seeking process (Kuhlthau, 2003). This anxiety that is associated with uncertainty can in turn evolve when in the library. The term “library anxiety” was first used by Constance Mellon in 1986 and is defined as a measurable state of anxiety when in and using the library that decreases with experience (Kracker, 2002). The concept itself arose out of feelings of confusion and uncertainty (Mellon, 1986). This confusion turned into apprehension when entering the library or staying in the library long enough to successfully complete research, and Mellon dubbed this fear “library anxiety” (1986). Although Mellon’s research was independent from Kuhlthau’s investigations, it was found that 75-85% of students surveyed felt anxiety that was specifically related to library use, and had an emphasis on the feelings, thoughts and emotions of students using the library space and services (Kracker, 2002; Mellon, 1986). From this research, it was determined that the concept of library anxiety suggests that there is an association between feelings of discomfort and information use, particularly being present in novice information seekers (Kuhlthau, 2003). This anxiety is especially prevalent when the library and its resources are unfamiliar to the student. Mellon’s research indicated that once a student met with a librarian, the library induced anxiety reduced due to this interaction (1986).

There is published literature on the concept of library anxiety affecting university level students. A 2002 study by Jacqueline Kracker on library anxiety and students, which took place at a large state university, focused on a group of upper division undergraduates who were assigned a ten or more-page research paper as an assignment (Kracker, 2002). Kracker acknowledges that with uncertainty, a concept that Kuhlthau identifies with the search process, comes anxiety, and this can result in library anxiety (2002). The 2002 study grew from the anxiety that students often feel when they are faced with assignments and papers. Anxiety and stress can interfere with learning, and it has been identified that reducing this anxiety can foster more satisfaction with the research process which results in overall better assignments and information literacy skills (Kracker, 2002). A two-part investigation on the effect of a thirty-minute presentation on the ISP model on student's perceptions of research and research paper anxiety, hypothesized that this could reduce research anxiety, and improve understanding and student satisfaction levels when researching. The results of the study suggest that previous knowledge of the information search process and the feelings that are associated with research at a general level can help to reduce the anxiety of the students, as they are then aware of the emotions that they might feel. It was discovered that a thirty-minute presentation was enough in this instance to decrease the feelings of anxiety, though it was considered that breaking this presentation up into three smaller presentations would be more helpful (Kracker, 2002).

## 3.12 Mediators and the Search for Information

Kuhlthau's research highlights the role of mediators in the information search process, emphasizing how human intervention can assist information seekers in navigating and utilizing information effectively. The term "mediator" is used, in place of "intermediary," as "mediator" is used in the context of human intervention in assisting information seeking and learning from information access and use (Kuhlthau, 2003). There has been a change in the library world, and this comes from two major developments: technological innovations changing access and dissemination of documents; and librarians changing their modes of intervention, becoming producers of documents and mediators of information (Azevedo and Ogecime, 2020). The two types of mediators that Kuhlthau identifies are formal and informal (Kuhlthau, 2003). Formal mediators can be described as information professionals such as a librarian, a professor or a teacher, with informal mediators being people that information seekers talk to about their research, such as family, friends, and colleagues (Kuhlthau, 2003). The original study which led to the development of the ISP model shows that the role of librarians, in this case formal mediators, could be narrow, as the students attributed a limited, source locating oriented role to librarians (Kuhlthau, 2003). To quote directly from the study, "the librarian's role was described as directing them to sources that they had difficulty locating on their own" (Kuhlthau, 2003, p. 109). As for informal mediators featured in the original study, students seemed to understand and recognize their own needs regarding seeking advice. The students sought a good deal of process intervention from friends and other types of informal mediators.

Since Kuhlthau first published her research on the ISP, and especially over the last two decades, librarians have been redefining their role within the information age (2003; Lysiak, 2020; Thiruppathi, 2024; Ateka, Maseh and Bosire, 2023; Iman and Ilori, 2023; Yamagishi et al., 2024). Direct access to information and information systems has changed

the role of information professionals drastically. Students and other information seekers may have less direct contact with library staff, due to having more direct access to information, sometimes at the very time when intervention in the research process is needed most (Kuhlthau, 2003). It is important to note that for many information seekers, the search for information can be emotional and even uncomfortable. Librarians and other formal mediators need to be prepared for the challenges students are going through within the research process (Jefferson, Stierholz, Fontichiaro and Hoelter, 2020). The professional duties of a librarian emphasize the mediation of information substantially, especially in relation to the development of information literacy, make and have available diverse collections of resources to those that seek them (Azevedo and Ogecime, 2020).

A library in the twenty-first century calls for services and systems that enable information seekers to seek meaning within a vastly increasing amount of information and resources. Kuhlthau's Information Search Process as a framework provides specific areas where librarians and information professionals can each support users in their searches (Jefferson, Stierholz, Fontichiaro and Hoelter, 2020). Kuhlthau has stated that in this current information age, "people require services and systems that facilitate understanding, problem solving, and decision-making in the process of seeking meaning" (2003, p. 209). Accessing and retrieving information is a complex adventure. The ever-changing information environment is now "about more than simply locating a book on the library shelves; it is now about knowing how to access services remotely and evaluating those sources" (Brown and Simpson, 2012, p. 44) and information systems and institutions need to reflect this. Information environments and services have not remained static, they have progressed with rapid advancements and those advancements have great impact on information technology, and in turn, information seeking behavior (Kuhlthau et al., 2008).

### 3.13 Successful Use of the ISP Model

With the ISP model being one of the most widely used information behavior models, there has been a plethora of information seeking behavior studies conducted. Below are successful uses of the model within a similar context to this research. These studies were successful in using the ISP model to determine the information behavior of students.

Hyldegard's 2004 study highlights the complexities of group work in academic settings. Hyldegard investigated the usage of the ISP model in a group-based academic setting, with the aim to explore if group members informationally behave differently when not working individually. The results of this study stated that to some extent, the group members demonstrated similar cognitive experiences as an individual would have during their search for information. These cognitive experiences resulted from both the information seeking activities, and also the work task activities and the intragroup interactions. Hyldegard reported that these students did not experience an emotional turning point where relief and certainty were felt by the end of the research process. This is due to members of the group feeling frustrated and disappointed at the end of the assignment. These feelings stemmed from the varying motivations, ambitions, and foci of the group members. Hyldegard suggests a natural extension of the ISP model in relation to group assessments to address the impact of the social and contextual factors, such as the emotions based on the actions, or lack thereof, of members of the group. Hyldegard's study differs from my study on the information behavior of fashion students, in that it investigated students only working in conjunction with one another. The study is similar to mine due to its focus on contextual factors and offers an updated version of the ISP model.

Using the ISP model, Jefferson et al. (2020) demonstrated how librarians can target specific stages of business students' research to provide tailored assistance and improve the overall research experience. These librarians analyzed their students' research process to

identify if they are going through the six stages of the ISP to determine where the students are struggling the most. This allowed the librarians to examine how they can best improve the research process. As a result of this study, the librarians were able to establish zones of intervention, such as when to intervene and aid the students, that are relevant to their demographic of students.

A 2022 study by Aladem and Rehman examined how postgraduate information science students' feelings aligned with the six stages of the ISP model, confirming that the students' emotional journey largely mirrored Kuhlthau's findings, except at stage one. The researchers aimed to discover if these graduate students felt the same as the school-aged students whom the model was originally applied to. Twenty students from Kuwait University participated. The results of this study demonstrated that these students' feelings changed during the different stages of the ISP, with each of the students going through all six stages. The students deviated from stage one of the ISP, as these students showed a mix of emotions, feeling both uncertainty and excitement. Kuhlthau's findings report students only feeling uncertainty at this stage. The students went through the feelings associated with stages two and five as in-line with Kuhlthau's findings. By stage six, eighteen of the students felt relief and optimism by the end of their research project, with the final two feeling disappointment with their research experience. Overall, this study was compatible with the ISP model, with the findings confirming the students going through the emotions associated with all stages, bar stage one. This study differs from mine, as it confirms the students go through all stages of the ISP, bar one. My study contends that fashion students are skipping multiple stages and are not going through these stages linearly.

Thindwa, Chawinga, and Dube (2019) successfully applied the ISP model to investigate the information behavior of undergraduate students in the Security Studies Department at Mzuzu University, uncovering distinct information needs and behaviors. The

researchers of this project established that “undergraduate students have different information needs, and they display different information behaviors when searching for information to satisfy their needs” (p. 2). The security studies department at the Mzuzu University identified a gap in the literature when investigating the information behavior of their undergraduate students. For this specific study, the researchers used both qualitative and quantitative methods in their mixed methods research, distributing a questionnaire and conducting a focus group. The questionnaire itself had three main sections on the various information seeking activities that go on.

The results showed that the students that participated in the study needed information resources to accomplish various academic activities. The results of the questionnaire concluded that the students pursued courses at this university to gain more knowledge and skills to improve their work and were most likely going through the ISP model. Only 37.2% of students surveyed said that they used information that was gained from the university library. The students that did not use the library said it was because there was a limited selection of books that pertained to their studies. The focus groups revealed that the students’ choices as to where and what devices were used to access the internet were usually based on convenience, access to high speed of internet, or cost. The use of the ISP model in this study highlights the feelings that these users experienced when looking for information. The researchers asked students if they experienced feelings when researching that are identified in the ISP model. The results of the study confirm and fail to confirm some elements of the ISP model. In conclusion, this study has shown that the internet is the most popular sources of finding information resources for these students and four key feelings came with information and searching: anxiety, optimism, uncertainty and excitement which have all been previously identified in the ISP model. The study also showed that limited computers and free internet were also an issue for students. The model itself was created in the pre-internet era, and this

was acknowledged by the researchers. The ISP model is especially useful in offering insights into students and their usage of library services (Thindwa, Chawinga and Dube, 2019).

This study also indicated that students were using more online resources, since their universities library did not have the resources which they needed to complete their assignments. This study also concluded that the choices students make regarding devices used to research or location were based purely on convenience and cost of internet services (Thindwa, Chawinga and Dube, 2019). The model is useful in providing insights in certain contexts, and this applies to digital contexts as well (Kuhlthau et al., 2008). This study both conformed and negated the ISP model in this context. The study confirmed that these students rarely consult formal mediators such as librarians during their research process. The students also felt the associated feelings, such as anxiety, optimism and uncertainty, that are associated with the ISP model. This study deviated from the ISP model, as these students were not exclusive library users, with only 37.2% stating they used their library during their research process. These students also developed feelings that they would fail their assignments during their information search, which deviated from the feelings Kuhlthau identified. The researchers suspect that the students deviated from the model due to their reliance on and use of the internet, and the fact that the ISP was developed before the widespread use of online resources. These students also faced challenges during their research process, including lack of internet connection and university computers, confusion due to the amount of information encountered online, information overload, lack of information literacy skills and lack of internet search skills

The results of Thindwa, Chawinga and Dube's study may differ from Kuhlthau's original study due to multiple factors. The reliability of internet service, which greatly affected the students, may come from the wider issue of consistency in the students' home country. There are also limited online resources, due to the country finding their area of study

to be sensitive. The lack of library-offered print materials is another factor that drives the students towards the internet, even with the issues that come with internet use. The lack of library information resources may come from a lack of funding, which then stems to students only being able to use each physical resource for up to two hours at a time, so as many students as possible have a chance to use each resource.

The fashion students in this thesis' cohort are unlikely to face all the challenges of security systems students. Fashion students are facing information overload due to the amount of information they are encountering, but they are not facing issues such as subject sensitivity, unreliable internet connection and lack of physical resources.

In 2015, Cole et al. tested the ISP model's relevance in an American middle school, examining eighth-grade students' emotional, cognitive, and behavioral responses as they conducted research for a history project over a three-month period. The researchers conducted this study to test the usefulness of the ISP model in this educational setting (Cole et al., 2015). The main aim of this study is to look at the feelings, thoughts and actions of the students as they seek, find and use information for a history class, gathering data over a three-month history assignment. The research methods for this study included a survey, and a one-hour interview, which was separated into six ten-minute sessions. The researchers collected data from a total number of forty-four students, 41% of those students being girls, and 59% being boys. Although this is mentioned, the researchers did not categorize the results regarding sex.

Overall, this study that was conducted determined that generally, the study supported the ISP model and results of previous studies that involved the model, it is shown that the students front-loaded their knowledge construction activities in the first 4 weeks of the three-month assignment, instead of during stage four of the ISP model (formulation), which appears to contradict other studies using the ISP model, and the students did not appear to

have a stage five (collection) stage (Cole et al., 2015). The absence of stage five, the researchers contend, is due to this initial front loading, allowing students to skip this stage of the information search process. For their assessment, the students were tasked with creating a thesis statement early on in their research process, in consultation with their teachers. It is unlikely that the cohort of fashion students that are studied in this thesis will skip stage five due to this specific aspect. This is because the eighth-grade students are under direct supervision with their assessments and research, and university level fashion students are studying and researching more independently, and for both academic and inspiration purposes.

### 3.14 Post-Internet Use of the ISP Model

Although the ISP model was originally developed in a pre-internet era, several studies have shown its continued relevance and effectiveness, even as students increasingly rely on the internet for their research. Information seeking on the internet has quickly become routine in people's everyday life and has brought about more access to new and different formats of information (Mansourian and Ford, 2007). Students and other researchers have more ways in which to conduct research, and this may take away the barriers of time, location, and availability. Information has evolved, and with this evolution its behavior has evolved along with it. After the technological advancement of the last two to three decades, questions arose regarding the usefulness of the ISP model, even by Kuhlthau herself (Kuhlthau et al., 2008). Kuhlthau acknowledged these technological changes and decided to test the model with new advancements. Based on another study testing the ISP model in a digital-centered environment, new conclusions were reached regarding the model being used successfully when using digital technologies in the information search. With this new study, the results suggested that the internet is full of readily available information, and this has changed students' concept of the research process. Students expect to find information quickly and without much effort, often choosing research topics due to estimating the availability of information (Kuhlthau et al., 2008). The study suggested that the involvement of computers and other digital technologies did not seem to influence the information search process in this study, and there is ongoing research which suggests that students undergo the same affective and constructive stages of the information process in digital environments (Kuhlthau et al., 2008). Due to this study, it was determined that the ISP model remains helpful for explaining students' information behavior. Although the introduction of new technologies has changed different aspects of the information search process, it was revealed

that the students still went through at least some of the six stages when looking for information (Kuhlthau et al., 2008).

### 3.15 Conclusion

Information behavior models vary in their focus, and there is no one-size-fits-all approach when applying them to different demographics. While the Ellis, Leckie, and Berrypicking models could have been adapted for this project, they were not selected in favor of Carol Kuhlthau's Information Search Process (ISP) model. The primary reason for this choice is that the ISP model specifically targets students, which aligns directly with the demographic under study here. Furthermore, the ISP model has been widely used in LIS literature to explore the information behavior of various student cohorts.

# Chapter Four Methodology

## 4.0 Introduction

This Chapter will outline the methodology employed for this research. It will detail, analyze, and justify the mixed methods that this thesis uses. Methodology is concerned with how researchers “find out” (Case, 2009). Researchers in all fields need methods to control human error and reduce mistakes when researching (Case, 2009). Research methods are a way of gathering data and are intended to be a partial corrective for human shortcomings and are about how to best explore a phenomenon through the lens of a structured yet personal experience. (Case, 2009).

Research methods in the library and information science field vary widely, with certain techniques being particularly valuable for studying different demographics in information behavior research. Within the library and information science field, and more narrowly, information behavior research, certain research methods have been identified as valuable when studying demographics. Sonnenwald, Wildemuth and Harmon (2001) identified surveys, structured interviews, semi-structured interviews and direct and participant observation as popular research techniques in this field. In a 2018 study, Ameen and Ullah found that surveys and observation were two of the most popular research techniques in the LIS field. Their study highlighted the most appropriate LIS methodologies and data collection techniques currently used when researching (Ullah and Ameen, 2018). Research in the library and information science sector is diverse in nature, and therefore, diverse methodology is needed (Ofiazoglu, 2017).

Studying fashion and dress also integrates a variety of research methods. As the study of fashion and dress is interdisciplinary, incorporating research methods and theories that cross disciplinary boundaries (Kawamura, 2020). This is done so to synthesize the methods

from each discipline that this thesis is concerned with. Many studies concerning fashion use primarily qualitative methods, although the use of mixed methods methodology is becoming increasingly more popular within the study of fashion. The most common methods of data collection when researching fashion are as follows: interviews, questionnaires, surveys, diaries, observation, material research, historiography and ethnomethodology (Kawamura, 2020).

Seeing as the fields of library and information science and fashion use similar methods, I chose to use methods that overlap with each discipline. Different methods make different information available and that is why the use of mixed methods was chosen for this thesis, using the data collection methods of semi-structured interviews, questionnaires and rounds of observation. Due to this, both quantitative and qualitative data collection techniques have been used. The questionnaires featured both open-ended and closed-ended questions and have been collected and used in a quantitative context, while also informing qualitatively. Semi-structured interviews and rounds of observation have also been used for the study, in a qualitative setting. The use of semi-structured interviews encourages two-way communication between the researcher and the participant and provides more in-depth data. Questionnaires provide uniformity to a project, as all participants are seeing the same set of questions. Observation provides data that has been derived via an information environment, in this case, the library. Since the different methods provide different information, the methods inform one another. Although there is a standard base used for the interviews, no two interviews are the same, providing a range of data. Questionnaires provide the structure that is missing from the semi-structured interviews, with the standardization of questions. Observation gives insight from an environment that is document and resource heavy, that is available to students via their institution.

## 4.1 Research Timeline

In this section I will present a schedule of works regarding the research and writing of this thesis.

2020

- establishing a research schedule
- reviewing the literature of fashion studies and library and information science
- establishing a firm research focus

2021

- updating the literature review
- beginning the upgrade document
- designing the scoping study questionnaire
- drafting ethical approval forms
- obtaining ethical approval for scoping study

2022

- updating the literature review
- conducting the scoping study
- analyzing the results of the scoping study
- continuing to write the upgrade document
- planning the next round of questionnaires
- obtaining permission for rounds of observation
- drafting of ethical forms

2023

- transfer from MPhil to PhD candidate
- updating of the literature review
- obtaining ethical approval for questionnaires, interviews and rounds of observation

- scheduling of interviews and rounds of observation
- distribution of questionnaires
- interviews
- rounds of observation
- analyzation of the data derived from the questionnaires, interviews and observations
- beginning of the writing up process

2024

- writing up thesis
- updating the literature review
- hand in of thesis
- Viva examination

## 4.2 Mixed Methods Methodology

The use of mixed methods research has become increasingly popular in social science disciplines, including library and information science, as it provides a more comprehensive view of complex research topics like information behavior (Wildemuth, 2017). As I am investigating the information behavior of fashion students and identifying the adequacy of collections available to them and which resources they use the most, a mixed methods methodology allowed me to address each research question. Until 2007, there was no published LIS research using a mixed methods approach, as observed by Wildemuth (2017). Until this point, researchers in the field of LIS employed qualitative and quantitative approaches separately, with Wildemuth suggesting that the use of mixed methods would be a welcome addition to the field (2017). The interest in studying information behaviors via mixed methods is popular due to its ability to bring about new perspectives on information behavior and other information science studies (Wildemuth, 2017). Wildemuth advocated for the use of mixed methods in LIS, as the methodology provides a fuller picture of the research at hand, resulting in multiple standpoints and creating new dialogue in the field (2017). This argument stems from quantitative and qualitative methodologies having an established usage individually in the field. Most commonly in the information sciences when using mixed methods is to use just two or three sources of data (Case, 2009). I chose to employ the use of mixed methods for this project, as I agree with Wildemuth and her analysis of creating detailed and full-bodied research by using a variety of methods.

The research design for this thesis is based on a mixed methodology approach, using three sources of data. This approach is widely used in the social and health sciences (Sonnenwald, Wildemuth and Harmon 2001; Ameen and Ullah, 2018; Wildemuth, 2017). This method sees the researcher gather both quantitative (closed-ended) and qualitative (open-ended) data, integrating the two and drawing interpretations based on the combined

strengths of both data sets to answer the proposed research question(s) (Creswell, 2015).

Quantitative data measures variables to facilitate finding answers to specific research questions using statistical analysis, which enables the researcher to make an interpretation of the end results (Creswell, 2015). Quantitative data is deductive in nature and the analysis is concerned with reproducibility, with results being presented numerically or at the very least categorically (Pearson, 1997).

By contrast, qualitative research involves the researcher interacting with participants, using methods such as interviews, observation, and questionnaires. After data collection, the researcher conducts a thematic analysis and presents the findings in a literary format (Creswell, 2015; Pickard, 2013). Qualitative data is concerned with the specificity of the data collected, examining the meaning individuals or groups give to social problems (Creswell and Creswell, 2018; Pickard, 2013). This research involves merging questions and procedures, and analyzing the data to build themes, with the researcher making observations and interpretations of the meaning of the data. The final report of such data is flexible in its structure, and those who undertake qualitative methods support a way of looking at research inductively, by focusing on individual meaning and the complexity of a situation (Creswell and Creswell, 2018). There are advantages and disadvantages to both quantitative and qualitative research, though both approaches follow the general process flow of research in the social sciences.

Mixed methods research is the most suitable approach for this project, as it allows for a more nuanced understanding of the research questions than using either quantitative or qualitative methods alone. The integration of both methods maximizes the strengths and remedies the limitations of quantitative and qualitative research. Using mixed methods provides this project allows for the most comprehensive view of the data. The semi-structured interviews (qualitative) featured in the study aid in providing insight on feelings and thoughts

of the participants, which are harder to conclude via the questionnaires (quantitative) alone, as there is a lack of interaction between researcher and participant.

Each research method has both strengths and limitations, sometimes so that only using one method individually may bring an insufficient result to the research. It is then appropriate to use mixed methods when the use of qualitative or quantitative research singularly would prove to be inadequate (Creswell, 2015). Mixed methods are a research methodology which involves the collection and analysis of both quantitative and qualitative data, and integrating the two datasets by combining, merging, connecting or embedding them together. By combining qualitative and quantitative research techniques warrants researchers to obtain two different perspectives, procure a more comprehensive view and more data by using both methods and not simply one, as well as add instrument data and details and context of personal experiences (Creswell, 2015).

Mixed methods are used to capitalize on the strengths of both qualitative and quantitative research approaches. It provides a better understanding of the problem at hand, by giving a more detailed understanding than what would have been provided by using just one method alone, wielding new variables that may not have occurred to the researcher if just using one method (Creswell, 2015). Since the mixed methods technique is distinguished by featuring the two approaches in some proportion, the usage of qualitative and quantitative methods may vary. Either the quantitative or the qualitative methods can be more dominant, or the approaches may be balanced. In the case of this thesis, the use of qualitative research methods is more dominant. Integration of the two data sets can occur at various times in the research process (Wildemuth, 2017). Although the use of mixed methods provides a more detailed result, it is time-consuming. The researcher is essentially conducting two different studies consecutively and combining the two. There is potential for conflicts and differing results, since merging of the data is needed with this method (Wildemuth, 2017).

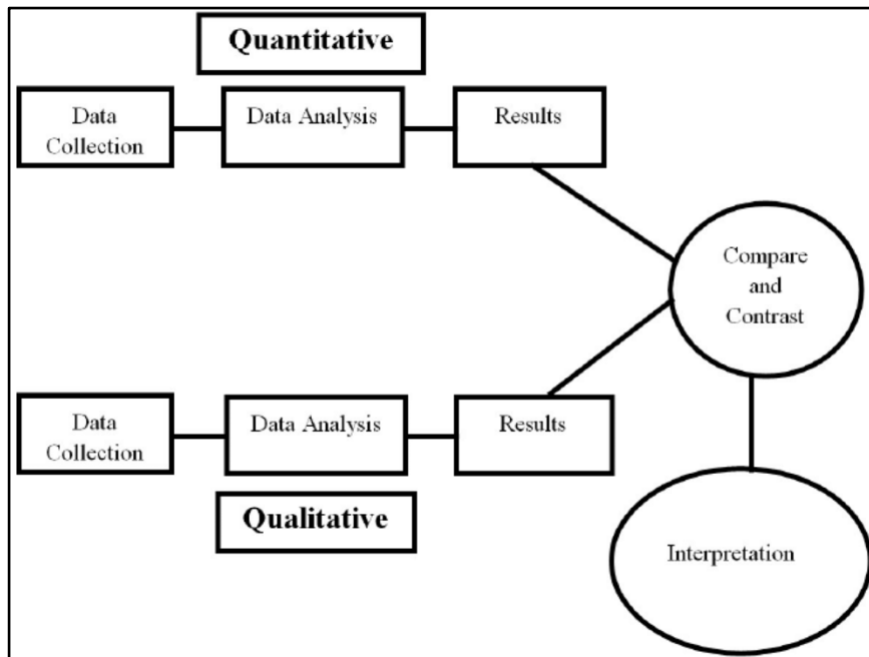


Figure Seven. The Mixed Method Research Design Approach Model, Opoku and Ahmed, 2013.

## 4.3 Convergent Design

There are three basic research designs within a mixed methods research methodology: a convergent design, an explanatory sequential design, and an exploratory sequential design (Creswell, 2015). One of these designs is found in every research study using mixed methods featured either explicitly or implicitly. A convergent design approach is the most suitable for this research, as it allows for the simultaneous collection and analysis of both quantitative and qualitative data, ultimately merging the findings to offer a richer and more comprehensive understanding of the research problem. I chose to use a convergent design approach for this research project, employing questionnaires, rounds of observation, and semi-structured interviews. A convergent design-based research project features the intent to collect both quantitative and qualitative data, analyze both sets, and then merge the results of each of the two sets with the intention of comparing the results (Creswell, 2015). The objective of the convergent design in mixed methods research is to merge the results of both datasets. The aim here is to provide “both a quantitative and qualitative picture of the problem, and because both forms of data provide different insight, their combination contributes to seeing the problem from multiple angles and multiple perspectives” (Creswell, 2015 p. 35-36). The combination of both datasets allows for a more complete understanding of the results (Creswell, 2015). As a result of using the convergent design, “the mixed methods researcher can advance multiple perspectives or even validate one database with the other” (Creswell, 2015, p. 36).

There are “procedures” that are followed when using the convergent design. These procedures are analyzing the quantitative and qualitative datasets separately, merging or bringing together the two datasets which can be done in multiple ways. This includes discussion format, arranging them side by side, followed by a discussion and comparison of the results. After the datasets have been merged, the results are then examined, and either

conformed or shown to differ, with an explanation as to why if the latter is the case (Creswell, 2015). The convergent design approach is useful for researchers who need to gather both sets of data in the field, as it fuses both data sets together (Creswell, 2015).

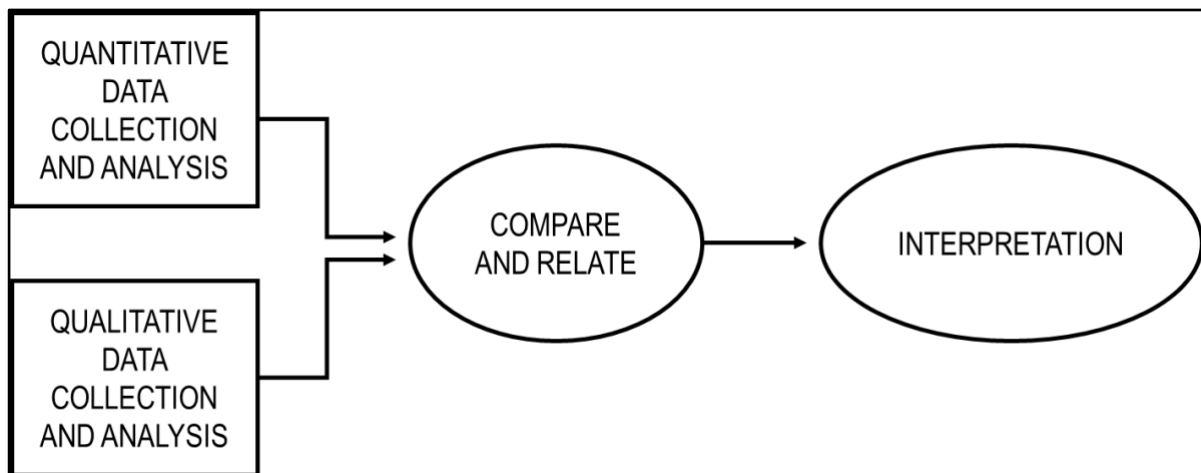


Figure Eight. The Model of Convergent Mixed Methods Study Approach, Demir and Pismek, 2018.

## 4.4 Methodological Paradigm: The Constructivist Theory

This section will outline the constructivist theory, the methodological framework underpinning this thesis, and explore how Kuhlthau applied this theory in developing the Information Search Process (ISP) model. I will also discuss Kuhlthau's use of the constructivist theory within her research into the development of the ISP model. Jean Piaget, a Swiss psychologist is the founder of constructivism, contending that knowledge cannot emerge from a single experience. Constructivism, therefore, is a philosophical perspective and an educational approach that asserts that knowledge is constructed by the learner, rather than just passively taking in information (Damyanov, 2023). The learner constructs new knowledge based on their conceptions, both old and new (Benson and Brack, 2010). With the constructivist theory, learning therefore is contextual, as it occurs in the situation within the context of an individual's life (Damyanov, 2023). The theory is used in research to gain understanding of how individuals create meaning in their lives. There are four main points of the constructivist theory, which are as follows:

1. Knowledge is constructed through the interaction of individuals and their environment
2. Learning is the process of actively constructing an individual's understanding of the world
3. Learners are motivated by their own interests, needs and curiosity
4. Learners use problem-solving and critical thinking as they construct new knowledge (Damyanov, 2023).

## 4.5 Constructivism and the ISP Model

The constructivist theory, as applied in this thesis, emphasizes the active, personal nature of learning and offers a valuable framework for understanding the user experience in the Information Search Process (ISP) model. According to Kuhlthau, there are two basic themes that run through this theory, with one being, “that we construct our own unique personal worlds, and the other is that construction involves that the total person incorporating thinking, feeling, and acting in a dynamic process of learning” (Kuhlthau, 2003, p. 14). She relies on the teachings and writings of three theorists, John Dewey, George Kelly and Jerome Bruner.

The writings of John Dewey (1944) were published in the mid-twentieth century. Dewey developed a philosophy of education during this time, which has been described as “uniquely American” (Kuhlthau, 2003, p. 14). Dewey’s constructivist theory of education is based on the writings of philosopher John Locke. Through his writings, Dewey recognized that the basis of education is to prepare pupils for change (Kuhlthau, 2003). Kuhlthau, when writing on Dewey’s perspective, states here that “the information age is characterized by the availability of vast amounts of information and rapid changes of events” (Kuhlthau, 2003, p. 15). Due to the changes that are ongoing in society, research and higher education, students need a higher level of thinking and problem solving. Dewey goes on to describe learning as an active, individual and continuous process (Kuhlthau, 2003).

Kuhlthau included, and focused on, George Kelly’s “Theory of Personality” (1980) in her model. The personal construct theory describes the experience of individuals when going through the process of constructing meaning from information. Kelly developed this theory in the 1980s, basing it in constructs. Constructs were defined by Kelly as “a way in which some things are construed as being alike and yet different from others” (Kelly, 1980, p. 105). With this notion,

“Kelly saw a person’s behavior as strongly shaped by his or her mental constructs of the world and how it operates: constructs are knowledge structures that ‘enable us to anticipate events and predict outcomes” (Kuhlthau 1988, p. 233).

Kelly’s construction of knowledge also hypothesized five phases in thinking, listed here:

1. encountering a new experience;
2. initial feelings of confusion that result;
3. the formation of a working hypothesis;
4. taking actions that result in either reconstruing [sic] a (faulty) hypothesis or validating a (true) one and;
5. assimilation of the findings with previous knowledge, resulting in changes of behavior (Floridi, 2010).

According to Kelly, the theory of personality began with the combination of two notions, the first that people might be better understood if they were viewed in a larger perspective of time, rather than in the quick flickers of passing moments, and the second being that each person contemplates the personal events in their life (Kelly, 1980). Arising out of Kelly’s theory, thinking is then, at least in part, based on prior convictions (1980).

The usage of Kelly’s theory feeds well into the study of information behavior, as it focuses on the individual. Within his theory, Kelly argues that an individual’s psychological processes are channelled via the way they anticipate events. Basing his thoughts on this idea, Kelly believed that anticipation and prediction are two of the main driving forces of our minds. In turn, people’s minds are full of constructs of predictions (1980).

Kuhlthau’s ISP model was based on the cognitive process of information seeking, based on the user’s perspective. Kuhlthau relies upon Kelly’s work of the personal construct theory, using it as the criteria for investigating the user’s perspective in the information search process, and for developing the ISP model (2003). Kelly’s theory depicted the process of

construction as occurring in phases that were experienced by individuals as they build their personal view of the world by assimilating new information (Kuhlthau, 1993).

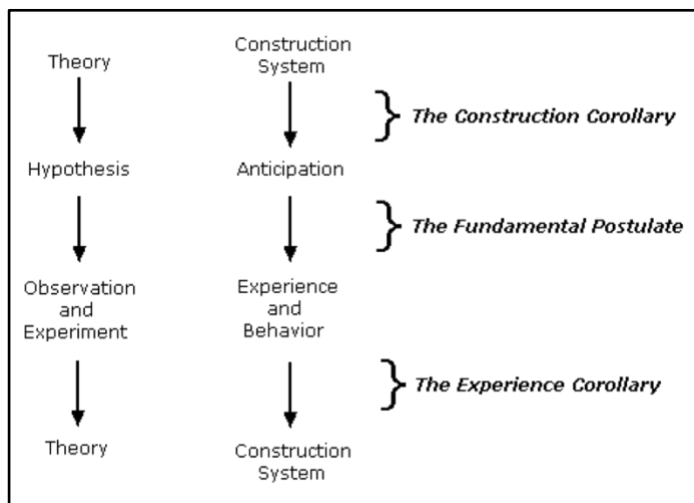


Figure Nine. A Visual representation of the Constructivist Theory. Published in Boeree, 2006.

Jerome Bruner's work is grounded in the early works of John Dewey. Bruner identified three main themes in his work: knowledge, knower and knowledge-getting process (Kuhlthau, 2003). Bruner's theories further verify and refine constructivist theory on the nature of human thinking and learning (Kuhlthau, 2003). Bruner, like Kelly and Dewey, confirms that we are actively involved in the learning processes, and making sense of the world around us, rather than being passive receivers of information. Bruner is adamant that learning is not linear or straightforward, but an affective experience of uncertainty and confusion (Kuhlthau, 2003).

With the use of constructivist theory, learning is not a simple or straightforward process of assimilating new information. As we as individuals construct our personal knowledge, this process of construction is driven by feelings, interacting with thoughts and actions (Kuhlthau, 2003). This theory is compatible when studying the user's experience, which the ISP is directly interested in. As I am basing my research on the ISP model and have

special interest in the user's perspective, I have also chosen to use the constructivist theory as the paradigm for this thesis.

## 4.6 Methods Used in Information Behavior Research

The methods I selected to use for this project were chosen as they make a wide range of data available. Both the qualitative and quantitative research methods chosen have been commonly used within research in the information sciences. Questionnaires and interviews were included in the methodology, as in the information sciences the use of these methods is very common (Case, 2009). Survey methods such as questionnaires and interviews are present in over one third of all information behavior research (Case, 2009). The method of observation was also included in the project, to bring more depth into the research. The methods chosen for this thesis are also similar to those used by Carol Kuhlthau during her original testing of the ISP model. The qualitative methods used by Kuhlthau in her original ISP investigation include the following: journals, search logs, long written statements, case study interviews, conceptual maps, and teacher's assessment of the students' assignments. Questionnaires in her study were used quantitatively (Kuhlthau, 2003). I used two of the same methods that Kuhlthau used, interviews and questionnaires. I did not use the other methods from the original study, because of its nature as a case study. Kuhlthau worked directly with the teacher of these students, where I did not have the opportunity to do a case study or have that level of interaction with one class and/or teacher. I chose to use the methods of questionnaires and interviews, as well as include rounds of observation, as these methods were obtainable for my project, that was under time constraint and conducted during the COVID-19 pandemic, which severely limited my research method options. Although I could not use each of Kuhlthau's original methods, I still chose to use the ISP model as the basis of this research because it is still the most appropriate choice of information behavior model. This is because of its focus on students, and the cognitive aspects of the search for

information. I believe I was still able to confirm the usefulness of an updated version of this model when investigating the information behavior of fashion students using these research methods. The updated model is proposed not because of the research methods used, but due to the use and availability of online resources and other contextual factors that affect the information search process of these students.

#### 4.6.1 Interviews

Interviews, a widely used research method in library and information science, offer valuable insights into participants' experiences, perspectives, and language, making them an ideal approach for gathering qualitative data in this project. An interview allows the researcher access to what is in, and what is on the interviewee's mind (Stenhouse, 1984). Interviews are generally used when seeking data that is qualitative in nature (Pickard, 2013). Conducting qualitative interviews requires intensive listening skills, detailed note taking, and careful and sufficient planning (Qu and Dumay, 2011). Interviews are useful for understanding the interviewee's experiences and perspectives, discovering a participants' language forms, such as how they speak about things and what words and expressions are used, for the gathering of information about subjects that cannot easily be observed, the validation and verification of information that is obtained from other sources, as well as obtaining efficient data collection (Conaway and Radford, 2016).

Types of interviews can vary in structure, with fully structured interviews following the same guidelines as a questionnaire, allowing for very little expansion on the responses of the participants (Pickard, 2013). This method asks the participants the same set of questions, with no room to move or add variation among the set. The method can be limiting, especially in qualitative methods of research (Wilson, and Maceviciute 2012). Unstructured interviews allow for more freedom and expansion, presenting the interviewer the opportunity to gain a

holistic view of the interviewee (Pickard, 2013). Unstructured interviews are concerned with open-ended questions, allowing the participants to answer in their own words without confinement. This method of interview offers the most flexibility, as the researcher will have some idea of what they want to discuss, but the interview is more like a conversation. But, since conversations can go in any direction, analyzing the data from this type of interview is difficult (Wilson and Maceviciute, 2012).

A semi-structured interview can also be used in place of a structured or unstructured interview. Semi-structured interviews marry the other two methods together, allowing them to balance one another. These interviews are popular, as they are flexible, accessible, and capable of disclosing important information (Qu and Dumay, 2011). This type of interview features open-ended questions, with the allowance for flexibility within the interview structure. Having a guideline, but less structure than a completely structured interview permits the interviewer to explore themes and responses that present themselves (Dearnley, 2005). Due to the flexibility of a semi-structured interview, that is the interview technique that was used in this research. Using the semi-structured interview process, the researcher can gain further insight into the opinions and feelings of the participants, as well as using the flexibility the technique allows digging deeper into themes and responses from the interviewees.

An interview with one student, and three fashion information professionals were conducted. The interviews were the last of the data collection techniques to be used in this project. The student participant studied fashion design at an England-based university, and was in their last year of undergraduate study, after completing a placement year within the fashion industry. This student responded to the call for student participants that was emailed to them via their program leader. This interview was semi-structured in nature, as I wanted the interview to allow for movement and discussion on topics that arose during the

conversation. This interview was held in-person, in London, before the student began the autumn term of their final year. This was due to both the student and I living in London at this time, and when given the choice the student stated they would prefer an in-person interview. Multiple students responded to my request for interview participants. After the initial email interactions, and setting up the time and dates for interviews, I again emailed these students for confirmation the day before the meeting. All but one of the students did not respond to the confirmation emails and subsequently did not attend the scheduled interview. I promoted the search for interview participants in multiple ways. I emailed lecturers, course leaders and other heads of fashion departments, asking if I could send them my request for participants and my information, for students to reach out to me if interested. I also had this call for participants promoted via university and course-level newsletters and emails. Posters and flyers were distributed and put up at multiple universities in and around London. I had a total of ten students reach out and agree to interviews, but only one student followed through.

Three librarians participated in semi-structured interviews. The three librarians interviewed were each employed at different institutions in and around London. The librarians interviewed were each asked to participate via email. These interviews were held in-person and via Microsoft Teams. The librarians were all given a choice as to what they would prefer, and two stated that they would prefer to participate in the interview via Microsoft Teams, as they participated in the interview during their lunch breaks. One librarian, who is employed by an arts-centered university in London, asked for the interview to be in-person, and gave me a tour of the library and introduced me to the library assistants that were employed at this university as well. All three of the librarian interviewees held a Master's degree in library science, and each had a particular interest in arts and fashion students. Each interview was one hour and fifteen minutes, and all featured a list of similar questions, but allowed for different themes and aspects that were brought up during the

interview to be discussed as well. Questions stemming from these discussions also appeared during the interviews and were explored.

As interviews allow for in-depth data to be contrived that is related to the interviewee's beliefs, thoughts and feelings towards a topic, I felt it important to have interviews with both students and librarians. An interview with a student was necessary for this thesis, as I wanted to understand this student's perception of the library resources and services available to them, and their opinion on them on a personal level. Interviews with librarians were also important to this research, because they are the ones who are curating library collections and tailoring services to their students. I felt these interviews were important to include in the attempt to understand the librarian's perception of the students they serve, and how and if they felt their students are using library resources and how they serve fashion students. These interviews allowed for data to be derived from in-depth, detailed, and personal conversations. There are limitations to the data that these interviews produced. The interviews only featured a small number of librarians, with each of these librarians working at institutions in England, and more specifically, in and around London. These librarians also all worked at fashion and arts-based universities.

#### 4.6.2 Questionnaires

Questionnaires are the most popular data collection technique within the social and information sciences (Pickard, 2013). Questionnaires are low cost to make and distribute, allow for the anonymity of those participating, and can reach a more geographically dispersed demographic of participants (Pickard, 2013). Questionnaires may feature closed-ended and/or open-ended questions. According to Pickard (2013), open-ended questions are still quantitative in nature. Pickard argues that open-ended questions are descriptive questions that require a more detailed response (Pickard, 2013). Though these questions are personal and

descriptive, Pickard denies that they are truly qualitative. I disagree with Pickard here and will be analyzing the data derived from the open-ended questions qualitatively, although they were gained quantitatively. The data derived from the closed-ended questions will be analyzed quantitatively.

The data derived from open-ended questions provides great insight and detail to the research. The answers to these questions can bring a new perspective that the researcher may not have thought of and encourage more detailed follow up from the closed-ended questions (Pickard, 2013). A questionnaire may feature just one form of question or provide a mixture. The form of the question determines the method of response (Conway, Radford and Powell, 2016).

Closed-ended questions that feature on questionnaires fall into one of three categories, those being the dichotomous question, the multiple dichotomous question and the rank order questions (Pickard, 2013). The dichotomous response allows for the respondent to choose from two responses, sometimes with a neutral third option, or a question with fixed alternatives (Pickard, 2013). The multiple dichotomous question provides the participant with a list of possible responses, allowing for the respondent to choose any number of choices offered (Pickard, 2013). A rank order question allows for the participant to rank each option that applies (Pickard, 2013). The questionnaires that were distributed for this research project used a mixture of dichotomous and multiple dichotomous questions.

There are a number of options to distribute a questionnaire, with some researchers relying on paper-based, printed questionnaires, while others use an electronic format. Electronic questionnaires have been distributed for this research project. An electronic questionnaire is formatted the same as a paper-based option, but distributed online (Pickard, 2013). These types of questionnaires are convenient, as once online questionnaires are live, they run themselves without much further input from the researcher (Dewaele, 2018). Using

the electronic format allows for the researcher to reach participants that are not in the immediate vicinity, furthermore, giving the research project a wider scope of participants (Dewaele, 2018). Questionnaires distributed online tend to encourage more frank answers due to the anonymity provided (Conway, Radford and Powell, 2016). Participants have access to the questionnaires in real time, and there is less time pressure (Asiedu, 2019). This format of dissemination is more convenient for the participants, who can take the questionnaire in their own time and space (Asiedu, 2019). Though it is a popular data collection method, there are some disadvantages when using this technique. Unless the researcher is distributing them directly, there is the chance of a low response rate due to the lack of interaction (Pickard, 2013). With the low interaction levels, confusion of the participants cannot be easily resolved (Pickard, 2013).

Online-based questionnaires were distributed to both students and fashion information professionals for this project. These questionnaires were distributed in two phases, the first of which was a closed-ended question exclusive questionnaire that was dispersed as a scoping study to test the validity of the research project as a whole. This questionnaire was distributed to both fashion students and fashion librarians. Twelve fashion students and six fashion librarians responded to these questionnaires. The questionnaire distributed to the students featured almost exclusively questions relating to the ISP model and their library usage. The questionnaire distributed to librarians was again focused on the ISP model, as well as the types (such as online or physical) of resources students were using and looking for the most.

One year after the scoping study was completed, another questionnaire was distributed to students and professionals. Twelve information professionals that work with fashion students took the questionnaire, and ten fashion students also responded to a questionnaire. Questionnaires for both cohorts featured open-ended and closed-ended questions. Information professionals were recruited in multiple different ways to participate

in taking the questionnaires. Librarians were emailed via their university email address by the researcher, asking them to participate in the questionnaire. I also posted links to the questionnaire via X (formerly known as Twitter) and LinkedIn. Students were recruited via emails to course and program leaders, asking to share the link with their students. Links to the students' questionnaire were also posted to X (formerly known as Twitter) and LinkedIn. Two of the universities contacted put the link to the questionnaire in their online newsletter, along with the researcher's contact information and email address. The researcher also created posters featuring a QR Code that would go directly to the questionnaire around the libraries and student bulletin boards around multiple universities in and around London. Librarians from eight different universities in England, Northern Ireland and Scotland agreed to participate by taking and distributing the questionnaires. Ten different universities from England and Scotland agreed to distribute the questionnaire to their students. Since the questionnaires were completed anonymously, it is unknown what institutions the librarians and students are affiliated with. It is also unknown if the students and librarians took part in both questionnaires, or just one, as the questionnaires were distributed to many of the same institutions each time. The questionnaires used in this research are presented in the appendices, please see Appendix F, G, H and I. There are limitations and biases to the questionnaires distributed for this research. The student answers to open-ended questions are not as forthcoming in comparison to the librarians.' Most librarians and programs and schools that responded to my call for participants were from universities based in England, with very few respondents from other parts of the UK. The year of study and the course or degree of study of the students is also unknown, which limits this data.

### 4.6.3 Observation

According to Pickard, there are very few research situations where observation would not be beneficial (2013). Observation can be one of the most “universal and comprehensive techniques for collecting information” (Dzwigol and Barosz, 2020, p. 142). The method can be used in both qualitative and quantitative contexts, though it is more likely to be used in a qualitative study and has been used for this project in this framework. Observations are carried out within a research context to provide evidence of the here and now, to discover how people are behaving and interacting in particular environments or situations (Pickard, 2013). For this research project, observation is being used in conjunction with other mixed method data collection methods. Observation has become an invaluable process within qualitative research practices, especially when used along with other methods (Baker, 2006; Dzwigol and Barosz, 2020). There are four levels of involvement that a researcher can adopt when using observation as a data collection technique. These roles are listed as nonparticipant, complete observer, observer-as-participant, and moderate or peripheral membership (Baker, 2006). In this role of the complete observer, the researcher is present at the scene of observation but does not participate or interact with those that are being studied to any great extent (Baker, 2006). The researcher’s only role within this technique is to listen and observe (Baker, 2006). This is advantageous as it allows the researcher to remain detached from the group they are studying. It has been noted that until the mid 2000s, very few library and information science studies included observation. However, the method has since gained favor as LIS researchers began to seek understanding of the role of information in the everyday lives of people (Baker, 2006). For this project, I took the position of complete observer.

The observation for this project looked for specific elements involving fashion students in an information setting, in this instance, the university library and library-run workshops and tutorials. The students were listed as letters of the alphabet, for example

“student A,” and nothing identifiable of them was recorded. When observing, the observer looked to see what types of devices the students were using, if they were personal devices or school-owned ones, what types of resources they are looking at/using, and if these resources are online or physical. The rounds of observation happened at two different universities, in and just outside London. These universities each had a traditional library collection, as well as materials libraries. One of the materials libraries was established between my rounds of observation, and their collection was not available for student use. The materials library that was observed is located within the library's regular collection. I was able to observe both collections on the same day but spent the same designated amount of time within each. Within this thesis, these libraries will be referred to as “Library A,” “Library B” and “Materials Library.” Four rounds of observation took place, two at each institution. I chose to conduct the rounds of observation at these universities due to these institutions being arts and creative-based universities, where either a high percentage or all their students were undertaking fashion-based degree courses. I also established relationships with the librarians at these universities through the interview process and was given permission to observe their students and facility. Observations at each institution’s library took place, as well as observation during library run workshops and tutorials with students. Library A was located on a campus that only supported fashion students. Due to this, the library only featured resources related to fashion. Since this collection was curated specially, I was able to conduct observations throughout each floor and section of this library with the reassurance that each student was a part of my demographic for this study. Library B and the Materials Library were open to all students at this university, which was arts-based, but did not only support fashion-related degrees. I worked closely with Librarian B and other members of staff before and during my rounds of observation to make sure the sample was not contaminated. For these rounds of observation, I only observed the fashion resources, which were conveniently

located on the same floor. I was able to identify fashion students for Library B and the Materials Library via the library staff. When conducting these rounds of observation, I took meticulous notes to ensure that I was not observing the same student(s) more than once. I am also very retentive, especially with respect to people, faces and clothing, which has served me in other capacities, and I was able to recollect if I had previously observed a student that day. The rounds of observation lasted one hour at a time, with three rounds occurring per visit, totalling three hours per visit. Each student was observed for two to three minutes at a time, being observed close enough to identify the resources they were engaging with, but with enough distance to not cause the student's discomfort. Observation occurred on different dates in the spring term of 2023, between the months of March and May. The dates were chosen at random depending on both my schedule and that of the librarian, except for the dates where the researcher was observing library run workshops and tutorials, which were pre-planned with the librarians. Each library was observed between the hours of 10:00 am and 4:00 pm, with breaks and informal talks with the librarians in between. I felt it was important to include rounds of observation for this thesis because I wanted to see fashion students interact with resources and library services, naturally, to compare this to their self-identified answers to the questionnaires. For notes, spreadsheets and specific dates and times of the rounds of observation, please see Appendix J, K, L, M, and N.

## 4.7 Literature Review

A thorough and complete review of the literature is essential when conducting and presenting a body of research. Literature reviews are present to identify what is already known, and to establish where the gaps, to create a framework that clarifies research aims, provides depth and breadth of a subject knowledge, form a theoretical framework and to contribute to research design (Pickard, 2013). Pickard contends that the literature review process requires four skills:

1. Information seeking and retrieval: the ability to search for appropriate literature and to read that literature efficiently.
2. Evaluation: the ability to judge a resource to be credible.
3. Critical analysis: the ability to examine and analyze the content of the literature.
4. Research synthesis: the ability to synthesize the concepts and evidence into a structured piece of work that provides context and background to the topic area (p. 27).

I began with a loose framework, knowing that a more structured framework would fall into place. I began my review of the literature using the online library at City, University of London and through my own collection of relevant books and resources that I previously had. I used the online library, as the UK was in lockdown at the time due to the COVID-19 pandemic. Through the online library I was able to consult E-books, journal articles, magazines and databases using key word searches. At this time, I was specifically searching for literature relating to information behavior, document theory and fashion studies. Once I had established my research focus, I continued with these searches, eventually formulating boundaries and establishing parameters as to what was needed and what literature was relevant. I was also considerate of the spelling of keywords and authors and did searches using both American and British spelling. I also searched for literature using synonyms of

key words, and re-wording short phrases. Due to this, each key word and phrase was searched multiple times to find the most relevant literature possible. These searches eventually became more complex with the evolution of my research and knowledge of my topic. Since a great deal of my PhD research was during the COVID-19 pandemic, a majority of my literature review was conducted online. I updated my literature review often, throughout my research period and during my writing up year. This was to ensure that the most up-to-date research and literature was presented. Each resource was analyzed, and notes were taken and stored in a word document, along with the citation of the resource used. I also kept a separate document that recorded the bibliographic sources.

## 4.8 Ethics

In any research, ethics is at the forefront of the research process. Researchers have the duty to protect their participants and conduct their studies ethically and with integrity.

Research ethics is concerned with the norms, values and practices regarding the collection, analysis and dissemination of the findings of research (Bos, 2020). Researchers are therefore concerned with asking participants' relevant questions, by using validated research methods, obtaining reliable data and using that data to draw logical conclusions (Bos, 2020).

Each of the data collection techniques went through the ethical approval process at City, University of London. These ethical approval applications were approved each time, with no amendments. Regarding this research, the participants, both students and librarians, were informed of their rights as participants (please see appendix A, B and C). This was made available to them via a participation information document. Each participant for the questionnaires was asked to consent with a consent form during the scoping study, and by consenting by ticking a consent box before entering the questionnaire during the distribution of the second questionnaires. Confidentiality and informed consent are the two main ethical concerns of questionnaires. Before consenting, each participant had the opportunity to read an information sheet, and was told of the confidentiality of their answers, and their anonymity. My email address and the email addresses of my supervisors were on these forms, if the participant had any issues or concerns. No emails from participants were received by me or my supervisors.

Each interview participant was also asked to sign a consent form, and they were also given an information document. Each interview was recorded with the permission of each participant. Two participants asked to not be recorded, and I respected this request and took handwritten notes. I clarified each answer multiple times, as I was unable to go back and listen and/or read the transcription. The ethical concerns of confidentiality, anonymity,

voluntary participation and consent are present when using the interview method. To combat these concerns, I address each in the information sheet given to each participant. I also took time before the interview began to discuss the information sheet, reiterate the points on the sheet. I also asked if they had any questions or concerns not on the information sheet, and we discussed anything that was brought up at length before beginning the interview.

The participants of the rounds of observation were informed of my presence in multiple ways. For those that were observed during a library sponsored workshop or tutorial, the students were made aware by an announcement by the course leader and/or librarian, and a printed sign. These students were also told to alert their librarian/course leader if they were uncomfortable with my observation, and if need be, this would be addressed by me and the staff. Those that were observed within the library were informed of my presence with a sign at the library entrance and signs posted throughout various areas of the library. The students were again informed to seek out librarians and other library staff if my presence was a concern for them. If a student were to approach the staff, I would have stopped the observation and returned another day. During the rounds of observation, no students approached a member of staff with any concerns. I worked closely with the librarians and library staff at the institutions where rounds of observation took place. The comfortability of the students was the main concern of both me and the library staff. I had some specific criteria of what I was looking for when observing (please see Appendix J, K, L, M and N). I was not listening to the personal conversations of students, nor did I identify any personal or physical details or attributes of the students. The librarians were aware of the nature of these criteria before each of my visits and were told to bring to light any concerns they had over this. Each observation criteria were confirmed by the librarians, and were furthermore confirmed with the City, University of London's ethical committee, and with my thesis supervisors. No photographs or identifiable data were collected for these observations,

addressing the ethical concerns of observation. My email address was also posted on the signs letting students know I was conducting observations, if they had questions or concerns. No emails were received from observation participants. I also saw no signs that the students felt they were being observed, nor do I believe they acted differently due to my presence in the library.

This study was of “low ethical risk” by City, University of London’s ethical committee, and followed the universities research ethics framework. Each ethical approval application was a straightforward process. This is due to the study not investigating people under eighteen, those considered to be “vulnerable” or those with physical or mental disabilities, the aspects of gender, and the aspects of age and sex were not considered in this study. Medical or personal information was not asked of the participants. Each of the participants remained anonymous, and no identifying factors of participants were published within the thesis.

The data collected on this thesis stored on a password protected laptop and files and was not shared with anyone. As the researcher, I was the only person with access to these files. These files will stay in my possession for the set amount of time required by City, University of London. Once this time has commenced, the files containing the data will be destroyed.

## 4.9 Triangulation

Triangulation, a research method that involves using multiple approaches to enhance the richness and validity of data, has been employed in this study to address the limitations of individual data collection methods. Triangulation refers to the use of more than one approach when conducting research to obtain data that is richer and fuller, to help confirm the results of the research (Wilson, 2014). The use of triangulation was initially used to increase the validity of research results. This method can be used in qualitative, quantitative and mixed methods research, and has become popular in social science research. In this research, triangulation is being employed to counterbalance the drawbacks that are associated with each of the data collection methods.

## 4.10 Sampling

Sampling, or the selection of the subset of the demographic of interest in a study, is a crucial step in research (Connaway, 2016; Turner, 2020). There are multiple different methods of sampling used in research. These sampling methods include non-probability sampling; convenience sampling; purposive sampling; cluster sampling; and systematic sampling (Turner, 2020). For the purposes of this research, I chose to use purposive sampling. This is because purposive sampling is used when researchers are interested in a certain type of subject, in this instance, fashion students. This type of sampling method is not likely to be representative of the entire population but provides insight and information on the topic and/or demographic from a specific research question or project (Turner, 2020). There are two approaches to purposive sampling: a priori sampling, which involves establishing a framework before the sampling begins, and snowball sampling, which is an approach to “growing” a sample as the research progresses (Pickard, 2013, p. 64). In this research, I use a priori sampling of purposive sampling. This is because of the structure it provides, which is best suited for novice researchers.

## 4.11 Data Analyzation

### 4.11.1 Qualitative Data Analyzation

For this project, the researcher has undertaken thematic analysis for the qualitative portion of the data. Thematic analysis, also abbreviated to “TA,” is “a method for identifying, analyzing, and interpreting patterns of meaning (‘themes’) within qualitative data” (Clarke and Braun, 2017, p. 297). Simply put, thematic analysis is used to study patterns of data and uncover the underlying meaning. The term “thematic analysis” was first used in the 1970s and has been further defined in 2006 and more recently, 2018 as being a flexible and accessible method of data analyzation (Braun and Clarke, 2006; Cormack, et. al. 2018). Thematic analysis is making meaning from the data due to, but not to the extent of using grounded theory or interpretative phenomenological analysis (Cormack, et. al. 2018). Making meaning in qualitative data is a process or relationship that moves between questions, data and meaning (Litchman, 2011). This process is described as first, the data, which then moves to the development of themes and ultimately to the meaning of the data (Litchman, 2011). When analyzing the data at hand, then comes the meaning behind the data (Litchman, 2011). This analysis technique offers a method that does not link itself to theoretical commitments and provides easy-to-use and highly accessible systematic procedures to generate codes and in turn themes from qualitative data (Clarke and Braun, 2017). Codes are the smallest units of analysis that capture interesting aspects featured in the data, that could potentially be relevant to the research at hand. Codes are the building blocks to themes, which are larger patterns of meaning (Clarke and Braun, 2017; Cormack, et. al. 2018). Themes differ from codes, as they are focused on grouping repeating elements of the data. It is about looking for patterns rather than isolating individual categories (Cormack, et. al. 2018). Themes are the overarching categories that are identifiable in the data and come into play via the analysis of the codes (Cormack, et. al. 2018). A theme is more than a patterned meaning across a dataset, it also

tells the researcher something important about the data that is relevant to the research questions presented (Braun, Clarke, and Weate, 2016). Sub-themes are lower-level themes that cluster themselves under a main theme (Cormack, et al. 2018). These themes furthermore become concepts (Litchman, 2011). Thematic analysis is designed to be a recursive process, not a linear one, as steps may force the researcher to circle back to earlier phases due to new data or newly emerged themes (Kiger and Varpio, 2020).

Braun and Clarke (2006; 2017; see also Cormack et al. 2018) have defined six phases of the thematic analysis approach. Phase one involves familiarizing yourself with the data that has been collected. The data will need to be read through thoroughly, interviews transcribed, and initial thoughts of results need to be recorded. The making of lists has been recommended by Braun and Clarke (in Cormack, et. al. 2018). Phase two follows, after having immersed oneself in the data, initial codes then need to be generated, building upon the lists that initially started in phase one. The task of the researcher here is to systematically go through the entire data set and codes, looking for any perceived patterns and themes (Braun and Clarke, 2017; Cormack, et. al. 2018). After completing stage two, the data codes that were generated need to be further examined. How and whether these codes can be grouped thematically can then be explored, resulting in stage three. This stage can further be represented with a thematic map (Braun and Clarke, 2017, Cormack, et. al. 2018). Phase four comes with the reviewing of the themes and sub-themes identified thus far, with a view to refining them. Some of these themes may be discarded, merged, or moved from theme to sub-theme or vice versa at this stage (Braun and Clarke, 2017, Cormack, et. al. 2018). By phase five, and once a thematic map has been produced, the themes and sub-themes need to be refined even further, with the labelling or naming the said themes. At this point in the thematic analysis, an in-depth written analysis of each theme should take place, including how each individual theme fits into a broader context (Braun and Clarke, 2017; Cormack, et.

al. 2018). Phase six, the final phase within thematic analysis is the write up, including relevant supporting evidence in the form of extracts directly from the data.

There are three identified approaches when conducting thematic analysis. The first of the three is inductive thematic analysis, which explores patterns and themes that emerge directly from the data (Afzal et al., 2023). This approach is particularly useful when the objective of the research is to generate new insights and understandings from the data itself without imposing pre-existing theoretical frameworks (Afzal et al., 2023). To use inductive thematic analysis, the researcher must be open and flexible in their mind-set, by allowing the themes to emerge organically from the data. Secondly, there is deductive thematic analysis, also known as top-down thematic analysis, which involves applying pre-existing theoretical frameworks in order to guide the analysis (Afzal et al., 2023). This is a useful approach when the research aims to explore specific concepts and examine how they manifest in the data (Afzal et al., 2023). The third and final approach to thematic analysis is the reflective approach. The reflective approach focuses on the researcher's interpretations and engagement with the data collected. This approach considers the researcher's subjectivity and personal perspectives, experiences and their assumptions on the analysis of the data (Afzal et al., 2023). This approach is particularly helpful when exploring complicated or sensitive research topics (Afzal et al., 2023). For this research, inductive thematic analysis will be used, as this approach focuses on the researcher's interpretations of the data.

Thematic analysis can be a standalone analytical method and be a foundation for other qualitative research methods (Braun and Clarke, 2006). As with any data analyzation technique, there are risks when using TA that may affect the researcher. It is important to note here that some researchers may fall victim to the risk of not providing sufficient descriptions of their theories when undergoing the analysis, such as not explicitly labelling themes and codes (Kiger and Varpio, 2020). Due to the flexible nature of the technique, it may be

challenging for some researchers to determine which aspects of the data to focus on and which, if any, to abandon (Kiger and Varpio, 2020). Having acknowledged these disadvantages, Braun and Clarke point out that the use of TA is ideal for early career or novice researchers (Braun and Clarke, 2006). Although thematic analysis has been recommended to researchers new to the process, TA is no less rigorous than other methods of analysis.

TA, if conducted meticulously, can produce trustworthy results (Nowell, et. al. 2017). Thematic analysis is flexible and can be applied to a wide range of frameworks, research questions, and sample sizes, as this concept is easily grasped by researchers and relatively quick to learn (Kiger and Varpio, 2020; Nowell, et. al. 2017). Thematic analysis forces the researcher to have intimate knowledge of the data and to take a very structured approach to its handling in order to produce a clear and organized final assessment (Nowell, et. al. 2017). There are no strict guidelines for sample sizes or strategy with this concept, allowing room for flexibility (Braun, Clarke, and Weate, 2016). TA gives researchers the opportunity to find connections in their research and ask queries to find new meaning in the data derived (Anon., 2023).

I used thematic analysis and inductive coding when reviewing the data derived from the interviews and the comments from the open-ended questionnaire responses. Although there is software available to identify themes, I did this process manually. This process included multiple read-throughs of the data. Each interview transcript was printed out, bar the interview that was not recorded. For the first two reads of the transcripts, I did not take any notes or highlight any terms. I wanted to gain a general understanding of the data, to establish a foundation for the next phases of read-throughs. During the second round of read-through of the transcripts, I began to take notes of phrases that appeared often, and words or ideas that I thought might become themes later. I took these notes when reading the transcripts twice.

After reading the transcripts and taking notes, for the following two read-throughs I began to highlight key terms, phrases and anything that came up multiple times throughout each transcript. For the interview that was not recorded, I did this same process for the notes that were taken. When highlighting, each color highlighter marker was assigned to a word or phrase that I identified. I did this to keep track of the key words identified from the data. This was uniform throughout each of the transcripts.

The process of reviewing the open-ended questionnaire responses was the same as the analysis of the interview data. I printed out the open-ended responses, and for the first round of read-throughs, I read over the data twice without taking any notes or highlighting any comments or phrases. I then read through the answers taking notes, and I did this twice. I then read through the data again, highlighting key words and phrases, and this was done twice. Stemming from this process, I was able to conduct inductive coding, as the codes were created from the data, and not before data collection. The themes that emerged from this process are detailed in the subsequent finding's discussions, Chapters Four and Five.

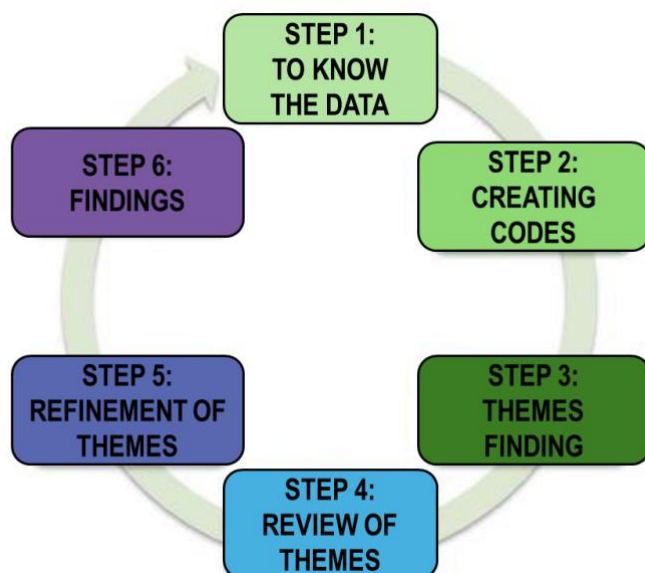


Figure Ten. The Six Steps of Thematic Analyzation, concept by Braun and Clarke, 2006, model published by Choong, 2020.

#### 4.11.2 Quantitative Data Analyzation

Quantitative data is deductive in nature. The questionnaires used in this project were created via Qualtrics, an online platform that is used by over 18,000 brands, universities and professionals (Qualtrics, 2024). The closed-ended questions featured in the two questionnaires were analyzed via the Qualtrics statistical programs and reports. Quantitative data was used in a limited capacity for this project. Quantitative data collection was used at a limited scale, in order to obtain early information that was then used in further stages, such as the open-ended questions featured informed the questions that were used as a guide during the interview stage. Although the open-ended questions were collected via quantitative data methods, they will be analyzed via thematic analysis, to establish the patterns that emerge. The data from these questionnaires was collected quantitatively but analyzed qualitatively. The data from the closed ended questions will be expressed in numerical percentages, the data derived from them will be used to establish patterns and themes, which will be expressed via descriptive statistics.

## 4.12 Demographics of the Participants

The demographic for this research project focuses on fashion students in higher education in the United Kingdom, studying at both the undergraduate and Master's levels. Since there are many different types of fashion educational courses and degrees, any type of fashion student was a welcome participant. I made this choice as this is the first study on the information behavior of fashion students, and I wanted to keep the demographic of these students broad and include not just one-degree fashion students. Fashion students require a wide range of resources, and each category of fashion has distinct information resource needs. There is great diversity in focus within the fashion industry and in fashion education and students. With this also comes great diversity in the documents and resources related to fashion and that are available to fashion students and librarians. Different types of fashion students may not be looking for or using the same resources, but they are fashion resources all the same. A student focusing on the fashion business may never look for a physical or digital fashion garment, or a fashion photography student may never search for a statistic-based trend report. As participation in this study was anonymous, it is unclear what type of fashion student the participants were.

Gender, age and race were not considered for this particular project, as these attributes did not factor into the research questions. Although these factors are important regarding class, gender or background, it was a conscious choice made by the researcher to omit these factors from this study, proceeding with a completely anonymous study. There are two main reasons for this choice: focusing on a particular aspect such as these would widen the scope of the study which is already quite broad. The second reason was that I felt keeping the participants anonymous would make the students and librarians more comfortable and forthcoming in their answers. I also did not explicitly explore the impact of English as a first language versus a second language on the information behavior of these students, although

this did emerge in an interview with Librarian B. I also did not explore how different kinds of secondary, and in some instances undergraduate education impacted these students' library behaviors. These limitations would make a fruitful study in the future. The librarians involved in this research especially were keen to participate on an anonymous basis, and I decided to keep the students anonymous as well for this thesis to remain consistent. The decision to keep these factors out of the project can be seen as a potential limitation, which is further discussed in subsequent chapters. Students were welcome to participate no matter their year of study, if they were enrolled at a U.K. based university. The kinds of institutions surveyed were as follows: arts universities, post-92s, public, and specialist creative. The type of university was not a main factor for the researcher when contacting universities for research participants. The researcher contacted universities in the U.K. that featured fashion-based programs, and the programs that responded to the call for participants were subsequently used.

Librarians and other fashion information professionals working with fashion resource collections and fashion students also participated in this research. The only requirement for those who participated in this regard was for the professionals to work with and provide information and resource assistance to fashion students studying at university. Age, race, institution, gender nor educational background were considered as a requirement for participation. Information professionals from England, Scotland, and Northern Ireland responded and participated in this project, by either taking a questionnaire or sitting for an interview.

Although I would have liked to include fashion lecturers and other academic and technical staff in this project, it was not within the scope of this research to do so. As this research is from an LIS viewpoint, I felt it was more important to involve fashion information professionals specifically, in conjunction with the students. I do believe that there is now a

foundation for future investigations of this kind to involve both fashion educators, students and librarians.

Although this study focuses on the information behavior of students, the researcher found that reaching students came with difficulties. The questionnaire portion of the research garnered higher response rates regarding the students than the interview stage. The interview portion had a lower response rate than projected, as only one student responded to the request for interview participants. The one student that did participate in an interview provided great insight into the information behavior of fashion students and answered the research questions presented. There was a higher response rate for the questionnaires in contrast to the interviews, and the research data derived from this portion of the study brought enough insight to help make up for the lack of interview participants. The observation aspect of the methodology also provided qualitative data and helped to fill in the gaps due to the lack of participants for interviews, and what some would consider to be a low number of questionnaire respondents. It is noted here that the researcher does understand that students are busy and cannot always commit to being research participants. Observation as a data collection technique was added to the research methodology plan after the completion of the scoping study in 2020. The addition of this method added to the qualitative data that is used in this project.

#### 4.12.1 Benefits of a Small Sample Size

The sample size of this research consists of participants and observations from fashion librarians and fashion students in the UK. When research is conducted, subjects are not sampled from the entire population, but instead from a “criterion-determined subpopulation” (Anderson and Vingrys, 2001, p. 1411). This study uses a pre-determined demographic of undergraduate and Master’s level postgraduate fashion students studying at UK-based

universities and librarians working with fashion students at universities in the UK. The total sample size of this research consists of 237 participants and observations from a mixed methods approach where I use questionnaires, interviews and rounds of observation to complete this study. Most of this sample size derives from the (qualitative) rounds of observation, where 196 fashion students were observed over four rounds of observation. A total of four (qualitative) interviews were conducted, with three fashion librarians and one fashion student. Forty (quantitative) questionnaires were distributed, with twenty-two student participants and eighteen librarian participants, including the three librarians who also participated via interview. As of 2021, there are over 100 UK-based higher education institutions offering fashion-related degrees and courses (Bide, 2021a). For this research, I was able to contact fifty-two librarians that work directly with fashion students at UK universities offering fashion-related programs. This constitutes over 42% of known UK-based fashion librarians. This is considered to be a small sample size, but there are benefits to a smaller sample size in research.

There is a long-standing misconception that sample sizes must be large to be representative of the “parent” population. Sauro and Lewis argue against this, stating that representativeness and sample size are two different concepts (2016). Accordingly, they state “you can have a sample size of 5 that is representative of the population, and you can have a sample size of 1000 that is not representative” (2016, p. 10). For Sauro and Lewis, the most important aspect of research, be it qualitative or quantitative, is that the sample represents the specific population that is being investigated. Without this, there is no logical basis for generalizing the results. Although my sample size is small, I had a predetermined group of subjects for this project, as all those included are either fashion students or fashion librarians, and I did not sample students from other degree courses, or librarians who did not work

specifically with fashion students. I do not generalize about the one student who participated via interview.

Since 2002, there has been an increase in the use of qualitative methods, with interviews and other qualitative methods involving a small number of participants becoming more common in social science-based research (Crouch and McKenzie, 2006). Research conducted with a smaller sample size can still make meaningful and unique contributions to the research and literature of their fields (Anderson and Glebova, 2022). Smaller participant sample sizes for qualitative methods are often more feasible than larger scale-studies, especially for first time researchers. Smaller studies often obtain ethical approval comparatively easier than larger studies (Hackshaw, 2008).

Small sample sizes for questionnaires and other quantitative methods can also be beneficial to research studies. As this PhD was to be completed within a scheduled amount of time, using a larger sample size for methods such as questionnaires may be too time consuming (De Beuckelaer and Wagner, 2012). Similarly, to smaller studies, large-scale studies also fall victim to low response rates (De Beuckelaer and Wagner, 2012). This was a factor I considered when reviewing the research methods, and I was aware that this study may not garner a large number of respondents. To combat this, I included the rounds of observation within the mixed methods design. Although this is a smaller-scale study, it is the first investigation into the information behavior of fashion students in the UK, and it provides insight into this demographic, and leaves space for further investigation.

#### 4.12.2 Benefits to Anonymous Research Participants

The research that is the basis of this thesis kept the anonymity of each participant, which was done deliberately as part of the research design. The anonymity of research participants has been prominent in the biometric sciences and has become equally as popular

in the social sciences as well. The anonymity of research participants allows for them to feel more comfortable in expressing their thoughts and opinions, without fear of backlash from their institution, colleagues or peers (Bouchard, 2016). This was the main factor in the decision to keep the participants of this study anonymous. I wanted each participant, whether they were fashion students or fashion librarians, to feel comfortable and be able to speak freely regarding their answers and opinions.

I did not ask the names of questionnaire participants, nor did I ask them to elaborate on the universities they attended. This project does not involve participants under the age of eighteen, or those who would be considered vulnerable, and participant safety would not be at risk if the participants were to remain anonymous. When conducting interviews with the librarian participants, they each mentioned they felt more comfortable with the study being anonymous and gave more in-depth answers to questions and specific information.

## 4.13 Institutions

The UK higher education system features multiple “types” of universities. These types include Russell Group universities, new universities, also referred to as “post-92s,” red brick universities, specialist and private universities. For this research, I contacted universities that offered fashion-related courses, regardless of the “type” of university. At the beginning of this research, I was unaware of the differences between UK universities, as I completed my secondary and undergraduate education in the US. Through this research, I gained invaluable understanding of the differences between UK universities, and perhaps how the type of institution might affect the information behavior of the student population. For this research, Russell Group, specialist, post-92s and private universities are featured.

## 4.14 Limitations to the Project

There are limitations and shortcomings within this research project. For this project, fashion students as a broad category were studied. Since this project was the first investigation into the information behavior of fashion students, the scope of this research is quite wide. There was no specificity within the demographic, but as this was the first investigation of its kind, starting with such a wide scope leaves space for more research in the future. There is room for future investigation of the information behavior of cohorts within the “fashion student” demographic, such as an investigation into fashion design students or fashion media students. Using students as the base demographic for this project also produced some limitations. Students are inherently busy, and this was reflected in the response rates for the students during this research. Compared to the librarian respondents for the questionnaires and interviews, the student response rate was low. I acknowledge the small sample size of this research, especially regarding the one student interview. I use this student’s testimony as information based on their experience, as it is not generalizable.

Librarian participants were also majorly from England, though there were more respondents from other locations in the UK than the student cohort. This of course presents a shortcoming to this project, as the aim of this project was to include the entirety of the UK, and not just England. Most of those institutions who responded to the call for participants were in England. This is likely due to England having the most fashion-centered degree programs available. This study was originally focused solely on undergraduate students. Due to the low fears of a low response rate since students were the target demographic, it was decided to then include Master’s level postgraduates into the student cohort. Unfortunately, it was not within the scope of this research project to

investigate the differences between the undergraduates and the postgraduates' information behavior.

## 4.15 Research Process

This section will outline how the data was collected and will be structured according to the research method discussed. The questionnaires were the first data collection method to be administered. Students and librarians were sent questionnaires in two rounds. The first round of questionnaires for students was distributed by email to course leaders and other academic staff, as well as placed in newsletters and update emails. The questionnaires for librarians were emailed directly to the librarians who had agreed to participate in this stage of the research. Six librarians participated in taking this first questionnaire as part of my scoping study, along with twelve students. The first round of questionnaires directly addressed the ISP model and its six stages. Through these questionnaires, the main findings were; Gaining insight into when students are approaching librarians, and the stages of the ISP students are going through; Most librarians do not believe their students can navigate the library effectively; Fashion students are using more online resources than physical; Online library systems are adequate in supporting the needs of fashion students; Over 90% of students surveyed rarely/never seek the aid of a librarian when researching; Nearly 70% of students surveyed experience emotions that indicate information overload when researching; And, nearly 60% of these students reported feeling excited and optimistic at the first stage of their search for information, which directly conflicts with Kuhlthau's original findings. These findings will be addressed in more detail in the subsequent chapters that report on the findings of this research.

The second round of questionnaires were distributed one year after the first round. This round featured ten students and ten librarians. The student questionnaires were distributed in multiple ways, with emails being sent out to course leaders and programs directors, links being posted to LinkedIn and X (previously known as Twitter), and flyers

with QR codes were posted around libraries and on campuses of fashion and arts universities around London. The questionnaires for librarians were distributed in the same way as the first round, with the emailing of fashion librarians at universities around the UK. The second round of questionnaires addressed the resources aspect of this research, and investigated uncertainty, the choice of formal and information mediator and anxiety in more detail than the previous questionnaires. The findings these questionnaires uncovered were; The overall adequacy of fashion information resource library collections; Which resources are the most used and most sought after; The identification of resources; The choice of mediators used by students; And, the concepts of uncertainty, library anxiety and information overload.

I conducted rounds of observation within libraries and during one-to-one tutorials and a library-run in-class workshop. I observed students in two libraries at universities located in London, and one of these libraries featured a large materials library in addition. When observing in the libraries (which I refer to as Library A, Library B and Materials Library throughout this thesis), I had a set criterion of what I was observing, please see Appendix J, K, L, M and N. I spent the same amount of time in each library. I took handwritten notes, and had an excel sheet that was printed out, so I could check off my observations by hand. During these rounds of observation, I was looking to see if the students were using a personal device, a university-owned device, researching with a physical resource, researching with an online resource, and if the student was approaching library staff for help in their search process. In total, I conducted four rounds of observation, two in each main library collection, including the materials library. Through these rounds of observation, I observed 191 students. I also observed one-to-one tutorials between Librarian B and five fashion students. When observing these tutorials, I again was looking for specific aspects. I was looking at how the students were interacting with the

librarian, which stage of the search for information they were in, the materials they either had with them or were recommended to them by the librarian, and if the students mentioned what year of study they were in. I also observed a library-run workshop, which was held in conjunction with Librarian A and the course's module leader. For this round of observations, I was looking to see if students were using their own devices, and how the students were interacting with the librarian. Students were walking in and out of this workshop, and it was difficult for me to get a definitive number of students, so I did not include these students in the final total of participants. I did use these observations however when discussing how the students were interacting with the librarian in the finding's chapters of this thesis, and when discussing the importance and benefits of library-run workshops.

I conducted interviews for this research as the final step in the research process. I conducted three interviews with librarians that support fashion students, and one interview with a current university fashion student. For these interviews, I used the data from the questionnaires and by observations to inform my interview questions. When interviewing the fashion student, who I refer to as Student A throughout this thesis, I focused my questions on the resources their university's library provides, library workshops and how the student interacts with the librarians and library staff. Through this interview, I learned that Student A rarely consults a librarian or library staff when researching. If they do seek their assistance, it is for help with references and citations. Student A believed that the library at their university was well stocked with useful resources and stated that they felt the collection was adequate. The data from this interview with the student is not generalized in this thesis; however, it is used to showcase the perspective and experience of a current fashion university student.

Each of the three librarians interviewed were asked the same base questionnaires, but as these were semi-structured interviews, different points of view were brought up and different discussions were also had. When interviewing the librarians, I focused on the specific resources available in their collections, how they acquired their resources each year, their thoughts on the changing nature of the fashion industry and fashion information resources, their training with programs and software available via the library, and at what stages they find their students are coming to them for assistance. Through these interviews I was able to gain the understanding of these librarians' experiences supporting contemporary fashion students, with each librarian finding that their students are approaching them at different stages of their information search process, the usefulness of tutorials even with the limited number of students they can see, the low attendance rate of workshops and other library-sponsored support, the confidence levels of students growing throughout their university experience and the effects of uncertainty and anxiety during the research process.

## 4.16 Conclusion

This chapter has outlined the data collection methods used for this research project, which include questionnaires, interviews, and rounds of observation. The subsequent two chapters will present the results and analysis derived from these methods, addressing the research questions posed in this thesis.

# Chapter Five Current Library Fashion Resource Collections

## 5.0 Introduction

As this thesis has argued, Carol Kuhlthau's ISP model has several limitations, including not investigating the information need of students, or the resources used and available to them. These limitations are discussed in more detail in Chapter Three. The qualitative findings presented have been analyzed thematically, which was undertaken manually. The quantitative findings presented were analyzed via the Qualtrics software, as this platform was used to support the questionnaires. In this Chapter I will address the themes of fashion resources available to and used by fashion students, the curation of fashion resources, digital fashion, and print disabilities. I will also evaluate the data derived from interviews, questionnaires and rounds of observation. Where the data is obtained from will be referenced each time, to provide clarity. The librarians interviewed will be labelled as Librarian A, Librarian B, and Librarian C. The student that participated in an interview will be labelled as Student A. The libraries will be labelled as Library A, Library B and Materials Library. This chapter will propose an elaboration of this model which will be featured in the Conclusion Chapter, addressing its gaps- namely, what resources students use when researching; and whether library collections of resources are adequate for current students in order complete their university assignments, and to prepare them for their careers in the fashion industry. This elaboration relates to research question three concerning the curation of adequate library resources for this thesis, presented in the Introduction Chapter. I defined the adequacy of collections by asking respondents to place their collections into one of three categories: adequate; somewhat adequate; and not adequate. I placed a message before the question, stating my definitions of the categories. I am addressing this gap because the

information resources a demographic has available directly affects their information behavior (Wilson, 1997; Niu and Hemminger, 2011). Wilson states that within information behavior, there are sets of intervening variables placed onto the information seeker, affecting their information behavior. These variables include what Wilson defines as “information source characteristics” (1997, p. 561). This is the first investigation to explicitly identify the most used and the most wanted fashion information resources in the UK. This chapter begins with an overview of the diverse needs of fashion information resource library collections, the physical and online resources provided to the students, before focusing on the contrasting perceptions between information need and information behavior that arose between students and librarians that responded to my questionnaire, participated in interviews and consented to being observed in their institution’s library. I will contextualize these perspectives by considering the library space, digital and physical resources, resources the students desire and the UK higher education financial crisis, as well as the high percentage of print disability in creative students before arguing the adequacy of fashion information resource collections curated by librarians at UK-based higher education institutions.

In this chapter I will report the findings of my research by identifying the resources librarians state are the most used and widely available, identify the resources fashion students are using when conducting their research via the library, and establish where fashion students are finding their resources, in order to address this gap which is present in the ISP model. I will discuss the themes of adequate resource collections, the cost of resources, and print disability within fashion students. There is a need for information professionals working with fashion students to be aware of the resource's students are using most, and where they could focus their future acquisitions. I will also discuss if current library-based fashion resource collections are adequate, and identify the resources students feel are lacking, and if they are using the same or similar resources as their peers. I will also analyze if collections are

adequate in regard to preparing fashion students for their future careers in the fast-paced and ever-changing fashion industry. The emergence of digital fashion resources and VR and AR technologies will also be discussed, in the context of students and librarians being aware of this emergence within the industry and higher education, and if resources are being acquired to project this change. The buying and development of resource collections by fashion librarians will be touched upon to demonstrate the process of curating these collections. Limitations and challenges associated with fashion resources are also being discussed within this chapter. The topic of print disability is discussed within the context of creative students, which features a high percentage of fashion students and the awareness of library staff to this disorder affecting their students. It is important to identify contemporary fashion information resources because to understand the information behavior of fashion students, we must understand and identify the resources in which they are obtaining their information.

The main findings of this research are derived from the questionnaires distributed online, interviews conducted with librarians supporting fashion students and an interview with one fashion undergraduate student, and observations conducted around the libraries and in workshops and tutorials of multiple fashion centered universities in and around London, England.

Fashion students are unique as a demographic, as their degrees have creative focuses and due to the range of fashion-based courses offered, therefore requiring a wide variety of resources and fashion information. They require this vast assortment of documents, resources and software available to them to complete their assignments and gain inspiration. Similar to other creative degrees, fashion students, especially those with a design focus, need inspiration to complete assignments. Inspiration is subjective, and fashion students in particular need a multitude of resources available to them. Of the students surveyed, 30% stated they use

fashion information resources specifically for inspiration, with one student noting they use resources for “inspire [sic], concepts, and trends.” I make a distinction in this research between students researching due to inspiration purposes and for academic purposes, although I do acknowledge that these two phenomena intersect. I define inspiration as a personal desire or interest that can lead to a creative concept or idea. Academic purposes, on the other hand, stem from students undertaking the work required by their studies. Due to the creative focus of the work undertaken by fashion students, these motivations sometimes interrelate, for example, as students can often become inspired through their research for academic purposes. The student participants in this research gave much insight into this, just confirming if they use fashion resources when looking for inspiration.

Therefore, to support fashion students in their studies, libraries need to have a diverse catalogue of resources, both physical and digital. Some institutions featured in this research have materials libraries in addition to their regular collection. These materials libraries consist of a collection of materials and other related physical substances, such as fabric swatches, metal shards, and plastic samples. Two institutions involved in this research had materials libraries. This materials library is identified throughout this thesis as Materials Library, with Librarian B serving as the materials librarian. Students are directed to these resources by their academic tutors and subject librarians. The Materials Library collection is located directly next to the physical fashion-related books and magazines. Tutorials are also available with Librarian B, just as they are with subject librarians. Workshops and tours during class time and outside of these time restraints are also available, especially for those in the first two years of their degrees. These workshops are generally scheduled by the lecturer and will take up to a class period. This is done to familiarize the students with this unique collection. The materials library is especially promoted to design and studio-based students, according to Librarian B. Students use these in their research for physical projects, such as designing

garments, accessories, fashion products and collections, researching textiles, as well as for other related research projects and assignments. Not all fashion students will need the same fashion resources. Some types of fashion students, such as those studying design, media, or communications, require software to complete their degrees. Fashion design students require industry-led programs, while those focusing on the marketing and business side of fashion will require access to databases and trend reports.

Fashion students require “traditional” resources such as books and journals, as well as image and object-based resources, and collections and software that are of fashion industry standard. Both the students and the librarians featured in this research are aware of resources that are used in industry. Fashion librarians across the UK are creating collections featuring resources that are similar to or the same as other universities, which sets a standard of fashion resources available and the quality of resources to students across the board. Both physical and online resources within collections support fashion students. There are logical conveniences, such as students not having to wait for physical books to be returned, when they can easily download the E-Book version and so on. This is also convenient for distance learners and for those who are commuter students. This makes for more access to resources without having to wait for limited physical copies.

## 5.1 Resources Located in the Library

Resources, although not directly addressed or specifically identified within the ISP model, play an important role in the information search process. University libraries need factually correct and relevant resources to support fashion students properly, and to do this, the most used resources and those deemed the most helpful must be identified. This section investigates what resources fashion librarians are making available to their students, and if these resources combine into an adequate collection of resources for this demographic of students.

There are a variety of different “types” of universities offering fashion degrees, such as Russell Group institutions, Post-92's and private universities. The librarians that participated in this research come from institutions that vary in size and specialty. The institutions featured had different student attendance numbers, locations and various fashion related degrees. Two universities featured in this research have a materials library, though these collections vary in size, layout and space. Resources available to the students from the library are unique to each institution, but there are high degrees of similarities in what is offered to the students via the library. Every institution involved in this research presented a collection of both physical/print and online/digital editions of books, magazines, and journals. The base of their collections of fashion resources available is similar, with certain resources being cited as used or available more than others. Some institutions featured have rare and special collections available in addition to their regular collections. Archives of old print issues of magazines such as *Vogue*, *Teen Vogue* and *Frame* magazine were available based on the institutions' collection. Special collections may also include resources such as physical garments and accessories, historic sketches and look books. Regardless of archives and special collections that are present in some institutions, this research presents that universities across the UK with fashion-based degree programs are currently offering the same or similar

resources to their students via the university's library. Most librarians who participated in this research have observed that their students are using the same, or similar resources from their library collections as their peers, with 66.7% of the librarians surveyed confirming this.

### 5.1.1 Physical Resources from the Library

Physical resources make up a large percentage of the available fashion resources within these libraries. The collections have been collated over years, some dating to before the emergence of online-based resources. When asked specifically if there are adequate physical fashion resources for students, 100% of librarian's surveyed answered "yes." These surveyed librarians felt that their library's physical resources are easily available and widely accessible to their students. 50% of students surveyed disagree with this statement, responding that they feel challenged when researching due to a limited selection of physical resources in the library. I believe this discrepancy stems from a reluctance to enter the physical space due to the convenience of online resources, and their lack of knowledge of the library resources and where they are located. Due to the large availability of these resources, the librarians surveyed have observed they are widely used, especially by fashion students undergoing design-based courses. When posed the question of whether they felt their physical collections were adequate for their students, one surveyed librarian stated that in terms of books and print publications, yes, their collections were, but in terms of physical clothing garments and historical archives, no they did not feel the collection was adequate. There is an emphasis on the use of physical resources in this section, based on my disproven assumption that students are using more online resources due to inadequate physical collections.

### 5.1.2 Online Resources from the Library

Alongside physical resources, online resources and software are also available via the university library. E versions of books, journals and magazines are available through libraries or through the Libby App, which is a free app wherein E-books, audiobooks and digital magazines are available to read on a smartphone or tablet. One of the most beneficial fashion resources for students is The Berg Fashion Library, which is an online resource that gives access to fashion-related E-books, encyclopaedias, museum collections and more; WGSN, a popular consumer trend forecasting website; and CLO 3D, a fashion design software program were the most identified resources by librarians that their students use. Business accounts for websites and magazines are available for the students, which allow for more access than a student account would. *Business of Fashion* and *Vogue Business* examples of resources that are available to students with extended access. Multiple trend-forecasting platforms are available to the students with subscriptions for the most popular ones being purchased. These platforms include; LS:N Global, Peclers, and Unique Style Platform.

Software and other database systems are also used by fashion students. The librarians surveyed and interviewed for this research identified the programs available to students via the library. These programs are plentiful, and they aim to provide as many resources as possible for their students. Fashion Monitor, a new influencer database is available, as well as the Design and Applied Arts Index. Librarians identified multiple design software programs including CAD and 3D CAD Downloads which allows for the creation of computer-aided design, digital drawings and models 3D models; 3D rendering programs to create models of objects and products; Rhino a 3D modeler, rapid prototyping, and 3D printing program; Canopy, an interactive design software that also features 3D model capabilities and animations; UME textiles, a program that integrates design, production and sales associated

with textiles, 3D game design programs and Wearable Technologies, the leading software for the development and design of wearable technologies. These are specialist programs that are used in the fashion industry that the librarians have incorporated into their library collections for their students.

Along with these software, other programs are also available to the students via the library. These programs include LinkedIn Learning, bookmarking tools, referencing and citation software, mind mapping tools and fact checking tools. These resources are not necessarily related to fashion but are available for the students to aid in their assessments. These resources are the most identified resources from librarians across multiple universities around the UK. Therefore, fashion students across the UK have access to the same or similar resources, no matter if they are attending a post-92, private or a specialist arts or fashion-based university.

Of librarians surveyed, 83.33% stated that their students sometimes use more online resources, but it depends on their circumstances, such as if they are distance learners, or the assignment in question. It is important for these systems to be usable and easily accessible to the students, with clear search capabilities. Library systems to be usable for both students in the library, and those working from home. 66.7% of librarians surveyed believe their current systems meet these standards for their students and are adequate in terms of searchability and ease of locating relevant information for students working from home and within the physical library. A further 33.33% of surveyed librarians feel as though the systems are somewhat adequate. In this context, the phrase “adequate” refers to the systems as being user friendly and easy for students to use. By “somewhat adequate” it means that these systems are usable, but not as user-friendly as they could be, which can make researching more difficult for the students. These definitions of “adequate” and “somewhat adequate” were given to the participants at the beginning of the questionnaire. As this data was gathered anonymously, I

could not ascertain whether there were any differences in responses based on the type of institution each librarian worked at. Though this does indicate that across the sector, these insights remain consistent.

## 5.2 Resources Identified by Students

In tandem with what resources fashion librarians are offering within their library collections, this section examines and identifies what resources fashion students are searching for, where they are searching for their resources, be it the library or elsewhere, and if they are using the same resources as their peers. Fashion students, along with other demographics of students, are not solely using library resources when researching. Students are using non-library fashion resources through online searches to fulfil their information needs.

Fashion students search for information for a variety of different reasons and obtain these resources from different places. The internet and the variety and number of resources available have changed how information is sought when researching. 16.67% of students surveyed stated that they get their fashion information resources in unspecified places online rather than from the physical or online library via their institution. 25% of surveyed students stated they found their resources elsewhere, and not in the library either in person or online but did not specify as to where they obtained their resources. A further 58.33% of students surveyed reported they were getting their resources via their library both in person and online, as well as elsewhere online and other unspecified places. This reflects the accessibility of the internet and wide availability of fashion resources, that are accessible without the vetting and curation of librarians. Students are getting their information from a mixture of places, showing the diversity in fashion resources and not a 100% reliance on the library for information.

As surveyed librarians identified that students use the online library more, students were asked how often they visited and used the online library and its resources for this research. Of students surveyed, only 25% claimed to use the library website and accompanying databases “often.” 50% of these students stated they occasionally use the library website portal. 16.67% of students answered they did not use the online library often,

while 8.33% of students surveyed stated they never use their library's online portal. This data indicates that the students are using the library when researching, not exclusively.

Most students surveyed stated they used their university library's resources when they have a specific need or resource in mind. The students surveyed reported only use the university library for specific information needs, with 54.55% of students consulting the library *only* when they specifically need print books. The further 45.45% of students only turn to the library to find text-based or print resources such as books, journals and magazines for their research. This data shows that students associate the library with traditional and print resources and are using these resources for specific information problems and needs. The students feel they can solve these information problems or find certain resources exclusively at the library.

Today, fashion students use the library space differently than cohorts in past years. There are a variety of different resources available to students with or without sponsorship of the library. With the number of online resources, some students are less inclined to enter the library at all. When interviewed, Librarian B commented that "some people might use digital resources for their entire degree," especially if they are distance learners. Librarian B stated that they recently met with two students, with one of the students in their third year of study. This student had not been into the library at all for the duration of their studies, and had done all their research online, and found this did not hinder them with their coursework or assessments. This study has identified that fashion students mainly use the library when they are looking for traditional/textual academic resources, such as books, journals and magazines. Libraries are no longer the sole keepers of information. Librarians here need to be aware of the fact their students are not reliant on the library's resources and are using more than just traditional academic resources. This expanded usage of resources is helpful in the diversity and availability of resources, but it is important to remember that these resources might not

always be academically appropriate for use by students. Using these resources comes with risks, as they may not be considered scholarly or academically appropriate. The student interviewed, Student A, stated their most used physical resources are books and special collections, and their most used online resource is WGSN. Student A stated that they feel that they use the physical resources in the library more.

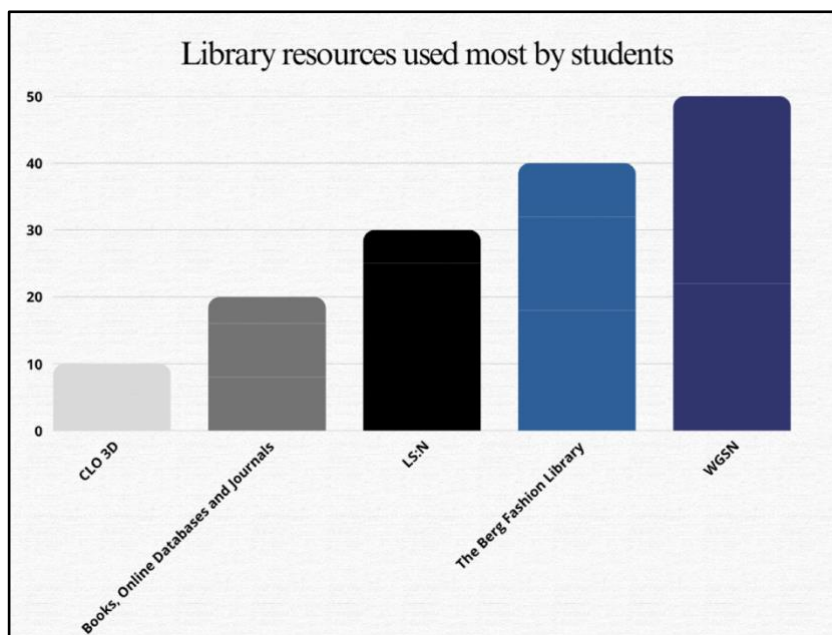


Figure Eleven. The Most Used Library Resources According to Current Fashion Students.

By identifying these resources, this allows for librarians to continue to curate library collections stocked with useful resources. Librarians featured in this research have identified three main resources the students are using the most, with those being WGSN, LS:N, CLO 3D and The Berg Fashion Library. The student participants within this research also identified WGSN, LS:N, CLO 3D and The Berg Fashion Library as their most used resources, see Figure Eleven. This indicates that the librarians are aware of their collections when obtaining new resources and the resources that are most helpful to

their students, and that students are using the same or similar resources as their peers.

When collecting data for this research, 196 students in total were observed using library resources when researching in their university libraries. Of these 196 students, they either used online library resources, physical library resources, or both simultaneously. The percentages of the observation are broken down in a chart, see Figure Twelve. I observed that fashion students are using all aspects of the library. They are using the physical collections, library provided computers, materials libraries (when available), and the online library catalogue and databases. Students were observed in the library to be using a mix of different resources, including online resources not sponsored by the library. The students were also seen to be using multiple resources (both physical and online) at the same time. The students were engaging well with the library collection, and with the library space in general.

A higher percentage, 60% of students surveyed identified that they were getting most of their information resources online, but from sources other than the library. Although a lesser percentage of students surveyed stated that they were getting their information resources from the library-either in person or online, there is only an 11.11% discrepancy between them. This data is presented in Figure Twelve, below.

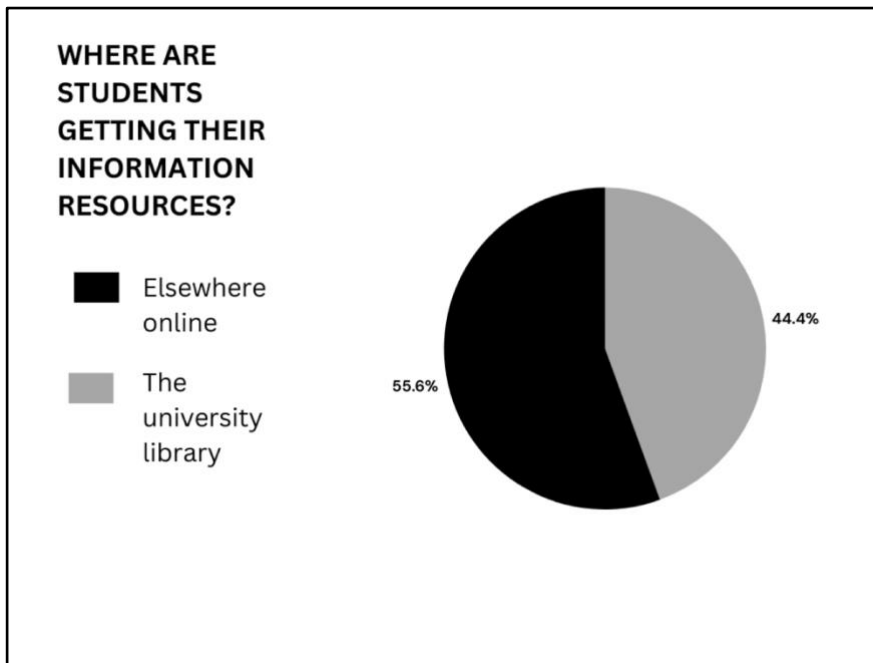


Figure Twelve. Where are Students Getting their Information Resources?

60% of students surveyed identified that they are using online library resources more than physical library provided resources. The remaining 40% of these students stated they are using both online and physical resources from the library an equal amount. Of the students surveyed, none indicated they are relying heavily or solely on physical library resources.

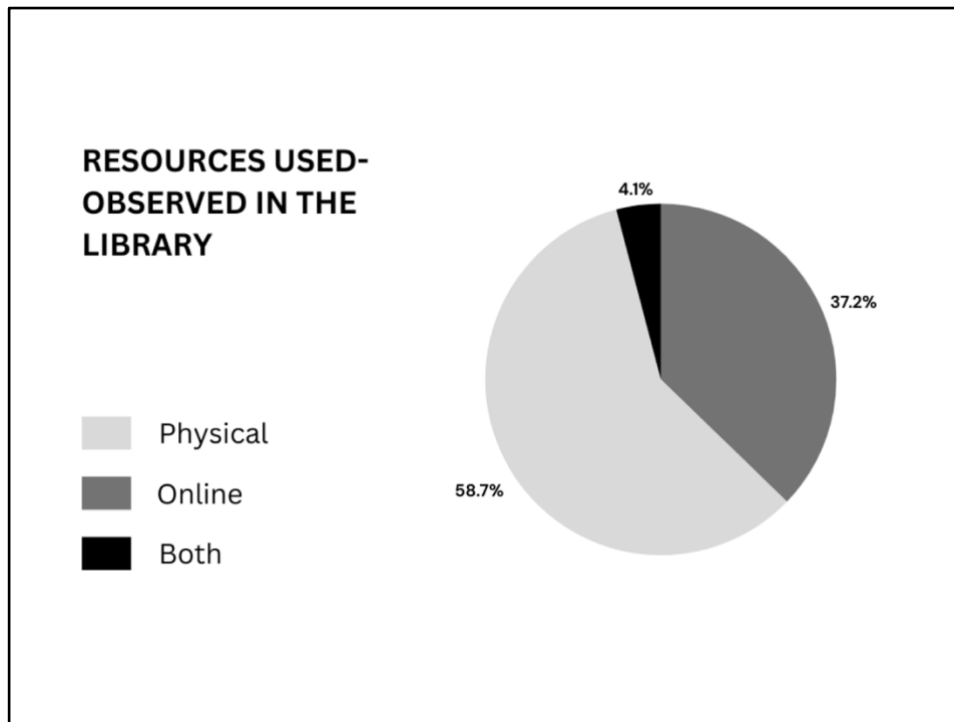


Figure Thirteen. Resources Observed to be Used by Students in the Library,

From the data presented in Figure Thirteen, the students were observed to be using more physical resources when in the library space than online library resources. Researching within the library space could be a factor here, as a high percentage of students surveyed stated they are only using the library and its resources- both online and in person- when they are looking for text-based or specific resources. More investigation here in future could indicate if fashion students are more likely to use the library's resources when in the library space, as opposed to using other resources when they are studying from home or other spaces.

Resources available in library collections, as identified by librarians, are being deemed useful or most used by the students they serve. This indicates that the collections of resources available to the students are adequate, as the students are using them successfully and are acknowledging them as most used and most useful. This data shows that although the library collections are adequate, the students are not necessarily getting their resources from

the library to complete their assignments. The students stated that they use their university's library the most when they are looking for specific resources, with those usually being text based in format.

## 5.3 Resources Students Want from the Library

Surveyed students were asked what resources they would find to be the most helpful if they were available in the library. 70% of students surveyed answered this query by stating they felt as though everything they needed resource-wise was available to them in the library. This sentiment was the same regarding digital fashion resources, with 70% of surveyed students stating there were no digital fashion resources they wanted that they did not already have access to, with one student stating “no, we have access to a lot.” Contradictorily, 60% of student respondents taking this same survey answered “no” when asked if they had adequate digital fashion resources. Student A stated that more Apple computers in the library would help aid in their researching, because of the available software that the students needed, as well as more up to date physical fashion books, more physical imagery, tablets for sketching and other design work. This indicates Student A is in need of more library sponsored devices, not necessarily information resources. In the case of this research, when surveyed students did describe resources they wish were available in the library, they were asking for software and other programs that it is likely their library already provides at least partial access to, or for books on very specific or obscure topics, which may be an under-researched area. It should also be noted that the students are able to request resources that the library does not currently offer at any time.

Students surveyed answered with the following:

- Videos
- CAD
- 3D Design programs
- More physical books on fashion studies theory
- Books and journals on cultural appropriation

- Books on Asian Cultures

## 5.4 Are Resources Adequate?

Librarians featured in this research have identified that their students are using more online resources than physical. The students identified that although they use a mixture of both physical and online resources from the library, they are reaching for online based resources more than their physical counterparts. 100% of librarians participating in this research believe that their library resources are adequate for their students, and I agree with this sentiment. The librarian participants make a conscious effort to be up to date with the fashion industry, and the standards and programs that are prominently being featured. They are making careful choices in the development of their resource collections, prioritizing the needs of their students in these decisions regarding acquisition. The students agree here, as 40% of students surveyed responded by asking for resources they already had access to, or niche resources that likely can be ordered for them. I also believe that librarians are providing adequate library-based fashion resource collections. I have come to this conclusion based on the data presented here. Librarians supporting fashion students are aware of their needs and the diversity of these students. Both the students and the librarians identified the same resources that were most used and regarded as most useful. The librarians curate collections that feature a range of variety within the strict restraints of budget.

## 5.5 The Future of Digital Fashion and Providing Relevant Resources

Throughout this thesis, new types of fashion documents featuring AR and VR technologies have been discussed. This section focuses on the emergence of these documents, and the awareness of contemporary students and librarians of this change. It is important for librarians supporting fashion students to be aware of this new avenue of the fashion industry. Concurrently, students entering the industry are entering a fast-paced environment and need to be as prepared as possible when entering this competitive industry.

The emergence of VR and other similar technologies in the fashion industry is changing the industry and what is required of those involved. Students and librarians are both aware of this emergence. To provide the resources to complete assignments and prepare the students for their future in industry, relevant resources need to be available in library collections. 90% of surveyed librarians stated that there are resources relating to digital fashion available in the library, while the remaining 10% of those surveyed said they were not sure if there were resources relating to digital fashion available. The same librarians surveyed also observed 70% of their students are checking out or using digital fashion related resources when in the library. According to the students that took part in surveys, 80% stated that they either do or sometimes do, search for resources that are related to digital fashion. When asked if students have access to enough digital fashion and AR and VR based fashion resources, librarians surveyed responded with the consensus that the students have some access currently but, “as the field develops, they will need more.” Fashion students will need more access going forward, especially as currently, there is not one primary resource that relates to digital fashion, and VR and AR technologies in fashion and related industries. There are articles, books and databases on this subject, but these are dispersed within different fields throughout academic resources and not under one umbrella term. A librarian

noted via survey that they did not believe that students have enough access to information on this subject at their institution, as their library has limited resources related to this at this time. Stemming from this, the same librarian believes that it would be beneficial for the students to have more access to resources that focus on digital fashion. One student mentioned via survey that they struggled with some assessments due to the lack of resources on modern digital fashion. Another student surveyed stated that finding digital fashion designers is very difficult, as the field is emerging, and that they are not sure what they could do in order to find a solution to this information problem. 50% of students surveyed stated that they use resources related to digital fashion, with 20% stating that they sometimes use these resources. It is important to note here that students have the option to ask librarians for assistance and request resources or access to certain resources. Approaching librarians and library sponsored services such as workshops and tutorials are discussed in Chapter Six in more detail.

Students surveyed relayed the difficulties they faced when searching for digital fashion related resources. These resources are new, as this is an emerging field of study. Due to this, it is likely that there are more hindrances when researching this topic compared to researching a subject that is more established and furthermore has more published literature and resources. 60% of students surveyed stated that they do not feel that they have access to adequate resources that relate to digital fashion. Multiple students relayed that cost was a hindrance to their research, as some universities have provided some, but not full, access to certain programs and software that relate specifically to digital fashion that the students are interested in using. As there is partial access to these resources, students searching for these in library databases and systems are encountering the most expensive resources first, and the students find they do not have the time to sift through the resources to get to the cheaper or more accessible options. It is important to note here that libraries have limited budgets per year for their resources, and librarians are trying to provide a wide range of resources.

Librarians can also be consulted by the students to find resources that are available at no extra cost or can order or subscribe to the relevant resource. It is important to note here, that new and digital fashion resources are industry led, and often come at a premium cost. 60% of librarians surveyed mentioned this as a prohibiting factor for librarians and other information professionals, as extending collections to feature these resources strain budgets so therefore there is a limit as to what the library and its staff can support. When asked via survey if librarians feel that they are coping with digital fashion resources, responses were mixed. 70% of librarians surveyed stated that they feel they are coping well with these developments, in the sense that librarians are information specialists, and it is their job to help students navigate these new information resources. In the minority, 20% of surveyed librarian's stated that they felt they were "only as up to date as I am with all new digital developments, across all subject areas." This librarian commented that they felt it was hard to keep up with every single new development but felt that as long as they keep up to date with search techniques and how to find information, it is enough for them to adequately serve their students. 70% stated that they felt they were coping well in this area, as they need to be able to demonstrate and introduce these to students, especially in workshop environments. Of the 70% majority, a librarian commented via survey that it was necessary for them to keep up with the changes in technologies and demands, stating "I find I am always learning about new tools, resources, terminology- I have to stay abreast of this to support students as they research these areas." When responding to another question featured on the questionnaire, 60% of the respondents stated they were outwardly confident in their knowledge and understanding of digital fashion resources.

To best support the students, fashion librarians are aware of the emerging trends and resources in the fashion industry as a whole but are finding they are not aware of how to use these tools and programs and have little to no training in this area. Librarians working with

fashion students are noting the importance of keeping up with the newest developments in resources and are taking measures to ensure they are able to do so. It was stated via survey that, “as a librarian who supports fashion [students], I’m trying to keep up to date with developments” this librarian also noted that they received a budget increase to support existing digital fashion resources such as WGSN and technologies concerning wearable technologies.

The librarians that participated in this research come from a variety of universities, each with different resources and specialties. Librarian C works at a fashion-based school that features a lot of programs and does not focus on design. They have touched slightly on digital and new fashion documents by adding popular resources such as WGSN to their collections, but they have not gone into AR and VR technologies or resources currently. There are many other types of digital fashion resources available to their students via the library and the library team is conscious of the changes in industry and emerging technologies.

Fashion students and librarians that support fashion students are aware of new technologies and developments in the fashion industry. Librarians are doing the best they can to provide relevant resources that relate to digital fashion, but cost and the fast-paced nature of the fashion industry make this difficult. This is still an emerging discipline in the field, but information professionals are aware of this and are trying to keep up with and anticipate future resource needs to close current and future gaps in their resource collections. The students are also aware of this development within the industry, with some engaging with digital fashion first-hand via their courses or internship placements. Students in this research are finding that resource collections are severely lacking relevant digital fashion-based resources. Librarians find they are doing the best they can with the budgets and time they are

given and find their collections of digital fashion resources to be as adequate as possible due to the constraints they face.

## 5.6 Limitations to Resources in University Libraries

To curate the most adequate collections of fashion resources for students, it is important for the librarians and those developing these collections to acknowledge the limitations their students face in accessing these resources. This section will outline the limitations in resource collections that affect both the students and librarians. For the students surveyed, the most common limitation was the extra cost of subscriptions and software, and limited knowledge of the use of these programs. This affected librarians, as they reported insufficient training for software and other programs for themselves, which makes it difficult to support students with these resources. Librarians also identified budget restraints and lack of physical space as two of the main barriers they face when developing their collections, which are limitations students are likely to be unaware of or have thought little of.

For fashion students, the element of cost is apparent in fashion resources, especially for software and other programs. Many software programs are offered to students at a discounted rate, but there is still a cost involved for the use of the software. This also requires the student to have access to a personal laptop, desktop or tablet device that can support these programs onto which these can be downloaded to use when not on campus. Software programs are available on library devices, but this poses the barrier of only being able to be used when in the library, depending on the institution, and if the devices are available at the needed time. Some fashion resources identified are also blocking students due to site paywalls. These paywalls associated with resources that are not software are also a hindrance to students. Resources such as *Vogue* are now also behind a paywall, making it difficult for students to access current issues.

Libraries subscribe to the most used sites, such as WGSN and *The Business of Fashion*. For sites such as *The Business of Fashion*, librarians surveyed and interviewed spoke about making sure to subscribe to the “professional” account for this resource, as it

provides the students with more access than a student account would. Librarians need to expand the library acquisition budget as far as they can to provide a well-rounded and diverse collection. To do this, the most used resources are subscribed to, to give as much access as possible. Unfortunately, due to the restraints of the budget, not all subscriptions provide full access. Although limited access comes with restrictions, it still provides the students with useful resources.

The cost of subscriptions and other programs was a consideration for Student A, who was interviewed for this research. Student A stated that they felt as though they were “lucky,” as they had received a grant from the university that they put towards programs, software and a private device. Without the grant, Student A said that the cost of these programs would have hindered their studies and research, as there are not enough university and library-based computers with the programs for everyone to use, especially close to deadlines. The library at this student’s university offers programs such as CAD and CLO 3D on their computers for free, but the programs were only available on Apple computers and could only be used in the library. Since there are limited devices, not every student will be able to use these at the same time. One student surveyed also identified the barrier of paywalls, by stating database access is provided through the online university library, but they do not offer the student full access unless there is further payment, as the student believed the university does not have a full subscription. This surveyed student did not indicate if they sought the aid of a librarian or the IT department to see if full access was possible.

Libraries subscribe to relevant journals and other resources, and if certain issues or articles are not available, students can request these from their course's librarians or other library staff. A bigger theme presented here is the lack of literacy with academic databases and with the services the library offers. Students will be briefed on these services, during library induction, and instructions will be on course homepages on sites such as Moodle.

Questions on paywalls and the availability of resources can be answered via email or chat service on the library's website. It is important to continuously remind the students of these services, so they will not go without them. It is also likely that students are unaware of the cost of resources, library budgets, and budgets cuts and restraints. Students are reluctant to involve a formal mediator, such as a librarian, or attend library sponsored workshops during their research process, even when they are struggling. This is discussed more in Chapter Six.

The desktops provided in each of the libraries where the rounds of observation took place for this study had access to programs and software, and had a single sign in option for students when looking for resources or using the software programs, making the usage of the desktop for databases research and the use of programs less reliant on the student constantly signing in and out. One librarian surveyed stated that at their institution, software programs that are available for students to use for design and other aspects of the degree are bought and controlled by the university itself and its academics or by the IT department rather than the library. Software needed by the students is available through the library but not necessarily provided or sponsored by the library. The instruction and teaching of this software and other design programs does not occur within the library; it is mostly provided by academic or technical staff within the classroom. There are some workshops on these programs available, but it depends on the institution as to which department (the library or IT) will run these workshops. Student A stated they never learned programs such as CLO 3D in class or via the library but would have found this beneficial as it was widely used in their industry placement year. Student A stated that there was minimal training on other programs, but this was done within the studio or classroom, and not the library. Student A was unsure if the library provided any workshops for this.

At the same time, library staff do not necessarily have training in these programs. Librarian A stated that they have a little experience with certain programs, but that is from

using and exploring them in their own time. They do not have any professional practice with this program or with any others that are available to the students. Librarian A stated that it would be useful to have some training in these programs, to get insight in the creative programs that the students are using, stating that “it might be useful as it would help to anticipate student needs and how they’re using the programs and also have a bit of insight on what to recommend to them when it comes to other resources and other aspects that could inspire with creative practice.” The remainder of the staff at this institution did have access to the programs themselves, but there was limited access to training.

Librarian B noted the tension they experienced at work, where students are requesting assistance in programs that librarians have not been trained to use. The student perceptions seemed to be that because the software was offered on library computers, librarians could support their implementation and answer queries related to them. Librarian B also mentioned that their university has programs for staff development and training to keep the staff up to date with the newest trends, technologies and resources. This is only available during staff members’ non-working hours.

Librarian C had no experience with programs but is interested in workplace training for these programs. Librarian B said that this question asked during our interview sparked some encouragement for them to ask their managers for more training and time to do this. Librarian B also said they feel it is important for librarians supporting fashion students to be trained in programs that are becoming industry standard and available in the library, to better serve students. Librarian B is quoted as saying, “everyone should be offered the training [for these programs] and then we can develop together.” Librarian B and I also discussed using different programs for different academic projects, as InDesign, can also be used as a writing tool as well as a design tool. Librarian C stated that they do have minimal experience with these types of programs but made special mention that a library assistant that is a part of their

staff is a former fashion designer and has a lot of hands-on and industry experience with these programs and can assist students in this regard. This member of staff is the only one who is aware of how these programs work, and the students, and other staff members, often rely on them for help in this regard. To better support fashion students in the library, better training for these programs for library staff would be helpful in aiding students with programs that are available on library devices. It would not be necessary for library staff to be experts in these programs, but to have general knowledge of the programs and how they work and how to produce work would be advantageous.

As for the emerging subject of digital fashion and resources that feature VR and AR technology, both librarians and students felt the resources are lacking. There is a discrepancy in the data here, regarding the feelings of the librarians, as a high 66.67% stated they felt their collections were adequate in context to the current times. The librarians acknowledged that this is an emerging field within the world of fashion, and they are doing their best to educate themselves on these developments and to continue to grow their collections of these types of resources.

## 5.7 UK Financial Crisis in Higher Education

Currently, there is an ongoing financial crisis within the UK higher education sector due to government funding cuts. These cuts make acquiring the newest and latest technologies and resources difficult, as these come at a premium price. Fashion is a fast-paced industry, and librarians try to accommodate the needs and wants of students by providing them with the best resources in the library collection. This can be especially difficult due to tight budgets and continuing cuts. Libraries need to extend their budgets and resources as far and wide as possible. This can sometimes mean libraries subscribing to limited access to multiple programs and resources to give the students as much variety as possible. Academic research is also time-consuming and does not always publish or become available immediately, making students believe that there are no resources in the area they are looking for. Students at this level are not always used to building upon other existing research that is available to them. Librarians do the best they can when acquiring resources to form adequate collections. Cuts and reductions often need to be made when doing so but providing the most used resources by the highest percentage of students is the main priority. Librarians are also tasked with buying resources for other subjects and specialties, not just fashion or fashion related subjects. The students are not behind the scenes of the development of collections and are likely not considering these issues presented above. Students wanting access to everything that might be considered relevant does not necessarily mean that this is obtainable for the library to provide. This does not also mean that the collections of resources are not adequate if they do not include full access to availability of everything the students might desire. There is a balance to the development of library collections, and librarians are aware of the constraints they face when developing the best collections, they can.

## 5.8 Students Encountering Information

With the internet and the availability of resources instantly, students have access to more information resources than ever before. This availability of vast amounts of information affects students and other information seekers. With the large amount of information available, information seeking can be an overwhelming process. 33.33% of surveyed students stated that they feel overwhelmed with the number of resources that they encounter when researching. A further 33.33% of surveyed students sometimes feel this way, with the final 33.33% of these students saying they do not feel this way at all. The amount of information that is encountered during an information search can make sifting through relevant information difficult. 83.33% of surveyed students stated that they feel a sense of joy when they find a relevant resource when researching. The latter 16.67% of students stated they sometimes felt a sense of joy when encountering relevant information. This indicates that the majority of the students surveyed are experiencing some information overload when they are researching. From this insight, this research has raised some interesting awareness about the relationship between uncertainty and anxiety in contemporary fashion students. This insight may lead to further investigation, as to information overload contributing to their uncertainty and library anxiety. Furthermore, this raises questions about fashion students being more comfortable in the exploration phase of the information search process because they work in creative ways that require the exploration of resources. It was not within the scope of this research to investigate further into the ways in which fashion students navigate vast amounts of information and materials, but this leaves room for further research.

### 5.8.1 Devices Students Use When Researching

Due to the availability of resources available on different devices, students have many options as to which they choose to conduct research on. Contemporary students have

multiple types of devices available to them from the university, such as Apple computers and desktop computers. Students also use their own devices when in the library, using laptop computers, iPad and tablets, and their mobile phones. Of the 196 students observed for this research, 104 of these students were using devices when researching in the library. 27 of observed students were using university-provided desktop computers. 72 of these students were observed to be using a personal device. 5 students were observed to be using multiple devices, one personal and one university provided. Of the total 196 students observed for this research, 92 were not using any type of device when researching in the library, relying instead on the physical resources the library has to offer.

Students that participated in this research via survey also provided insight as to what devices they are using when researching. Of those surveyed, 70% stated they relied on their own personal devices to research. 20% of these students stated they relied mostly on library sponsored devices, with the remaining 10% of students finding they relied on both their own personal devices and library devices an equal amount. When asked the types of devices they are using, the students responding to the survey responded with; Personal computers and laptops, mobile phones, and iPad and other tablets. The analysis of what devices fashion students were conducting research on was included within this study as students typically have access to one or more devices. These devices are generally portable, and research can take place nearly anywhere. Libraries do provide devices, but these come with the challenges of availability and physical space. From this data, it is indicated that students are reliant on their own devices to conduct research. This can be due to a multitude of reasons, such as convenience and availability.

### 5.8.2 Challenges Students Face When Seeking Information

There are many challenges associated with the seeking of information. 75% of students surveyed stated that they felt they faced challenges when researching, while 25% of students stated they sometimes felt they faced challenges. Surveyed students identified multiple examples as to some of these challenges faced, most notably the challenge of not being able to easily locate library resources. Multiple librarians identified via interview and survey the issues with the Dewey Decimal Classification system and the challenges this provides. This system is notoriously difficult to use and outdated (Marrocolla, 2019). All librarians featured in this research use either the Dewey system, or a modified version of it in their libraries. The Dewey Decimal Classification, also commonly referred to as the DDC, is commonly used in libraries in the US and across the UK. The librarians who participated in this study have seen their students encounter difficulties when using the DDC to locate library resources, with Librarian B calling the DDC an “alienating classification system.” It was also noted via survey that international students in particular struggle with the DDC, which makes it more difficult for them to locate books and other resources on their own. Students who were not exposed to the library before university also have notably struggled with the classification. Librarian B stated that as information professionals, they are used to the DDC and find it useful, but notes it negatively affects students, stating “it works for us, but I’m not sure it works for them [the students].” When asked how to better combat this issue, it was suggested by Librarian A that better signage entailing how the DDC worked would be helpful to the students struggling with locating resources in the library.

## 5.9 The Library Space

Libraries are seen as academic spaces within the higher education community, featuring a host of users. These users include students, researchers, and teaching and support staff. To support the users, universities require a well-supported physical library space (Bangani, et al., 2020). The value of the physical library space has been debated for the last several years, with the increased use of online teaching and the availability of online resources. The use of library resources and services has been linked to the achievement, engagement and success of university students (DeVille-Holly, 2024). The academic library space has also changed in that it is now also a social space used by the students (Mangrum and Foster, 2020). Libraries are now homes to collections, collaborative workspaces, social spaces and serve as inspiration for student learning. It has been discussed that as students adapt to new technologies, their learning styles also adapt, and those changes directly affect the learning environments students need to thrive (Mangrum and Foster, 2020). To best serve today's students, the library space needs to be both an academic and social environment.

Due to the changes in technological advancement, students' needs are different, and they are using the library differently. The usage of resources is not reliant on being in the physical space, but this space is still important to have available to students on campus. In a 2020 study, it was determined that a majority of students use the physical library for individual and group study, and to complete assignments with already completed research (Mangrum and Foster, 2020).

Fashion students are using the library to find specific resources, and to study and complete assignments. There are services available to the students, such as tutorials and workshops that would have them interacting with librarians to solve their information problems. The workshops that are offered by the library have notoriously low attendance

rates. Students seem to be aware of the services and offers the library provides yet are reluctant to use these resources to their advantage.

## 5.10 The Development of Library Collections

The collection and acquisition of fashion resources by librarians is vital to the usage and success of the students in their assignments and in preparing them for their futures in the fashion industry. To do this, the barriers of collection development must be acknowledged. The two main barriers identified by the librarians who participated in this research via interview and survey are the barriers of cost and availability of physical space. Librarians supporting fashion students have a unique role when developing their collections. There is a need for both traditional academic resources, as well as a need for resources to aid students in their inspiration and construct designs.

The factors of budget and cost were indicated as barriers multiple times by the librarians surveyed. The cost of resources directly correlates with budgets restraints which affects the resource acquisition for all subjects and resources in the library. A librarian via survey stated that, “cost is the main limitation when it comes to industry standard tools. Fashion print media is so fast paced it can be difficult for libraries to maintain subscriptions to new and valuable resources.” Special collections and archives that are also maintained via the library are affected by cost, with another surveyed librarian noting that “an extensive archive of fashion books and clothing would be incredible, but funding and rarity prevents this.”

The fashion industry is fast paced and constantly changing, and it can be hard for libraries to keep up, especially when it comes to books and other physical and print-based materials. Trend cycles are also difficult for libraries to keep up with resources for, especially when it comes to books or physical resources. Physical library space is limited, and this lack of space makes it hard for librarians to grow the physical collection, especially at schools that are not just fashion or creative arts based. A solution here could be the acquisition of more online based resources and keeping a conscious effort to keep up with the trends and

resources emerging. Online resources and databases are very up to date, with some updating daily, and take up no physical library space. The acquisition of online based resources for libraries does come with their own complications. Higher education licenses are complicated, and this is especially true for new/digital fashion resources, which in turn affects the library collection and its development. It is necessary for librarians to be mindful of these barriers when developing fashion resource collections.

Collaboration with academic staff as well as students is at the forefront of collection development of library resources. Librarian C stated that as the head librarian, they do all the resource purchasing for the collection. Librarian C works with the teaching staff and the department heads closely, to keep up with the resources that are needed for specific courses and classes. At this institution it is important to the library staff that the students understand the nature of the libraries resource collection and that it involves more than simply books. The staff want the students to be aware that there is a plethora of resources available to them. A lot of the resources available and acquired are also student led, for the staff to get the most up to date and useful materials. Here, the library team also keeps what they call a “week in review” document. This is a document which keeps track of trends and keeps up to date with each other and the resources. The staff have found this to be a great process for them to track the use of their resource collection.

Librarian A is the sole librarian for their university, which focuses on fashion and the creative arts. Librarian A is also the sole buyer of resources for the university. To allow for the purchasing of useful resources, the librarian here leaves their recommendations open for academic staff. Most resource requests come from the academics, either through their reading lists which are shared with the librarian, via direct requests, or from talking with the academics in passing. Librarian A also pays special attention during tutorials to what the students are learning and talking to students about what they are studying. A lot of the

development of the collection comes from talking to staff and students and anticipating their needs throughout the academic year to identify gaps in the collection. Librarian A stated that they spend a lot of their own time on X (formerly Twitter) and other social media sites to see what is trending in the fashion industry to identify ways in which to support their students better. Librarian A also credits keeping up to date with the fashion industry as a whole to anticipate trends and order resources that correlate. Librarian A works very closely with module leaders mostly via email contact, or by attending drop-in sessions with the staff to strengthen their relationship with the library. Librarian B is a materials librarian. Librarian B develops their collection by finding companies that work with popular materials as well as manufacturers and approaching them for samples. The collection also grows organically, with additions coming from samples left over as well as some student work. Librarian B's job is unique in that they are a specialist in the field of librarianship, and they are the sole finder of the material-based resources for their students.

The development of library collections that are intended to support fashion students is a collaborative affair. Librarians are required to gain insight into the needs of students directly and liaise with the academic staff to have resources relating to assignments and reading lists available. The librarians understand the multidisciplinary nature of fashion as a whole and the fashion students they support. They need to be keenly aware of their own collections and resources, to identify any gaps within the existing collection and keep up with the emerging trends of the fashion industry and academic world. I find that the library collections of fashion resources that are currently being curated and developed are adequate for current fashion students. Librarians are tasked with supporting all their students to the best of their ability, and developing collections that are relevant, useful and up to date is a main requirement of their job. Currently, fashion librarians are creating collections that are relevant and aid in student research and inspiration purposes. Students may find that in certain areas

the collection is lacking, but they are unaware of factors such as budget and limited physical space. The librarians featured in this research are aware of the gaps in their collection and try to provide as many resources to their students as they can, while also appealing to the masses of students and their needs.

### 5.10.1 Developing Relevant Collections with Employability in Mind

There are many different avenues for fashion students to take after graduation. Some of the careers the surveyed students indicated interest in include fashion/digital fashion design, garment technology, fashion management, media and marketing. When asked if there were adequate resources and library collections to prepare students for industry, 100% of librarians surveyed answered “yes” to some degree, with one librarian commenting “yes, physical resources are available and easily accessible”. Surveyed librarians featured in this research are conscious of the resources that are used within the fashion industry at the professional level and do their best to source collections that are useful in preparing the students. Each librarian surveyed commented on the wide variety of fashion resources their students have available, and how conscious they try to be of the changes within the industry. One surveyed librarian stated how important their team found it to ensure that their students have the most up to date information and accessibility to this information to help them with their current assignments and future careers.

Another surveyed librarian stated they encourage their students to use a wide variety of resources when researching, including resources that they will have available to them in industry. These librarians are aware of the changes and new technologies of the fashion industry, with one surveyed librarian stating “we follow industry trends closely in my work place, and I think students have experience with a wide variety of industry resources through

our library offerings that stands them in good stead to get into industry roles and succeed.”

The librarians featured in this research understand the need for preparation for the students.

Via survey, a librarian commented “students have access to a huge range of fashion resources [through the library] that are used in industry by most of the biggest brands and designers- this prepares them well with what to expect when they get into industry.”

When asked if they felt the library and its fashion resources were specifically preparing the student for their future career, Student A stated that yes, in the sense that the resources are there and helping them obtain their degree, and stated that they feel they are very lucky in their university due to great academic and library staff. Student A stated that they chose their university specifically due to their high level of student employment rates after graduation.

From the data presented in this section, it has been identified that librarians supporting fashion students are aware of the fashion industry, and the resources and knowledge that will be required of the students once they enter the industry post-graduation. To properly prepare university students for their future careers within the fashion industry, it is important to curate collections of fashion resources that are relevant and up to date. Currently, librarian participants in this research believe that their collections are adequate in their relevance and preparation of students upon entering the industry. I agree that the collections of resources for students are being curated with their future in industry in mind. The librarians are aware of the changes in the industry, especially regarding the new digital fashion resources. They are aware of the demanding needs of industry and industry and try to curate collections that reflect the needs of their students both currently and in the future.

## 5.11 Print Disability in Fashion Students

The concept of print disability affecting a high percentage of creative students is important to note when curating resource collections for fashion students. A high number of fashion students are based in creative-centred degrees, and developing collections of resources that keep the needs of these students at the forefront is imperative to their successful use of the library's resources. For more on print disability as a concept, and its prevalence in art-based students, please see: Macleod, 2002; Farrell et al., 2011; Royal College of Art, 2015; Cain and Fanshawe, 2021; Wolff and Ingvar, 2002, and Lorbeer, 2020. Print disability is a phrase used in higher education to describe students who have the difficulty or inability to read printed materials due to physical or learning disabilities such as dyslexia, ADHD and visual fatigue. Resources come in many different formats, which can be tailored to help those with print disability when they are researching and completing assignments. Studies have shown that students that have dyslexia and other print disabilities often have a higher visual ability, which allows them to flourish in creative industries (Macleod, 2002). This could also be due to dyslexic students struggling in certain academic environments and have instead compensated with their talents in other fields (Wolff and Ingvar, 2002).

In this study, 100% of the librarians who participated in interviews and 20% of librarian survey respondents each mentioned the high levels of print disability within creative students, and within their student bodies more specifically. Each librarian here was aware of this fact about their student bodies, and each tailored their library services to aid their students who were affected by print disability. As librarians and library staff are aware of the high number of print disability, they find they are making a point in using and demonstrating different resources for different types of students and for students with different learning styles, making sure to explicitly show students that not all of the resources are text based. As

the librarians have noted that they find their students to often have mixed ability, they find their students courses prioritize creative work over written work, and the students struggle more when it comes to academic writing and research techniques. Specifically, Librarian A mentioned that there are workshops in the library to address anxiety that occurs when researching with print disability, especially for the more creative based degree students. This librarian thinks that creative students with print disability often do struggle with the research, essays, and writing part of academia. The librarian stated that they felt that these students only saw the library as a place for books and a place that is strictly for traditional “academia”. The librarian stated that during these workshops, they try to get across the point that the library is so much more than that they have tried to make “the library a space that you (the students) can create in...it is about imagination.” They want the students to feel that the library can be a space where you can get lost and explore and not just all about words, which could be the intimidating factor for print disabled students. This acknowledgement of their student demographic is helpful to the librarians in identifying where the students will need more help and more out of the library service, as well as for the development of the resource collection available. To cultivate a library that is also accessible for creative students and those with print disability, diverse resource collections are needed. Print disability, and other disabilities may also be a cause of library anxiety, uncertainty and other struggles students may face when researching. Being aware of these factors is helpful in curating a library service, organizing relevant and helpful workshops and anticipating the needs of the students. Currently, I find that fashion information resource collections are adequate for students with print disabilities. This is due to the conscious effort made by the librarians when curating collections that are user-friendly for all abilities, and their tailoring of library services to be as helpful and accommodating as possible to students.

## 5.12 Fashion Students as Creative Students

Fashion students may also be a part of a “studio” where a lot of their work is creative, which again creates a barrier for the written or traditional academic work. Students are often not as keen on this portion of their degrees which the librarians are aware of, and librarians are trying to promote ways of making research and writing more relevant to the students and making the library inspirational. The surveyed librarians stated they find the creative based fashion students are not aware of resources or able to quickly locate them, so they default to Google. A surveyed librarian contended that “there are often resources that they (the students) are not aware of, or not using and the default is to go to Google. The aim for me would be to promote a combined use of the library resources alongside Google, Wikipedia and other sources and help to navigate these together.” The notion of the students feeling overwhelmed with the resources was noted here, as multiple librarians mentioned they found this to be especially true with creative based students who have physical portfolios. When interviewed, Librarian B stated, “I think, for creative students, the digital resources [E-books and journal articles] sometimes I think they get a bit, not scared, but kind of wary.” Librarians are aware of this reluctance of their students and are attempting to provide services and resources to combat this. Students are also hesitant to ask for assistance from a mediator when they are struggling with these resources. The students are also unlikely to see a librarian to help them with their creative practices, as well as what they deem to be more “academic” assistance.

Librarian A stated that their library’s collection is majority image based, and features objects and materials that cater more towards creativity and imagination. This is done intentionally, as this university caters to art and creative practice-based students. The importance of the library as a space that is creative and inviting for all students was also touched upon, as well as the efforts the library staff had gone through to advocate it as a space that “you can create in” and can be inspirational and not just about reading. Librarian

A was also a creative based degree student themselves during their own undergraduate career and is aware of the print disability-based challenges some of their students may be facing. During the interview, Librarian A smiled and enthusiastically stated, “I know what it’s like to be a creative student and navigate essays but also being really excited about creative practice.” Librarian A stated that they do believe that it is not always obvious that librarians are there to support the students with their creative practice, and not just the academic side of the curriculum. This could be finding inspiration or finding images and navigating materials. To best support fashion students, especially those who are undertaking degrees that are creative, it is important to curate collections that also inspire and aid these students in their coursework and assessments and to intimately understand these students’ educational needs.

## 5.13 Conclusion

Although Kuhlthau did not include which resources students were using when researching when developing the ISP model, this was an aspect of this research I found important enough to add into this study. To best understand the needs of the students, and in turn their information behavior, it is necessary to identify the information resources they are seeking. This element is also important to add to this thesis, because as this is the first investigation into the information behavior of fashion students, their most used and most wanted resources have never been identified before. As documents have gone through such transformations, the documents and resources fashion students in particular use are vast in mode and are widely available. When researching the information behavior of this demographic of students, it is important to understand if they are able to access collections that are adequate for them. By adding in this analysis, other librarians can learn from these insights to ensure that student needs are being met. I included the identification of fashion information resources and adequate resource collections as a whole to determine where fashion students were following, or not following, the stages of the ISP model due to lack of adequate resources. Other librarians can help their students by keeping up to date with fashion industry developments and with emerging resources. Librarians must understand and acknowledge different learning styles, print disability and creative students as a whole and curate a library collection with a wide range of resources in different formats. Librarians involved in this research have been asked questions specifically about the types of resources available to their students. The most common resources available in the library as identified by librarians include The Berg Fashion Library, WGSN, LS:N, and *Business of Fashion*. These resources were separately identified by fashion students that participated in this research, as resources that are used the most or are the most helpful. It has been identified that the biggest limitations to resource use of fashion students are the barriers of cost and

availability.

This research has discovered that librarians working with fashion students at UK universities do need to be more aware of the software that is available to the students via the library. Although these programs may not be purchased through library staff, they are available within the library and on library devices. The librarians need to have general knowledge of the inner workings and usage of these programs.

From the data collected and presented here, I believe the resources that are currently being offered to fashion students at the universities I am investigating are adequate. The librarians surveyed and interviewed identified the same or similar resources (physical, online and software programs) being used the most as the fashion students that also participated. This indicates that the librarians are aware of their collections and the needs and wants of their students. The librarians here are also aware of which resources are used the most and can weed out the ones seldom used to make room for more relevant resources when developing the collection. The resources in the collections have been identified by the students as useful, and for the most part, they feel as though the collections have every resource they need to complete their assignments.

Through this research it has been discovered that students are using the library provided fashion resources, but they are not solely using the library to solve their information problems when researching. Fashion students are using a variety of resources from many different sources, but it is important that library fashion resource collections are adequate for these students. Due to the diversity of fashion students as a demographic, it is important that the collections of resources available to support them fit with their diverse nature. Fashion resources come in different formats, being text based, image based, physical objects and online. To create suitable collections for fashion students, different types of documents are needed.

The resources which students identified as wanting or would like to see more of in the library were identified by librarians as already being available to some extent. This of course depends on the institution, as to what is available within the collection, but their information wants can be rectified either in the collection currently, or by requesting these resources from librarians. Librarians here curate their collections with student needs and wants in mind and are open to requests throughout the year. This should be communicated more to students, be it via signage in the library space, during tutorials and workshops, and signage in other areas of the university. Librarians are aware of the wants and needs of the students they serve and would be even more prepared collection development wise with more input and requests from students. In some instances, students were requesting resources that the library already had or had partial access to. To gain more access or aid in these resources, the students have the option to ask a member of library staff, attend a relevant workshop, or book a tutorial with the librarian, which students are seldom quick to do, as discussed in Chapter Six of this thesis. The resources librarians are acquiring are also adequate in preparing fashion students for their futures in industry, as they are aware of the changes and emerging technological innovations and are doing their best to keep apprised of resources needed for students to succeed. Students indicated that they are finding their fashion information resources from a variety of different places, including the physical and online library as well as other unspecified places both in person and online. When using the library and its resources, the students indicated via survey that they are using a mixture of resources but are reaching for online resources more so than physical. Although Student A and a higher percentage of students observed were using more physical resources than online, there is a nuance here. Student A's perspective is not to be generalized in this thesis, and their insight is only to provide a specific experience. As for the observed students, they were observed when in the library's physical space. When in the library, I comprehend that the students would make use

of the physical resources around them. The surveyed students also contended that they use library resources the most when they need physical books, or resources they know are located within the library. Student A interviewed stated they used the physical resources of their university library more so than those online, and specifically stated they use the physical books and special collections the most. During the rounds of observation, I derived that a higher percentage of fashion students in the library space were using more physical library resources than online. This indicates that when in the library space, the students are looking for specific print-based resources and using these resources when still in the library. This finding is in accordance with the finding of students most often visiting the library when they need a specific or print/text-based resource. Fashion students are using more online resources than physical and are obtaining these resources from a variety of places, not relying on the library for all their resource needs.

Based on my findings, it is likely that the fashion information resource collections featured in UK universities offering fashion-based degrees are adequate. This assessment is based on multiple factors. Firstly, this assertion is based on the vast majority of librarians and student participants deeming their resource collections adequate. Secondly, I have made this judgement based on my reading and comprehension of the data.

Main findings of Chapter Five:

1. Current university library fashion resource collections at the universities are adequate
2. As a whole, students are using more online based resources, which was identified both by fashion students and fashion librarians
3. The most-used fashion resources, as identified by students and librarians are: The Berg Fashion Library; WGSN; L:SN; and CLO 3D.

4. The factors that motivate and impact collection development have been identified as: Cost; Accessibility; and Physical Space.

# Chapter Six Fashion Students and the ISP Model

## 6.0 Introduction

As has been established throughout this thesis, this research is based on Kuhlthau's ISP model where there are six stages an information seeker goes through; initiation, selection, exploration, formulation, collection and presentation. Having established the most used resources by fashion students, where students are obtaining their resources, and the adequacy of library collections in Chapter Five, I will now turn to examining the ISP model in relation to research questions one and two.

This chapter reports on the findings of the usefulness of the ISP model when applying it to fashion students. There are three main segments of this chapter. The first considers contemporary fashion students in relation to the six steps of the information search process and outlines how the students are both compliant with the stages but also deviating from them. Next, I examine the role of mediators, both formal and informal, how they differ and what they each offer, including a discussion of the different services available to encourage students to interact with librarians (formal mediators), in the forms of workshops, tutorials and reference desks. This section also examines how fashion students approach librarians, if at all. Lastly, the third segment of the chapter focuses on the uncertainty of fashion students during their research process, while also highlighting Kuhlthau's guided inquiry curriculum, and how fashion students resolve their information problems.

Student needs are generally different than in years past for fashion students in particular. These students often work together closely in studios, depending on their course, and work with multiple academic and technical staff. Students are not reliant on the library to find information resources. Due to this, the students are using both formal and informal

mediators differently, and the information resources that are now available are more technologically advanced. This study seeks to identify if these changes affect the usage of the ISP model when looking at fashion students' information behavior, if there are deviations to the six stages, use of mediators and feelings of uncertainty, since the model has historically been associated with exclusive library researchers. This model was created in the pre-internet era, but the validity of its use post-internet was confirmed. Although it was confirmed to still be useful post-internet, this study was conducted over a decade ago, and there have been many new developments and technological innovations since then.

## 6.1 Why are Fashion Students Looking for Information?

Central to the study of information behavior is the query as to why a certain demographic is looking for information. Kuhlthau does not address this in her original study, but I felt it was important to include this in my study of fashion students, since there is an emphasis on the creative practice element of fashion-based degrees. Therefore, students seek information for a variety of reasons. When asked why they were undertaking searches for fashion information, fashion students responded with; to study, to research, for projects, for further development, inspiration, personal use when designing, references for inspiration and projects, to keep up with concepts and trends, university assignments, and help with work. Due to this, they are looking for a variety of resources and have a variety of information needs.

## 6.2 Main findings of the Study: The Six Stages of the ISP Model

This research explores how contemporary fashion students in the UK engage with the Information Search Process (ISP) model, revealing that their experience with its six stages is varied, non-linear, and highly individualized. Central to this thesis is the question of whether fashion students are going through some, none, or all, of the identified six stages of the ISP model. Through this research, I have identified that contemporary fashion students in the UK are going through some of the six stages, sometimes. The stage or stages which they are going through is dependent entirely on the student, and the students are not necessarily going through each stage of the ISP every time they conduct research. Librarians A, B, and C, who were interviewed for this research, state that they each see students at different stages, such as in the beginning or the end, and not at a pre-determined or exclusive stage. Each librarian's experience with their students provided examples as to where the students were in their research process, and where they decided they needed to reach out to a formal mediator for assistance. When interviewed, Librarian B stated that their students come more often to them in later stages, and not right when their information needs arise. Sometimes they are looking simply for inspiration and want a meeting to talk through it, but more often they already have that on their own, so they come in with a specific need or query to solve. In contrast, Librarian A commented that they are only seeing their students in the first stage(s), and rarely so in the middle stages. Although these librarians are seeing their students at different stages and at stages that Kuhlthau did not identify, the students themselves are going through some of the stages of the ISP and are seeking the aid of formal mediators to solve their information problems.

### 6.2.1 Stage One

During this first stage, students are just receiving their assessment brief. Actions during this stage show the student beginning to talk to others about the assessment in a generalized form and brainstorming ideas and contemplating the assessment as a whole and thinking of topics and ideas that would be appropriate (Kuhlthau, 2003). At universities in the UK, briefs are generally given to the students either during the first week of teaching, or at the start of the module when students are expected to begin working on the project. The briefs are given out in class by the module leader and are also available to the students via Moodle from the start of the module for student reference at any time. This first task initiation stage is simply where the student recognizes that they will need information and information resources to complete the assigned brief (Kuhlthau, 2003).

A critical aspect of the research process is managing the feelings that arise from uncertainty. This was a central consideration of this research when engaging with fashion student participants. When asked via survey what their feelings were when they became aware of their information need or when receiving an assessment brief, 58.33% of students surveyed responded that they felt excited and optimistic, 25% stated they felt anxious, 8.33% of students stating they felt confused, and the last 8.33% stated that they feel as though they will fail their assignment before they even begin the research process. When surveyed, the students were presented with these four options. Due to the design of the questionnaire, the students were only able to select one answer to this prompt and were asked to choose which emotion they felt most often. Although a higher percentage of students stated that they feel excited during the start of their information search, a combined 41.66% of surveyed students identified having feelings of doubt, anxiety and uncertainty, which follows the ISP model and the uncertainty that arises at the beginning stages.

The librarians I interviewed for this research reported observing a mixture of emotions in their students during this initial stage, if they saw their students at all. 16.67% of students surveyed stated they are going to a librarian at the beginning of their research. Librarian B stated that they do not see students much during the first stage at all. This librarian said that the few students who do engage with the library and the librarians at the beginning stages of research seem to be entering the library to familiarize themselves with the collection. According to Kuhlthau (2003), browsing the library's collection is typical during this stage. The students might also be attempting to get more information about the resources and the collection in a generalized form, such as what is available, but Librarian B noted that the latter here is "quite rare" as these students are browsing resources that are relevant to their topic choices. Librarian B also noted that often, when students are coming to look for inspiration or to familiarize themselves with the collections, they usually do not interact with the librarians. This differs from Librarian A's experience, as they find that students are approaching them at this initiation stage. This indicates that Librarian A's students are taking advantage of their time in the physical library but seeking mediators when browsing the library collection.

From this data, these students are going through stage one of the ISP model, regarding over 40% of surveyed students feeling apprehension at the beginning of their information search process. But they are also deviating from the model in that although not all of the student participants are experiencing the uncertainty that Kuhlthau has identified in stage one. The students here are also not approaching or seeking much assistance from the librarians at this stage, as Kuhlthau identified, which again deviates from the ISP model.

### 6.2.2 Stage Two

Students entering stage two of the information search process begin to feel less uncertain, as they have chosen a topic to complete their assessment. Kuhlthau (2003), describes this optimism as “brief elation” (p. 46), and it usually gives way to feelings of anticipation going into stage three of the information search process. During this stage, a general topic is selected, and the student is ready to begin the information search (Kuhlthau, 2003). At this point in the search, actions such as preliminary searches for information begin to take place, as well as talking with others about the topic and assessment possibilities (Kuhlthau, 2003). During this stage, consulting with mediators and discussing the topic are listed by Kuhlthau as one of the actions students partake in during this stage.

Librarian A found the majority of their students are coming to them at the early stages of their information search process, in the first, second or third stages of their information search process. The students come to them at this time if they are feeling overwhelmed or if they do not understand where to find the information to meet the requirements of the assessment. Students also consult librarians at this time when they have chosen a topic but are confused as to where to begin their research process. Students approach Librarian B occasionally, at stage two if they have an idea on a project or topic and they are not quite sure how to tailor their research techniques to find relevant specific information. Students are also engaging with this librarian during the early stages of their information searches when the students seek confirmation that there are resources on their chosen topic.

The data presented here shows these students are going through stage two of the ISP model. This is because the students are beginning to approach librarians, seeking the assistance of formal mediators. When approaching these mediators, the students have initial ideas about their project and are contemplating their options or have just chosen a topic. Students at this stage are also approaching librarians due to their feelings of uncertainty,

confusion, and anxiety. This conclusion stems from the data presented in response to the questionnaires and interviews with Librarians A, B and C. As indicative of the second stage of the ISP model, the students here are beginning to engage with the librarians. These students are in compliance with stage two of the ISP model, as they are going through the thoughts, feelings, and actions described by Kuhlthau (2003).

### 6.2.3 Stage Three

Kuhlthau identified the third stage- exploration- as the stage where students begin to feel “stuck” (2003, p. 108) in their research process. This has previously been identified as the most difficult stage of the ISP, as this is where uncertainty begins to increase. During this stage, students typically struggle with expanding their pre-existing knowledge. This is due to the information they are encountering not fitting into their preconceived constructs (Kuhlthau, 2003). This stage is commonly associated with identifying a focus of the chosen topic due to the exploration of relevant information and is consistent with students experiencing feelings of doubt, uncertainty, and confusion (Kuhlthau, 2003). Librarian B said the students who are booking one-to-one tutorials with them are coming to them during the middle stages of their research. They stated they find this to be especially true for fashion students that are design-focused, as they come to the tutorials with designs and ideas that they need help developing.

50% of the surveyed the librarians that participated via survey stated that they find that most of the students they see come to them during the middle stages of the research process. Of librarians surveyed, 50% responded that students sought their assistance when they are feeling stuck in their research, while the remaining 50% of those surveyed said their students were sometimes coming to them when they were stuck during the research process. Students surveyed are confirming this, with 50% stating they approach a librarian for help

during the research process in the middle stages of their information search. Here, the students are upholding the third stage of the ISP model, as they are filled with feelings of uncertainty. For more on uncertainty during the search for information and fashion students please refer to section 6.6 of this Chapter.

Librarian B contended that they find their students are coming to them in the middle state of research because they are becoming confused with the influx of new information, and this starts to make them anxious. During this stage, students have a difficult time allowing new information to extend the knowledge they already have on a subject (Kuhlthau, 2003). Due to these feelings of uncertainty, the students are coming to the librarians to gain clarification as to whether they are finding relevant information resources and are researching correctly. In conjunction with this theme, Librarian B also stated they find their students coming to them with the feelings that the librarian described as, “I’ve got this idea, but I don’t know what to do with it or where to go further.” This sentiment here validates the theme of uncertainty and confusion that is associated with the third stage of the ISP, where information seekers hit a research roadblock.

In Kuhlthau’s original study, students related the use of librarian intervention as one they used as a last resort when they were struggling or stuck in their search process. Due to this, the students indicated that they recognized their own need for help and sought a mediator (Kuhlthau, 2003). Fashion students featured in this study are booking one-to-one tutorials when they are experiencing uncertainty in their research process. This indicates that these students are aware of the resources and services available to them via the library. The students are aware that the uncertainty they are feeling during the search process can be lessened with the help of an information professional. Librarians are present in university libraries to aid students in their research, and the fashion students involved here are aware of this and the role that formal mediators can play in their search for information. Although the

students are aware of the services available to them via the library, they are reluctant to seek help.

As presented above, fashion students are feeling stuck at this stage, which is confirmed via survey responses. Although this is the stage where students are most likely to get stuck, Kuhlthau does not identify that students are seeking mediators at this time. Fashion students are getting stuck, which is in compliance with the ISP model, but they are seeking aid from formal mediators in order to combat issues within the research process, and reduce their anxiety and uncertainty, which does deviate from the model, as this is a stage where students were not identified as seeking mediators.

#### 6.2.4 Stage Four

The fourth stage of the ISP model is the stage where the information seeker begins to gain more confidence in their research process and chosen topic, with their feelings of uncertainty decreasing drastically. During this stage, a “focus” of the topic from the information collected is beginning to form for the students. For many students, this stage is a turning point in their research process, as feelings of uncertainty are overshadowed by feelings of optimism and confidence (Kuhlthau, 2003). Due to the research and collection of information, which in turn creates a focus, the topic becomes more personalized, and the constructs of the new information become clearer (Kuhlthau, 2003). A clearer focus on the information and assessment enables the student to move onto the next stage of their information search, and commonly, there is a sense of increased confidence and clarity.

Two institutions featured in this research had materials libraries, one of which features a dedicated materials librarian. These collections vary in size, and one was only established during the data collection portion of this research. This materials librarian, Librarian B finds that students often come in to see them either during the middle stages or

the end stages of their research. Usually, the students come in, for example, after early designs for their project are done and when early stages of preliminary research are completed. Since this is a library full of material resources, Librarian B sees a majority of students who have done a significant amount of research already, as they will need to have a concept and a focus either formed or close to forming in order to get to a stage in which materials would be needed. Librarian B stated here they find the students “have designs and they’ve already done the specification, but in order to complete the project they must choose a material.” Here, a concept is formed or is close to forming, and the students, especially those who are design based, are looking for specialist help to complete their research and assignment.

Students who are not using resources from the materials collections are still approaching librarians during this formulation stage. Librarian C, who works with the standard library collection, not the materials collection, stated students that are struggling during these middle stages usually have some sort of idea or general topic formulated, and they need help with the details of the topic they are researching in order to create a focus. Although the students are approaching librarians for help during this formulation stage, the librarians featured here are seeing a change in their students at this stage. Librarians B and C have identified here that students are coming to them with a focused research topic and are either looking for conformation of the clarity they are finding with this stage or are close to forming a focus and need help with more detailed research enquiries.

The data derived from this research confirms that students are going through the fourth stage of the ISP model, but they are departing from the model in some respects. As stated in Kuhlthau’s research, students are not generally approaching mediators at this stage. This is where fashion students differ from the model. The students here are approaching librarians. As reported above, the students are approaching the specialist materials librarian to

seek assistance in creating their focus. They are not necessarily seeking this assistance for “help” in their research process, but for resources and recommendations on materials and other physical resources. This shows a distinction between fashion students from other cohorts of students. They are approaching mediators at a stage where it is not typical, due to the creative aspects of their degrees. At this stage, if students are seeking aid from a mediator via the regular library collection, they are approaching librarians because they are struggling or seeking clarification. These students are seeking the aid of librarians to formulate their focus which takes them through to stage four of the search process. Although some students are seeking specialist mediator assistance at this stage, they are still going through the fourth stage of the ISP. These students have formulated a focus within their research, and this is indicative of stage four of the model.

### 6.2.5 Stage Five

The end stages of the ISP model see the information seeker using the information they have gathered most efficiently and comes with a sense of relief if their research has gone well, or in some cases, a sense of despair if their research has not. Students going through the stages generally have a feeling of relief and a sense of confidence by the end of the research process. Kuhlthau’s emphasis on the thoughts and feelings of the students is evident in these last stages of the information search process. The students’ feelings shift as they expand their knowledge in a given subject area. By the time the information seeker is reaching the fifth stage, information collection, they are interacting with the information systems most effectively (Kuhlthau, 2003). During the stage, gathering information that supports and defines the focused topic is the goal. The student has a clear sense of direction and can easily identify relevant and non-relevant information. During this stage, the students are able to ask for specific information resources from the librarians and are more focused when requesting

aid from mediators. Feelings of confidence begin to increase, and interest in the project deepens (Kuhlthau, 2003). Of the students surveyed, 33.33% reported that they are approaching librarians at the end of the research process.

At this stage of their research process, the students participating via survey and those identified by the interviewed librarians, did not go through the fifth stage of the ISP. Only 33.33% of surveyed librarians are coming to them at the end stages of their research process. The students here are not seeking the assistance of a mediator as expected by Kuhlthau. As reported in the questionnaires and interviews, fashion students are not approaching librarians seeking specific resources. However, during the observation portion for this research there was a student who was meeting with librarians during stage five of their research. This student was seeking assistance to locate specific resources, which is indicative of stage five. The majority of fashion students who participated in this research are not going through the actions that are typical of this stage.

### 6.2.6 Stage Six

The last stage of the ISP model is the sixth presentation stage. This stage entails the closure of the information search process. The task here is to present or otherwise use the findings that came from the search. At this point in the research process, it is time to stop searching for new information, but to recheck sources and confirm information used and make certain the correct citations are in place (Kuhlthau, 2003). The feelings associated with this stage are generally those of relief, and “sometimes satisfaction and sometimes disappointment” (Kuhlthau, 2003, p. 50).

The feelings of the students at the end of their research process were examined via the first questionnaire for this study. When asked explicitly if they felt a sense of confidence by the time their research is complete, 33.33% of surveyed students stated that yes, they did feel

a sense of confidence by this stage. 25% of students responded with no, they did not feel this sense of confidence, and 41.67% stated they sometimes feel a sense of confidence by the end of their research process. In this context, “sometimes” refers to whether the research has gone well for the student at a particular time or assignment. Here, again, this level of confidence is dependent on the student and on the research project at hand. This follows the ISP model, as feelings of confidence and relief come when the particular search and assessment have gone well, which does not necessarily happen with every search. Librarians featured in this research reinforce this notion of students feeling relief and confidence at the end of the research process. During our interview, Librarian B stated that they find students to have this sense of relief, stating “I think a majority [of students] are more confident by the end, they’re more sure.” But Librarian B also said they also see a good number of students coming to them at the end stages of their research assignments. Students are consulting with Librarian A when they are looking for some clarification on the resources they have chosen, if they are completing the objective as to what their assignment is looking for, if their referencing is correct and occasionally, the students are looking for a “oh you’ve done okay, you’ve done well.” For students, the validation of doing something that does not necessarily come naturally is an emotion that is sought after.

A marginal percentage of students are more confident by the end stages of the research, with a high percentage of students finding they sometimes feel a sense of confidence at the end stages of research. This is likely dependent on the assignment and the students’ interest in the topic at hand. There are some students who get to the end stages, and still consult a librarian, either looking for confirmation or even further clarification. There are also always students that have left the assignment until the last minute and are in a sort of panic mode. These students reach out looking for resources that can be found quickly, and they are not confident in any stages of research, or there have been barriers to their research

that towards the end of the assignment they desperately need research help and anxiety is quite high. The ISP model does not consider outside pressures such as time constraints and print disabilities, which might hinder students during their research process and affect their feelings during the research process and the assessment.

The data presented here demonstrates that the students involved in this project are generally going through the sixth stage of the information search process. As reported by Kuhlthau, emotions at the end of the research process can be mixed. This is also true for these results. Some participants revealed they feel a sense of relief after their research is concluded, while others maintain that they sometimes feel this. These findings are in line with the sixth stage of the ISP model.

Although there are deviations from the model, this research demonstrates that fashion students in the UK are generally going through the six stages of the ISP model. They are not necessarily going through all the stages or feeling the associated thoughts and emotions at the same time, but they are confirming the use of the ISP model when studying the information behavior of fashion students. Although fashion students, especially those with a creative process base, have different needs than other demographics of students, they are still going through feelings of uncertainty, confidence and relief during their information search processes. The students approach formal mediators at different times in their research process, when their feelings of uncertainty are at their highest. This is of course dependent on the student, with some students not approaching a mediator at all. The stages they are going through are not linear, and some may be skipped all together, but using the ISP model to research the information behavior of fashion students is conducive in gaining insight

## 6.3 The Role of Mediators

The role of formal and informal mediators is central to understanding how fashion students navigate the Information Search Process (ISP), as both peer support and professional guidance significantly shape their research process. Formal and informal mediators are important aspects of the ISP model, Kuhlthau's research, and in the information behavior of students. The importance of mediators is an important factor in the information behavior of fashion students featured in this study. Mediators are featured here as being friends of the students (informal) as well as the librarians in the students' libraries (formal). These formal mediators are also seen in different educational environments, such as with private and group tutorials and library lead workshops. In this section I will detail the importance of the use of formal mediators, and how fashion students are using mediators during their information search process.

Kuhlthau advocates the importance of mediators in her work. In this study, librarians are seen as subject specialists. Kuhlthau, although a supporter for the use of formal mediators, reported a limited role in their actual use by the students (2003). When originally testing the ISP model, no student involved in the study stated they sought the assistance of a librarian "often" (Kuhlthau, 2003, p. 108). Stemming from this, most students felt that the librarians had "little to no role in their search process" (Kuhlthau, 2003, p. 109). This study featured the same results. In Kuhlthau's study, the students saw the library as a "self-service" entity and were reluctant to use the services such as workshops and assistance the librarians offered (Kuhlthau, 2003, p. 108). For Kuhlthau's students, the librarians were seen and used as a "last resort," and were only used when seeking more obscure or specific resources (Kuhlthau, 2003, p. 108). The limited use of mediators by these students was due to the students feeling that if they sought this assistance, it made their research and work less "theirs" (2003, p. 109). In this instance, librarians were given the role of "resource locator,"

(2003, p. 109) where students only used them to find resources physically on shelves or when seeking specialist help. The use of mediators in this research is also limited, though when these students are using mediators, they are using them a bit differently than in Kuhlthau's study. In this study, the fashion students on occasion use mediators to brainstorm and discuss topics for their projects. This differs from the results Kuhlthau reported in her study, although this is reported to be an aspect of stage two of the ISP model.

The data from this study exhibits that fashion students are more likely to use an informal mediator if they are seeking a mediator at all, with 58.33% of students surveyed stating this. The students in this study stated this is due to them being more comfortable with people they are already familiar with. In Kuhlthau's study, she found that students believed that informal mediators were more encouraging than formal mediators, which led them to use informal mediators more as well (Kuhlthau, 2003).

The fashion students featured in this research via survey do not approach librarians often. When students are approaching librarians, they are doing so at different stages of their research process. There are a variety of reasons why students are seeking the help of a librarian. Librarians are no longer seen as just the information resources locator, though students are approaching librarians in this instance. Librarians are required to provide services to aid their students in a variety of ways and in different situations. When surveyed, librarians were asked what information problems students were approaching them for. Website navigation and log in issues were also common answers to this query, although these issues are better suited for different departments, such as IT. The fashion librarians felt that the more creative based students are more apprehensive about the written work. In these instances, creative students are asking for help with more traditional academic work, such as literature keyword searches, assistance with fashion databases, or for recommendations for extra resources to support the research they have done on their own. Help with academic

resources is not the only assistance librarians can provide. Librarian A that was interviewed stated that they felt as though their students thought that they, as the librarian, are only there to help them find print books, or theory based books for their essays, but they wished the students knew they are there for much more than that, and can also be there to help them navigate their creative practices as well.

41.67% of the students surveyed do not seek the intervention of formal or informal mediators. Although nearly 60% of surveyed students are seeking the help of friends over librarians if they are seeking a mediator for a variety of reasons. Anxiety and uncertainty are at the forefront of these reservations. Students feel as though they are bothering the librarians when they approach them for help or feel uncomfortable talking at length with someone they do not know well. If these students are seeking help from a librarian, they are more likely to go for specific information needs. For some students, they are more comfortable asking someone they are already familiar with for help. Students have admitted via survey, shyness when approaching librarians, and using an informal mediator, such as a friend, can take away these feelings of discomfort (Robinson and Reid, 2007). Kuhlthau noted that the students in her study found informal mediators to be more encouraging than formal mediators, while also acknowledging that their friends might not know the possibilities of what resources are available (Kuhlthau, 2003). Fashion students also feel this same sentiment, as was relayed via survey responses. Although students might feel more comfortable relying on their friends to help solve their information problems, it is important to note that librarians in the university library are trained to help the students and are often specialists in creative and fashion library practices. Kuhlthau does not discuss subject specialty in her research, though it is an important aspect of this research thesis.

Expectations of the students vary when attending tutorials and workshops run by mediators. Librarian B felt that a lot of the time the students come into workshops and

tutorials with unrealistic expectations. The students come in expecting that the librarian will give them the answer. Librarian B interviewed stated that, as an example, a student can come in with a specific question on mushroom leather, and the librarian can show it to them and answer questions about it, but it is up to the student to work it out if that is the material in which would work best for their project or if it is better for them to keep searching. The students often expect librarians to tell them which materials or resources to use. This is not the role of the librarian, as their role here is showing options and recommendations, but it is up to the student to decide if the resources they are shown will work for their own project.

Students are also coming into one-to-one tutorials with feelings of intimidation. Librarians A and B stated that the students they see often come into their tutorials feeling as though they already need to know everything about the subject at hand. Students here are afraid to look “stupid” in front of those who they deem to be “smarter” than them. Librarian B wishes their students understood that “we are learning with them, and we’re here to help them.” The librarians understand the attitudes and feelings of the students they are working with and are aware of the conceptions the students may have when approaching them for help. The students are aware of their need to seek help with their information problems but are still apprehensive to do so due to their reluctance to admit to librarians that they may not know everything already. Librarians find themselves wishing their students would come in with a more open mind and release the pressure to feel that they need to know it all. They also stated that they try to show the students that they do not know everything as well, and that they can use this opportunity to learn together, employing a more peer-to-peer tutorial style. Higher education as a whole and talking to staff and academics can be very intimidating for students and can hurt the confidence of students going into the library and asking librarians and staff for assistance. The librarians via interview and survey acknowledge that the students may have this perception coming into tutorials. They try their

best to reassure the students that the library is a space to explore, ask questions and specifically “not know.” These librarians are also aware that perhaps information professionals are overestimating the abilities of students coming into the library and have made sure to do workshops on tips and tricks for finding information and comprehending information.

The willingness of students to reach out to a formal mediator can sometimes depend on the cultural background of the student. Librarians A and B mentioned that with tutorials and other interactions with students, there was a difference between international students and home students in this regard. For some students, it is more comfortable for them to bring a friend with them when meeting with a librarian. Librarian B noted that the international students were more confident when booking tutorials and finds that home students are less inclined to reach out for help in this manner. This could be due to international students having a language barrier and recognizing their need for extra assistance. This could also be dependent on the student in general, with some students being more confident and willing to ask for help from mediators. It is not within the scope of this current research project to investigate this theme further, but this leaves room for future research in this area.

Contemporary fashion students are generally not approaching librarians for help when researching. When surveyed, 50% of students stated that they never consult a librarian for help when researching, 41.67% stated that they rarely consult a librarian when researching, and 8.33% stated they are sometimes consulting a librarian. 0% of surveyed students stated that they consult a librarian “often” when they are researching. If fashion students are approaching a mediator, they are more likely to go to an informal mediator. 58.33% of surveyed students stated they consult informal mediators, such as friends, more than they consult librarians when researching, with the further 41.67% of students surveyed stated that they do not use either informal or formal mediators when researching. Librarian B

noted that it can also depend on the point of the academic year as to whether students are booking tutorials and looking for help. At the end of each term, there is a usual influx of students looking to book tutorials, and course leaders asking for workshops for their students. Fewer students in general seem to come to help desks and book tutorials at certain universities, with most students opting to use the library online chat services or not seek help at all. This confirms Kuhlthau's findings on mediators, as the students involved in her conformation studies of the ISP model rarely sought out librarians and other formal mediators, seeking them as a last resort.

### 6.3.1 The Importance of Qualified Mediators

Librarians who develop specialist knowledge and creative skills related to fashion play a crucial role in effectively supporting students' research by understanding their needs and staying connected to the industry. With a field as diverse as fashion, having a librarian with specialist or related knowledge can be especially helpful. Some librarians also have personal interests that can help them when serving students, as they are researching and learning along with the students for their own personal knowledge. This interest or knowledge does not have to be perfected before working with these students directly. Specialist knowledge can be developed and can be done on the job. Librarians with creative practices of their own are also helpful to students and other staff members in a practical sense. Librarian C expressed that for them and their team, "there are a couple of staff members that are very creative and have their own creative practices, so they are aware of how to use programs and software." Having background knowledge of the subjects they support can also help librarians anticipate the information needs of their students. This can, in turn, allow the librarians to have an understanding of the different ways students conduct research and of different concepts or information and different groups of students. Events and

conferences within the field that a librarian's students' study is also helpful. There are many professional development webinars within both the librarian and information science profession and the fashion industry. Librarians identified the need for more interaction with fashion professionals via this research and made note to mention that although they might feel out of place at these events, it is important for them to attend, as this will greatly benefit their professional practice, collections and furthermore, their students.

Information practices and librarians are not one size fits all when serving students. Each demographic of students has different services, research needs, and resources. Generally, librarians working at the higher educational level have a Master's degree. This varies for library assistants and other library staff. Librarians working with students become specialists in the area of study they support. Some librarians come into their role with a background in or general knowledge of the subject and students they support. Modern libraries, and therefore librarians, have transformed into spaces that not only house resources, but those that support teaching, learning and researching initiatives (Abubakar and Attahir, 2018).

Having staff that are highly knowledgeable about the resources available in the library is important. During one observation, there was a consultant assisting the librarian. These observations are discussed in section 6.3.3. This consultant did provide important insight and helpful but more generalized resources to the students they interacted with, but it should be noted that they could not show the students anything specific within the collection or any resources that they knew are available through the library. In this instance, having a specialist librarian is very important for these students. The knowledge this librarian has is invaluable.

At one institution, Librarian C holds a great deal of responsibility and is responsible for hiring their staff. When asked how important they feel it is to have a specialist staff they have found that "this depends highly on the library team that is on staff, and how that team is

managed.” This also includes hiring staff that have knowledge of fashion and the industry, such as Librarian C’s team having a former designer on staff. Librarian C mentioned multiple times during the interview how important it was to them to build a team of qualified librarians.

When asked if they thought it was important to hire specialist librarians, Librarian B stated they did think it was important, but to a point. Qualified librarians are hired at this university, but sometimes they are hired into roles that are not 100% in line with their subject expertise and are hired based on library work experience and degrees. There is a lot of subject expertise that can be learned on the job by researching and collection development, as well as with outreach and networking. Librarian B does make a note to say that there does need to be some sort of expertise or specialist knowledge, and this brings an opportunity for development and further learning. Librarian A was an art-based student themselves, stating they have a real passion for arts and creative based librarianship and a true interest in creative practice and research. It is hard to show the students just how experienced the librarians are and what their expertise is, which is why workshops and inductions are helpful in showing the students this. Librarians working with fashion students are generally highly qualified professionals filled with passion and excitement.

### 6.3.2 Tutorials with Mediators

As tutorials are currently the main method of interaction between fashion students and mediators, this section will explore the concept of tutorials, and how students interact and use formal mediators. Tutorials offer the students the undivided attention of the librarian, and the ability to tailor the tutorial to their exact information needs. Students must book a one-to-one tutorial with librarians to obtain help from them. Depending on the university, there is also the option for students to approach a library reference desk; this is explored more in sections

6.5 and 6.5.1. One-to-one tutorials are there for students to have the full attention and time of the librarian. Each university library involved in this research offers these tutorials to their students. One-to-one tutorials allow for individual interaction between students and the librarian. Librarians believe it is better to have one-to-one interaction with students when helping them with their information queries, and the options of tutorials aid in filling this void. At all institutions featured in this research, students have a choice in booking either in person or online, with librarians A and B stating they find face-to-face meetings more beneficial to the students

Due to the only interaction with the librarians coming from tutorials and workshops, I enquired as to if librarians have enough interaction with the students for them to feel comfortable to ask for help. Answers to this were mixed amongst the participating librarians. Those that do not have a reference desk, such as Librarian A, stated how much they feel it would be beneficial to add one to their library. They feel that they cannot always meet the demand for student tutorials, and it would eliminate the need for students to book full tutorials for simple queries that could be answered if students were able to drop in to the desk. Librarians A and C feel that this would bring more of their presence in the library, but they do also feel that the workshops that have been embedded within the curriculum on the courses have worked quite well. Although there are barriers to librarians seeing every student that enquires about a one-to-one tutorial, there are other methods around this to provide service and help the students. Email and online chat services have great benefits in this regard. Librarian A stated that they often get emails from students, generally early on in their research, seeking guidance on their topic selection or asking for resources recommendations. These queries can be solved quickly, as the librarian can then respond with their recommendations, or with links to suggested online resources. Resources guides are also available online for the students. These guides are broken down by subject and are very

detailed. These are there for the students to access at any time. Librarian A made mention that they have a webinar program for the library that is available via LinkedIn for the students to familiarize themselves with the services of the library.

To study how someone behaves informationally, it is important to note different personality traits. Some students are naturally more confident than their peers. Librarians via survey find that the ones who are shyer can benefit greatly by booking one-to-one tutorials. If it is a student's first one-to-one tutorial, librarians find they can sense their nerves in this setting. Librarian B stated they now keep records of the one-to-one sessions they do with students, keeping information such as the student's year of study, which course they are on, and previous one-to-one tutorials. This helps keep a record of the student's needs and helps the librarian tailor their services to each specific student.

One-to-one tutorials are advertised in a variety of ways and are easily bookable for students. They are advertised within the library space, librarians are able to send emails to the students through Moodle or Blackboard, through a monthly digest newsletter, as well as the course leaders and lecturers reminding the students of this service. Librarian A stated that the library staff sometimes worried that the students are not aware of the services and tutorials that the library offers, especially when there are times where there are lulls in students booking tutorials. One-to-one tutorials generally have a higher attendance rate than the workshops within the libraries. The librarians interviewed suspect that this is due to a few different factors. Firstly, the student needs to take the time to book the tutorial themselves and can choose a time which works best for them. Secondly, this is an environment where the students are talking about their own work and creative practice, and a one-on-one setting is likely more comfortable for them to share and ask for help. There are also the more confident students who like the opportunity to talk about their own work and materials.

There are of course some issues with one-to-one tutorials, especially when it comes to student demand. There are only so many librarians to help the student body. This is where help desks, chat services, and resource guides are helpful. Unfortunately, demand is high for the librarians' time, but there are resources there to aid each student in need. Tutorials are limited due to the time constraints of the librarians. Unfortunately, there are too many requests for one-to-ones, and it is not physically possible to cater to them all and support every student in this way. Library sponsored workshops, which are readily available, could combat this issue, but these workshops have regularly reported low attendance rates, which is discussed further in section 6.4 of this Chapter.

### 6.3.3 Observed Tutorials

I observed multiple one-to-one tutorials for this project. These tutorials were conducted at one university on the same day. These were conducted featuring Librarian B and an independent contractor, with decades of library experience. This contractor does not work full time at the university and is only there for tutorials on some occasions. This university has a large student body and can be classified as an art-based university with a renowned fashion program located in London. These tutorials were available for all students at the university, not just fashion students. The tutorials took place in the library, at a table that was reserved specifically for the tutorials. Of the students who booked in for tutorials on this day, five were fashion students. These tutorials needed to be booked in advance, and this session of tutorials was fully booked. Each tutorial was scheduled to last up to 30 minutes, but they often went over this time limit. These tutorials were observed in order to demonstrate which stages fashion students are going through the process of booking a tutorial with a formal mediator for help within their search process.

**Student A-** This student had the concept of their project as a whole formed but needed help with the details. They were approaching the librarians for help during the middle stages of

research, or stage four of the ISP model. The student had completed the early stages of research and had a good base of knowledge. At this point in their research, the student needed specialist assistance. The student was seeking aid in creating a focus for their project. They needed help with the details of their project, as they were struggling to get more focused, relevant information. It was observed that this student did seem to be nervous at the beginning of their tutorial and seemed shy by nature. During this tutorial, the librarians gave the student recommendations for a variety of resources, including physical fashion books available within the library, and showed the student resources via the online library on an iPad. This student deviates from the ISP model, as they are approaching a librarian at a stage Khulthau did not identify.

**Student B-** Student B had completed the early stages of their research and had an established concept/idea for their project, a focus and a plan in place for the remainder, but needed specialist help with the materials portion of the project. This student was identified as being in stage five of the information search process. During this tutorial, the student was requesting specific resources from the librarian, as they knew the librarian would be able to locate these resources and give recommendations to other similar resources. The librarians here brought out examples of resources that are available to the student and went through each one of them in detail. Student B follows stage five of the ISP model, as they are seeking the assistance of a librarian and requesting specific resources.

**Student C-** This student had a vague idea of a garment/design they wanted to do for their final project but was seeking confirmation from the librarian on the usage of particular resources before going forward. Here, the student was more towards the beginning stages of their search process. The researcher identified this student as being in stage two of their information search process. This student had just chosen a topic for their project and was meeting with the librarian to discuss their chosen topic. The librarians discussed this topic

with the student, before discussing what resources would be best for the student to become more informed. For this student, the librarians showed the student different online resources, such as databases, websites, and articles on the student's laptop. The librarians brought out different resources from the physical collection for the student and also recommended specific journal articles and showed the student how to locate them online. This student was in stage two of the ISP model, as they had recently chosen a topic and were consulting with a formal information mediator.

**Student D-** The student from this tutorial was between the third and fourth stages of the ISP model. They had a concept for their assignment and early research was completed but were stuck and sought the advice of librarians. This student had just begun to formulate their focus and was requesting specific help from the librarians. The student was requesting specific resources and was also seeking the opinions of these resources with the librarians. The librarian took the student around the library, to show them physical reference books to use, but could not take them out of the library. The student here also brought in their own resources to talk about and seek the input of the librarian. This student was not in compliance with the ISP model, as they were seeking the aid of mediators at a time not identified by Kuhlthau.

**Student E-** The final fashion student who booked a tutorial with the librarians was in the early stages of research and had an incredibly vague idea of the project concept. The researcher identified this student to be in stage one, heading into stage two of their search. The student sought the help of the librarian for inspiration purposes for their project. They wanted help with brainstorming to create a focus for the project, so they could progress further into the research. This student was also seeking confirmation from the librarians that this topic was appropriate for the brief, and that there are enough relevant resources in the

library to complete their project. Student E was following the ISP model, as they were brainstorming topics and reaching out to formal mediators.

For this session of tutorials, each student had some sort of project in mind, varying degrees of specificity. They all had at least a little bit of context already for their assignment/project, although some were further along than their peers. Librarian B helped with not just resources, both physical and online, but also with general critical thinking skills and just talking through the assignments and resources with the students. Each student diligently took notes and photographs of the resources during their tutorials. They were very engaged with the librarians and receptive to suggestions. The specificity of the help students were asking for and how much detail they gave the librarians about their project depended greatly upon the student and their confidence level. Three students, Students D, C, and E, each stated that they were in their third year of study. The other students did not specify what their year of study was. The three students who indicated that they were in their third year were more specific in their details and description of their project and were more comfortable when interacting with the librarians during the tutorial.

The students were not seeing the librarian in the same stage of their research processes. Due to this, there was some conformity to the ISP, as some students were visiting at stages previously identified by Kuhlthau. The confidence and anxiety levels of the students also varied. Some students were confident in their work and themselves and seemed to be very comfortable interacting with the librarian. Contrary to this, one student was identified as being nervous during their tutorial. This student was identified as being in stage four of their research, which in this research is where the results differ from Kuhlthau's findings. Stage four of the ISP does not indicate students approaching librarians in Kuhlthau's results, but this has consistently been identified in this research.

These tutorials also showed that the needs of fashion and other creative students differ from other student demographics. During these tutorials, Student E sought the aid of the librarians to seek information resources for inspiration purposes, which is indicative of creative students (Daniels, 2018). Some of these students observed met with the librarians to seek assistance with their creative practices, rather than for aid with more traditional university assessments. This is what differentiates fashion and creative students from other kinds of students. Although certain characteristics of information behavior is similar to other demographics, such as the need for more information literacy, customized library tutorials (Morrison and Krishnamurthy, 2008) and the need for more resources offered by the library (Khan and Shafique, 2011), traditional approaches to addressing these information needs are not always appropriate for creative students, due to their unconventional learning practices and emphasis on inspiration and creativity (Appleton, Montero and Jones, 2017).

Although the students all approached the librarians for assistance at different stages of their research process, the librarians served them all the same. The librarians are happy to help all students at any stage of their research process and understand the pressures and needs of these students. The librarians are also happy to consult about the same project multiple times, if the students are able to book a tutorial with them.

These tutorials are also helpful for the librarians when they are developing and building their information resource collection. As observed, the librarians exhibited a wide variety of resources they thought were appropriate for each student. The confidence of Librarian B was very apparent during these tutorials and interactions with the students. The knowledge the librarian has of the library collection, and even resources available outside of the library, was vast. After these tutorials, the librarian also remarked that they feel as though they learn more every time they meet with the students and find that this aids in building a relevant collection of information resources.

## 6.4 Workshops with Mediators

Library workshops play a vital role in supporting students' research by offering accessible, diverse, and curriculum-integrated sessions that maximize librarians' outreach and student engagement. Library workshops are in place at every university library that participated in this research. These workshops are sponsored by the library and are available for students to drop in usually without booking. Library workshops are also incorporated into the curriculum, with courses having specified workshops for their students. Workshops center on a variety of different subjects, ranging from database research techniques, successful dissertation tips sessions, as well as workshops and extra help for those who have a print or learning disability. Workshops allow for librarians to maximize their outreach with the students, giving more students the tools to research and use the library successfully. Since one-to-one tutorials are limited for librarians regarding the number of students they can assist, workshops provide maximum outreach and more opportunity for interaction between formal mediators and students.

Library workshops begin at the beginning of the year, starting with an induction during the first week of university. Each librarian interviewed stated that there is an induction to the library for students at the beginning of each year. These induction days are usually mandatory and feature a workshop presentation to provide the students with a quick overview of the library, its services and their online systems. Student A stated that they attended the library introduction and tour during their first week. Here, students were shown how to use the online library and website and databases, how to book tutorials, and were introduced to the library staff. Student A said they felt that this was helpful, and that it was a good introduction to using the library at their new university.

After the induction, there are many other library workshops provided for the students, both mandatory and not mandatory. Librarian C stated that their library does multiple

workshops and other outreach programs a month, and stated they find this to be helpful for the students to get to know the library, its resources and its staff. Workshops are helpful for librarians, as they can reach many students at a time. Librarian C stated that their team is very focused on maximizing their time and outreach with their students. If there is a good number of students approaching them with the same type of information query, the library staff will book either a workshop or open tutorial that everyone in the class/studio is welcome to attend to help with the queries. Librarian A stated that for each course, they do an introduction to creative library research workshop with them, although this is not mandatory for the students to attend. The workshop runs for about two hours and is helpful in introducing the library to the new students early on in their university careers.

Often, library workshops are embedded into the academic curriculum. Course leaders and lecturers collaborate with librarians to give their students these sessions. Each workshop will be tailored to what the course leader is looking for, such as a workshop on finding resources that relate to fashion sustainability. Fashion business students are more data and statistics driven, so the librarian tailors their workshops to teach the students how to find resources that would suit this, such as how to use databases and other library resources for market research and other relevant resources. For a fashion design or a tailoring course, Librarian A stated that since these courses are more creative based, their workshop for these students would start with how to do visual research and how to find inspiration within the library. These workshops are either in the classroom of the course, or within the library space itself.

Library workshops are especially important for fashion students. Librarians are aware of the uncertainty that some creative students have with the academic side of their degrees. Librarians run workshops to try and alleviate this worry for the students, and this is especially helpful when the workshops are embedded into the curriculum. These workshops have been

successful and work well in introducing the students to the resources that are available to them. The libraries featured here via observation, and the libraries of Librarians A, B and C, run a variety of different workshops for the students. These workshops include help with software programs such as Adobe, editing suites, and photography and photo shopping tools. There are also workshops on how to use databases, specifically the fashion databases that are offered. Writing support, dissertation workshops and other workshops for students where English is not their first language are also offered. Workshops on visual research, image databases, and keyword building are also available.

In terms of the general workshops that are offered by the libraries, the librarians interviewed stated that the attendance of any workshop that is not mandatory is low. Librarian B's experience with workshops finds that they allow up to thirty students to attend. Currently, only about five to seven students are attending these workshops. This library also does weekly drop-in tours for students, so they can familiarize themselves with the library throughout the year. These tours also have low attendance numbers. Librarian B finds that the "group" activities have less attendance than the one-to-one tutorials. There was a mention of the library staff at this university getting a lot of emails asking for one-to-one tutorials about the same or similar subjects. To maximize time and outreach, a workshop was initiated for this. This workshop had low attendance numbers, although it was relevant for a vast number of students. Librarian B finds this to be difficult, as they are trying to mediate for as many students as possible, but the students are not accepting what is offered to them and instead choose to forgo help all together if it comes in a group setting.

#### 6.4.1 Observed Workshop

I observed a workshop for a fashion elective course with Librarian A for this research. This workshop was embedded into the curriculum during class time and was a joint effort by

the course lecturer and the librarian. The workshop was held in the classroom, with the librarian coming to the students. The workshop was focused on trend forecasting, and the students were all in their first year of study. This particular class was an elective, and the students were mixed majors that all relate to fashion. The workshop was held to show students techniques on how and where to find online fashion resources within the library. The focus of the workshop was conducting visual research and giving the students critical thinking skills. The librarian also took this opportunity to show the students how to use all the library databases to conduct research relating to academically appropriate resources.

The session was conducted fully by Librarian A with the support of the lecturer. The students have had workshops similar to this before and had previous interactions with the librarian in this type of setting. At the beginning of the workshop, the students were asked “where do you go to get inspiration?” The students have a variety of answers; Instagram, Pinterest, Tik Tok, Google Scholar, Museums, and talking to other people and friends were the most common answers. From this, the students are relying on very few academic or scholarly sources when they are looking for inspiration for their creative practice. For this workshop, the students were placed into groups for an activity. Librarian A then walked around the room to answer questions and give the students tips and suggestions. Each group was approached by the librarian, but none of the students called the librarian over to ask questions. During this workshop it was observed by the researcher that the students were relying on their peers more than the librarian during the session. The students asked the librarian questions when the librarian approached their group to see how they were progressing, but the students were not asking for help or calling the librarian over to them outright.

Although there are limited day-to-day interactions between the students and librarians, they are still establishing relationships with one another. Librarian C expressed that

that their students know them and the rest of the library staff well, after years of outreach and other workshop type library sponsored programs. From these programs, the students understand the expertise of the staff in the library at their disposal, and trust in their abilities to help them with their information queries. Librarian C revealed that “this was a journey” and did not come easily. This relationship is not always prevalent, especially at larger universities, or universities that are not art and design based.

## 6.5 Reference Desks in Libraries

Libraries operate differently now than they did in years past. Depending on the institution, some universities do not have a librarian reference desk. If this desk is present, it is usually headed by assistant librarians or other staff members. To encounter a librarian; students are required to email, or to book a tutorial via an automated system. Booking a tutorial is the job of the student, and they can request a time that works for their course schedule. Workshops are also available through the library to answer student queries and reach many students at a time. Most universities also integrate library workshops within the course curriculum, for the students to familiarize themselves with the library, its resources, and the librarians. Reference desks offer students the ability to speak to library staff immediately, without booking and waiting for a pre-scheduled time.

Not all libraries featured in this research have a reference desk within the library. Historically, librarians relied on reference desks to serve patrons and students. By the year 1886, it was well known that to get the aid of the librarian, a patron must approach the reference desk (Miles, 2013). Reference desks have changed dramatically with the introduction of digital resources, and less of a need for students to be in the physical library space. There has been some recent debate on the relevance and need of reference desks in today's libraries. This is discussed more in Miles, 2013; and Carlson, 2007.

If library reference desks were present at institutions featured in this research, it would be dependent on the university. If a library had a reference desk, this desk was generally run by library assistants or other departments, such as student services. Interviewed Librarians featured in this research are not typically front-facing, and students needed to book a tutorial to meet with them directly. This is not to say that when approaching reference desks students will not receive the help they require. Library assistants are more than capable of assisting students with enquiries about resources and locating items. If a student needs

specialist help, such as with their liaison or subject librarian or with a materials librarian, the library assistants are also able to aid them in scheduling this tutorial. Although not typically staffed with a subject librarian, reference desks are still important in the library space, as quick questions and help locating resources can be resolved here in a timely manner, without having to book a full tutorial with the librarian online. The importance of reference desks was brought up multiple times during the collection of data for this research. From this research, it was determined that around 80% of the time, a query can be answered quickly at the desk. For the other 20%, a tutorial with the librarian is better, as more time will be able to be spent with the student and their queries.

Librarian B described these inquiries as “basic referencing questions about research and the library.” This desk is staffed with library assistants who are there to support the students with locating resources and other inquiries that can be solved quickly and can help the students with other IT-based issues. If the student needs more in-depth help, the desk staff will help the student establish which academic support librarian specializes in their course and will give the student this librarian’s email address for them to schedule a one-to-one tutorial with them. At this university, the academic support librarians do not have reference desks, and do not have an area in the library where they work. I observed that at this university, there is signage posted all over the library on how to contact the support librarians. There are also cards with QR codes posted on the shelves for students to scan and book tutorials with the relevant librarian. There are also QR codes posted that provide the students with information about the tutorials in general and how to best prepare for them. This system allows the librarians to organize their time, allowing them to see as many students as possible. On occasion, Librarian B will have a block booking, where they will sit in the library space with a sign, offering drop-in one-to-one sessions.

For Librarian C, there was no dedicated reference desk on their campus either. This campus, although growing at a rapid and exciting rate, features a small library team with limited capacity space in the library itself. There is a desk that is in full view of the students, which the staff always tries their best to man. If for any reason there is not anyone at this desk, the students are encouraged to either send an email or book a one-to-one tutorial. The desk at this campus is used mainly as a workspace for the library staff, rather than as a dedicated front facing space for the librarians to interact with the students.

A library at an arts-centered university featured in this research does not have a dedicated reference desk. Librarian A, who is the head librarian for this university, stated that their library has what they call an “inquiry desk” in the library, which is always staffed. The staff at this help desk are not technically library staff members and cannot help students with their information problems or locating resources within the library. Due to this, students must book a tutorial for any and all information or resource queries. Although there is not a dedicated reference desk, the librarian stated that if they are not in a workshop or tutorial, they will often sit in the library and make themselves available to students. If the students see the librarian, they will often approach them or ask questions. Librarian A does feel that there is a slight barrier for their library service without the reference desk, because students need to go through the motion on establishing a booking for a tutorial, even for simple questions. They expressed their desire for some type of dedicated library-based reference desk, to maximize outreach to best serve the students. The librarian here feels the lack of a reference desk is a hindrance to their library service. It is difficult for the librarian to meet the demand for one-to-one tutorials, and since the students need to book tutorials for even simple or quick questions, it drives this demand even more.

No librarian interviewed for this research does not have a reference desk or space within the library where the students can access easily. The desks that are featured in the

library spaces are either manned by library assistants or by different departments entirely. Desks that are run by library assistants are able to assist students and maximize the library service. Front-facing reference desks are beneficial to the students, as they can frequently see library staff and have easy access to help when trying to research and solve their information problems.

### 6.5.1 Students Approaching Librarians

Approaching librarians and other library staff can be an anxiety inducing action for students. Of the 196 students observed for this research, only five students were observed to approach the librarians or other library staff for assistance. The observations of these students are analyzed in this section to demonstrate the low percentage of observed students approaching librarians and library staff, and for what information query they were approaching librarians for. The students that approached the librarians and staff were looking for specific assistance.

**Student 1-** This student approached a library staff member for help locating a physical resource.

**Student 2-** This student approached the desk that was manned by library assistants to ask for assistance with referencing.

**Student 3-** Student 3 approached the relevant librarian for help locating a specific resource in the materials library. This librarian does not have a reference desk, but the student recognized the librarian when in the library space and approached them for help. The librarian was happy to do this and expressed to the researcher that they wished more students approached them for help when seeing them within the collection.

**Student 4-** Student 4 approached a member of library staff who was re-shelving resources. The student asked the staff member for guidance and advice on resources to use for their dissertation, which they already had a topic for.

**Student 5-** This student approached a librarian for a specific resource when the librarian was within the collection. The librarian showed the student the resources they were looking for, as well as other relevant resources they thought the student might be interested in.

This research has identified that students and their use of mediators and their entering into the library is also dependent on their year of study. It was rare for the librarians interviewed to meet with first year students; rather, it was second and third year undergraduate and Master's level postgraduates that the librarians were seeing the most. The confidence levels of the students are directly related to their year of study as well. Every interviewed librarian involved in this research has noted that younger or first year students are more anxious about entering the library at first. I believe that it is possible that this is a wider trend within all demographics of students and is not specifically attributed to fashion students. First year students are just beginning to find their footing in the higher education environment, and most are not as confident in a new environment. Once the students become more comfortable in the higher education setting, their confidence in university spaces and using university resources grows. Students at Librarian A's institution are hesitant to enter the library space at first, but further into the curriculum it is mandatory to engage with the library. All interviewed librarians noticed that the more students enter the library space, the more comfortable they become, which makes it easier for them to build relationships with the library team. Curriculums that include having students actively engage with the library and its resources early on in their university courses also aid in making students more confident

when approaching mediators. It is not within the scope of this research to investigate much further into this, but this finding leaves an opening for future study and investigation.

## 6.6 The Role of Uncertainty in Fashion Students

A key aspect of Kuhlthau's research is its focus on the emotional journey students undergo during research, emphasizing how uncertainty and anxiety are natural and significant parts of this process. Kuhlthau's research is unique in that her work focuses on thoughts, feelings, and attitudes. There is a natural change in the attitudes and feelings the students go through during their research process. Students go through several different emotions during this process. These emotions can range from optimism, uncertainty, doubt, and clarity to name but a few. The emotion emphasized the most from Kuhlthau's ISP model is uncertainty. A dip in confidence and the arising of uncertainty is natural in the information search process. This uncertainty relates to unclear thoughts or confusion of a topic. Along with this emotion of uncertainty, feelings of anxiety are also present. This anxiety exists in students in multiple different aspects of their education. Anxiety that specifically revolves around the library, coined "library anxiety" by Mellon, is also present. Uncertainty is directly correlated with anxiety, as anxiety is the brain's response to uncertainty (Omary, 2023). As Kuhlthau identified, the information search process is ripe with uncertainty. Naturally, anxiety follows this uncertainty and is prevalent among students when researching.

Anxiety among students, especially in the post-COVID-19 world, is also present. According to studies conducted at the start of the spread of COVID-19, stress and anxiety levels in students began to rise as a psychological effect of the pandemic. These side effects were especially prevalent in university students, with the changing modes of teaching and learning and overall disruption to their lives (Basheti et al., 2023). In a study conducted in the United States featuring undergraduate university students, it found that students have a higher level of anxiety during and after the COVID-19 pandemic (Basheti et al., 2023). This anxiety has had lasting effects, especially on the mental health of current and incoming university students. Students are now experiencing high and lasting levels of anxiety and depression in

the post-pandemic era (Wang, et al., 2022). Uncertainty and confidence also correlate, as uncertainty and confidence are both affected by the amount of information one has (Peterson and Pitz, 1988). Certainty comes with the decreasing uncertainty, and this in turn brings confidence.

Through this research, it was identified that students become more confident in their research and their use of the library as they progress through university. This notion aligns with Kuhlthau's uncertainty principle. This is interpreted from the students' use of the library and the resources available to them. By the end of their degrees, librarians see a shift of general confidence within the students. By this point, the students are more confident when in the library and using the resources as they feel more comfortable.

Fashion librarians are aware of all the anxiety that students are going through during their studies. Feelings of uncertainty, which give rise to anxiety, are present in fashion students. This uncertainty manifests itself in different ways and affects students differently. The librarians surveyed offered that students are feeling anxious due to; new and different technological resources, encountering new resources, academic resources, and starting their search for resources. Some students instantly panic when they cannot find a resource, which causes them anxiety and uncertainty in the research process. In this instance, those that are going to librarians for help are doing so because they cannot find exactly what they are looking for. Stress from deadlines is very apparent, especially for students who did not leave themselves enough time to accomplish what they intended to. There are nerves and anxiety associated with students meeting with librarians. Communication can often be a barrier in this instance. For students where English is not their first language, this can prove to be especially difficult. Personality differences and cultural differences are important to be aware of when researching people, who each have different thoughts, emotions and feelings. There are students that are naturally more confident than their peers. Interviewed librarians find that the

students that are more confident in their research abilities are more open to suggestions and exploring more resources that they are not as familiar with.

Inductions, workshops, tutorials, and online library chat services are all available to students to help solve their information problems, and to relieve feelings of uncertainty and anxiety for researching students. The students are taught repeatedly how to use the library and its resources, both in person and online, and are aware of the options put in place to help them. The librarians are aware of this but acknowledge that there will always be students that struggle in this area. It was said by Librarian B that “we can prepare students as much as possible, but there is always still going to be students asking for help, and resources that scare them a little.”

When surveyed, 80% of the students surveyed stated they did not feel anxious when consulting a librarian for help when researching. Student A also reiterated this sentiment. They stated they felt comfortable in the library setting and were not anxious when entering the space. The mother of this student took them to the library frequently throughout their childhood, and the student was confident when using the library to research when they started university. Student A described themselves as an independent researcher, approaching the librarians most often for help with referencing. Some students did contend that they were anxious when approaching librarians. One surveyed student stated that they do feel nervous when consulting librarians, but believe this is due to their shyness, and nothing more. Another surveyed student answered they were hesitant to consult the librarians as they feel as though the librarians would not want to help them. When surveyed, 60% of students stated that they do not feel intimidated when entering the library and using the resources and facilities. The further 40% of these surveyed students said they sometimes feel intimidated by the library and its resources. 70% of the students surveyed stated they did not feel that anxiety hindered them when searching for fashion information resources. The additional 30% of students here

stated that anxiety during the research process hindered them. Students have multiple stressors such as not doing enough work and not finding information resources quickly, which are factors that students mentioned that are hindering their search process. When surveyed, 16.67% of librarians felt that their students were often anxious when approaching them for help. 83.33% of these librarians felt that their students were sometimes anxious when approaching them for help. The surveyed librarians felt as though this anxiety was either due to the stress of the assignment or the disposition of the student, not necessarily due to library or general anxiety.

Uncertainty is a common emotion that is felt when going through the information search process. When asked if students seemed anxious or uncertain when meeting with them, surveyed librarian's answers were mixed. 83.33% of surveyed librarians answered with students being anxious "sometimes." They felt that the students are often most anxious when using new and different technological resources that they have not used before or are daunted by the process of booking an appointment, especially if they have not done so before. A surveyed librarian mentioned they felt that it was "half and half" if students were anxious or confident when meeting with them. Half of the students they meet are very confident in their research, and typically just want advice on how to best use the library resources. The other half are very nervous when meeting with the librarian and are more apprehensive about academic research and seem shy or nervous about starting their research. When surveyed, 50% of students surveyed stated that they feel feelings of uncertainty when researching, 16.67% of students said they did not feel this way, and 33.33% stated they sometimes feel this way when researching. Librarians surveyed also reported that they generally do not feel that their students are nervous when approaching them. Since there are imbedded workshops and other encounters with the library staff, they feel that the students are comfortable with them, which eases their anxiety.

The concept of library anxiety is analyzed more in Chapter Three and is prevalent in students of all academic levels. Fashion students featured in this research are experiencing this library anxiety. Librarians working with students at the undergraduate and postgraduate levels are aware of this anxiety and are conscious of this when serving the students. The librarians surveyed here are actively trying to combat this library anxiety in a variety of ways. Being as friendly and supportive as possible is at the forefront of the librarian's minds.

Some students are more anxious than others due to the library being a new and unfamiliar place for them. Librarian A stated that they find with each incoming class there are around thirty students that have never used the library before. With students that have never been into the library space, this can cause more anxiety for the students during their research process. It is acknowledged by Librarian B that "there's still a lot of library anxiety for a lot of students, especially if they've never visited the library before."

There are ways in which to combat anxiety that is associated with uncertainty when researching and using the library. A combined approach with the academics and the library, working with the students in a library setting, and showcasing the libraries creative resources and using the library as a place for inspiration are helpful in this, as it is an all-sides approach to successful library use. This, combined with the students having familiarity with the librarian and a structured introduction to subject specific resources, takes a lot of uncertainty out of the research process, which will reduce anxiety around library use. Signage, useful leaflets, and resources around the library and on the library webpage are also helpful to students, as they are constant reminders and helpful tips. Making sure resources are as accessible as possible to the students and giving them a firmer base in technology will instil more confidence when navigating the library and available resources. This can be done by providing a wide range of services to support the students and building relationships with the

students by conducting workshops, working with them in their studio space, joining in on events and activities when possible and overall having the librarians visible to the students.

To ease library associated anxiety the surveyed librarians, find that interacting with the students as much as possible and according to one surveyed librarian, having “regular sessions with the librarians help them [the students] know that they can ask for help and come into the library whenever suits them.” Showing the students the library space in a positive and creative manner will help to reduce feelings of anxiety and uncertainty when entering the library. Students growing more comfortable within the space will help them to use the library and its resources more effectively. To ease the anxiety of students when entering the library space, the librarians surveyed offered these suggestions; better, clear and updated signage in the library, more guides to help students find books, especially as some students are coming into university never having visited or used a library extensively. Most notably, the librarians involved in this research all share that notion that as information professionals, it is important to offer times for students to be shown the library and how to use it and reminded of how to do so often in order to ensure that the library does not seem a daunting place to go.

The interviewed librarians see the change in students and their confidence when using the library. They notice that by the end of their degrees, the students are much more confident in the library. The students are more comfortable pulling books off the shelves, browsing, asking for help and sitting in the space for long periods of time. This can be seen as a showing of increased confidence, with Librarian A saying they “see this as a sign that they’re more confident or feeling more independent in their research.” This confidence is also reflected in how the students interact with the librarians when researching. When the students become more confident, they are more likely to speak with the librarians as more of a peer, where they can talk and explore their ideas more with the librarians, and are more open to the librarian’s suggestions. The students that are more reluctant to use the library or book

tutorials are generally the students that librarians are most concerned about. Librarian A also expressed that “it’s the students that don’t ask for help that you could be a bit worried about.” The importance of the awareness librarians have for students’ uncertainty and emotion is central to providing students with aid in their information search process.

Uncertainty and other similar feelings are natural parts of the research process. Uncertainty can create doubt and anxiety for the students, which could hinder their research. This uncertainty when learning new topics can affect the confidence of students, with them feeling too embarrassed to ask for help. This embarrassment can also cause anxiety for students when seeking the aid of mediators. The librarians featured in this thesis are speculating that the students are feeling anxious when meeting with them because they are embarrassed to be asking for help. There is a notion, especially today, that students feel as though they need to know everything about a chosen topic, or else they will look “stupid” in front of academic staff. Librarians are aware of this and are able to tailor their services and advice for students to combat this. Uncertainty is a core crux of learning and researching. The essence of researching is to deplete the uncertainty that comes with learning and seeking new information. Librarians working with the students are aware of the research process, and wish students were more open to the discovery of learning new things, with Librarian A saying, “that’s the whole point of research and being a student is not knowing, and the uncertainty of it, and exploring it and not be afraid by that.”

Some students do not visit the library until their third year of study, when they have gained the confidence to do so within themselves and as students. Even for the students the librarians have not seen until nearing the end of their degrees, they find that the students developing the confidence to come into the space as a sign of increased confidence. The librarians can see the development that comes with multiple terms of university. Librarian B

commented with this sentiment, “you can see the distinction, they’re more independent in terms of finding information.”

The information search process will always come with uncertainty and doubt, as these are natural emotions that take place when learning something new. Easing the anxiety that can come with entering an unfamiliar or intimidating place will help to alleviate the anxiety that students are feeling. Fashion students are alike to other demographics of students with this notion. They are experiencing uncertainty within their information search processes, and this is evident when they reach out to librarians as formal mediators. 16.67% of students feel as though they do not face uncertainty or anxiety when researching, and 33.33% of students sometimes feel that they experience uncertainty during the research process, but the librarians who work with them feel different. Fashion students are experiencing uncertainty during their information search process, though at a lower percentage than those who are not. Fashion students are also experiencing other emotions, in conjunction with those stemming from the research process. Library anxiety is present in this demographic of students, as is anxiety that is based on other factors, such as deadlines.

### 6.6.1 Guided Inquiry and Combating Uncertainty

The concept of guided inquiry was developed by Carol Kuhlthau, stemming from her extensive research of the ISP model to try and integrate students into the library more, to promote successful independent research and combat the uncertainty that students face when researching. Guided inquiry is an integrated unit of learning for students, which is guided by a team of librarians and teachers working together for the benefit of the students (Kuhlthau, Maniotes, Caspari, 2012). This theory allows students to gain deeper understandings of subject and curriculum and information literacy, with a team that guides them toward developing these skills and resulting in independent research abilities. Guided inquiry was

originally developed for students in kindergarten/reception, through to the end of secondary school in the United States. The concept was created to address the challenge of schools in the twenty-first century educating children that will live and work in an information-heavy and technological world (Kuhlthau, Maniotes, Caspari, 2012). The instruction team that Kuhlthau has identified is made up of librarians and teachers. Through this collaboration, “students gain competence by being guided through an inquiry process by teachers and librarians at each grade level” (Kuhlthau, Maniotes, Caspari, 2012, p. 2). The instructional team of guided inquiry plans and implements guidance to their students, with each member contributing what is appropriate to their expertise. The team works in conjunction and collaboration together, to provide a fuller range of learning for the students.

With guided inquiry, teachers and librarians share the responsibility in the instructional team, the expertise of their team members, and the satisfaction and success of their students (Kuhlthau, Maniotes, Caspari, 2012). In turn, this makes the students comfortable with library staff, as they are more closely integrated with them. Guided inquiry shows how the library and the librarians are implementing a team approach for meeting the curriculum objectives while developing research independence and competence for students.

There are many benefits to implementing guided inquiry as this concept motivates students to learn via them by constructing their own meaning and developing a deeper understanding. Kuhlthau identifies that this approach engages all students, and not just those that are seen to be academically gifted. This can be especially beneficial to creative and arts-based students. Throughout this thesis, it has been identified that some arts students are more intimidated by traditional academic resources and writing assignments, with a high rate of print disability within this demographic. The guided inquiry theory, although generally implemented throughout primary and secondary school age students, can also work in some regard at the university level. With librarians and academic staff working together as a team,

the students will benefit in their independent information search processes, with multiple mediators able to assist them. These mediators are furthermore aware of the students' information needs, as they are aware of the assignments and expectations set by the academic staff.

Collaboration practices similar to the recommendations of the guided inquiry program are in place at universities in the UK. Library inductions during the first week of term are common among universities in attempts to make students comfortable using the library and within the library environment. Courses implement library instruction during their course time, offering their students workshops and other instruction in the attempt to aid students in their studies and research. Lecturers also encourage their students to use the library in class and via email and the course Moodle page. Information literacy and how to properly use library resources are also being integrated into the university curriculum.

For continued student success, the collaboration of the library and course leaders and lecturers is required. Continued and increased interaction between the students, the lecturers and the library and its staff must occur, as well as library instruction during class time. Mandatory library-sponsored workshops and tutorials for students would also encourage this relationship, and support student usage of the library and its resources.

## 6.7 Resolving Students' Information Problems

The fashion students studied for this thesis are equipped with the tools to solve their information problems. As one librarian via survey identified, “information literacy is a core part of the curriculum” at most universities. Library introductions, workshops, and resources sessions are available to the students throughout the year, as well as tutorials with librarians and other forms of contact with the library staff. The students surveyed were asked if they felt they were able to adequately resolve their information problems. Of these students, 20% responded that yes, they do feel they can adequately resolve their information issues. 70% of these students stated they felt they can sometimes resolve their information problems, with the remaining 10% of students stating that no, they do not feel they are capable of resolving their information problems. The librarians surveyed responded with mixed feelings about if their students can adequately research in the library, and the services, tutorials and workshops to help them when they are stuck. A surveyed librarian answered this query with, “in general- yes,” they felt students had this capability, while another librarian stated, “I think sometimes they don’t, they often are used to being hand held through the research process, and seem to not feel comfortable research if the answers or information they are after takes longer than a few minutes to retrieve.” Another surveyed librarian echoed this sentiment, expressing that “most students have some basic level of research skills, but often they need guiding to the academic sources rather than just looking for free information of Google.” From this research, students do seem to be able to adequately resolve their information problems. The resources, in many formats, and help from mediators are there, and it is up to the student to use these factors to their advantage.

## 6.8 Conclusion

Currently, librarians working with fashion students in universities across the UK are providing their students with the tools to successfully use the library, search for information and relevant resources, and complete coursework and find inspiration. Collections are curated to support the needs and wants of the students. New resources, such as those that focus on AR and VR technologies, are also being included in the development of collections.

The main findings of Chapter Five of this thesis confirm the usefulness of the ISP model when investigating the information behavior of fashion students because: The model gives insight to the emotions and thoughts that fashion students experience during their information search process, even if these emotions differ from those Kuhlthau originally identified; fashion students are still going through Kuhlthau's previously identified stages; and fashion students are facing uncertainty in their research process. Differing from uncertainty is anxiety, and students face different anxieties. The model does not account for outside pressures such as these, but they are present in contemporary fashion students.

Fashion students are confirming the ISP model, as they are going through five of the six stages as: a high percentage of these students are feeling apprehension at stage one; consulting librarians and interacting with the library collection at stage two; feeling stuck and uncertain at stage three; creating a focus during stage four; and re-checking resources and either feeling relief or disappointment at the end of stage six. These students are deviating from the ISP model by not going through stage five. Rather than going through stage five, fashion students are forming a focus in stage four and furthermore gathering their needed resources during this stage as well. Fashion students are also not seeking the aid of librarians during this stage, instead seeking librarians during stage six, for confirmation and validation that they have done well. Fashion students are going through five of the six stages of the ISP model, but they are not going through these stages linearly. This is indicated by the students

seeking mediators as unidentified stages, and starting their research process out of the order Kuhlthau identified. This is also shown in the students approaching librarians at unidentified stages. These students differ from Kuhlthau's, as they are not exclusive library users and have immediate access to resources and search engine tools. These factors may have influence in fashion students not going through the stages linearly, backtracking, or skipping steps all together. This data also confirms the limited use of formal mediators by students during their research process. Although there is confirmation that the ISP model is useful in this context, there are deviations from Kuhlthau's original findings. Fashion students also confirm Kuhlthau's finding of the limited use of formal mediators such as librarians but are also seeking the aid of mediators at different stages than previously identified.

Although useful when investigating the information behavior of fashion students, these students do also deviate from this model. Over 50% of the surveyed students in this study felt optimistic at the beginning of their search processes, whereas in Kuhlthau's results, no student reported feelings of optimism and excitement. Fashion students are also deviating from the model due to when they are and are not seeking the aid of formal mediators. Kuhlthau identified students as seeking mediators in stages one, two, and five. This research has identified that fashion students are seeking mediators at stages two, three, and six. Due to the deviations, does the ISP model need to adapt? Not necessarily, but it is important to keep in mind that with Moodle and similar student home pages, initial uncertainty may be different, as the assessments and briefs are available to the students from day one of term. Uncertainty is still present in these students, but due to the availability of the assessment criteria, this uncertainty is stemming from not finding relevant information resources quickly, or from an overload of information, and not from the introduction of the information problem. Librarians and other information professionals are aware of this uncertainty and are also aware of challenges such as print disability within their students. They do their best to

tailor their services to fit all student needs, and curate resource collections that are diverse to fit research needs and information resources that are helpful to creative students and those with print disability.

The ISP model is useful when studying the information behavior of fashion students. The information resources available to these students are heavily digital, come in a variety of different formats, and include new technologies. Students are also obtaining their resources from multiple locations and are not reliant on the library's resources to fulfil their information needs. Despite this, the ISP model is still useful when the students being studied are seeking information that are not traditional resources, which are common in fashion resource library collections. I did not compare fashion students with other demographics of students, but through this study and the use of the ISP I have identified that fashion students in the UK are reluctant to seek assistance from formal mediators, although this seems to be a wider trend of students within higher education; and fashion students are not using library information resources and services such as workshops to their advantage.

#### Main findings of Chapter Six:

1. When using the ISP model to investigate the information behavior of fashion students, there are deviations from Kuhlthau's original findings.
  - A. The students are not going through the six stages linearly, with some stages skipped altogether.
  - B. Fashion students experience feelings of optimism at the beginning of the search process.
  - C. Fashion students are not exclusively using the library when researching
2. Students are going through some of the six identified stages of the model, despite the deviations listed above.

3. Fashion students face uncertainty during their information search process, which is in accordance with Kuhlthau's findings

# Conclusion

## 7.0 Introduction

The main focus of this thesis is the investigation of the usefulness of the ISP model when researching the information behavior of fashion students in the UK, in order to identify the thoughts, feelings and emotions of these students as well as to inquire as to what resources students are using when researching, and where they are obtaining these resources. This study determines that the ISP model is useful when investigating the information behavior of fashion students in the UK, although the students do deviate from Kuhlthau's model in some regards. Contemporary fashion students are going through some of the ISP model's six stages, but they are not going through all of the stages. Students are also seeking the aid of mediators at previously unidentified stages and are generally more optimistic at the beginning of their search processes. Students self-identified that they are using more online-based fashion information resources and are obtaining these resources from multiple places; they are not exclusively using the library when researching. This research also identified the particular resources students state they use the most, as well as the resources students wish to have available through the library.

## 7.1 Summarizing the Study

Fashion students, and students in general, have a mass amount of access to the internet, and in turn access to fashion resources. Due to this, their information seeking and furthermore, information behavior as a whole, has changed. Students have more options when searching for information than simply walking into a library and sorting through books and encyclopaedias. This is changing the ways in which they search for information. In this section I will summarize how the aims and objectives of this study were addressed.

**Aim 1:** To identify the information resources used by fashion students in the library and elsewhere and identify where the students obtain their resources: This study identifies that students are using a combination of locations, including the library and other unspecified places, by using the internet and social media, in order to find their information resources when they are researching. Library fashion resource collections are specially curated by librarians and consist of information resources in a range of different media. Although these collections are curated especially for the needs of these students, fashion students are not using the library exclusively when conducting their research. Students are using multiple locations when obtaining their resources, in conjunction with their university's library. To aid fashion librarians and information professionals in their service to their students, fashion librarians are required to keep as up to date as possible of emerging trends and resources within the fashion industry and education sectors. To do this, librarians need to work collaboratively with other information professionals, academic staff, and students. Continuing education and other training opportunities are vital to librarians working with students who are looking to go into a fast-paced and ever-changing industry.

**Aim 2:** To examine whether contemporary fashion students experience the same emotions as Kuhlthau identified, uncertainty, anxiety, and optimism, during their research process: Contemporary fashion students are experiencing the emotions that Kuhlthau

identified as being present in the information search process. Students are facing uncertainty during their research process, as well as anxiety and optimism. What this study has uncovered regarding these emotions differs from Kuhlthau's results. Optimism is felt at different stages in the research process, and anxiety stems from outside factors, time pressures, and information overload.

**Aim 3:** To investigate if the emotions Kuhlthau identified in her ISP model are present in these research environments and with a demographic of students that has multiple categories and foci: These emotions are still present in this demographic, but perhaps differ due to the elements of working closely in studios, and the mass availability of information resources online.

**Aim 4:** To discover and investigate the information behavior of fashion students in the UK by testing the Information Search Process model (ISP), as developed by Carol Kuhlthau (2003): Through this research it was discovered that current fashion students are going through some of the stages of Kuhlthau's ISP model. The search process of fashion students is not linear, and some students are skipping steps in the model. This thesis has determined that the ISP model is useful in discovering the information behavior of fashion students in the UK, and that these students are going through the six stages of the model and experiencing uncertainty within their research process. This research has also determined that although the students are going through these stages, they are not going through all the stages and are also deviating from the model by approaching the aid of formal mediators at stages that are not typical according to Kuhlthau's findings.

## 7.2 Contributions of this Study

The results of this study contribute to the literature of library and information science, as well as fashion studies and education, and informs fashion librarians on the information behavior of their students and aids in their collection development of fashion resources. This study is the first to use the ISP model to investigate the information behavior of fashion students. The research presented in this thesis lays the groundwork for further investigation into fashion students from an LIS standpoint. This research contributes to the field of LIS, and aid librarians in their service of fashion students of all specialties. This research impacts fashion educators and academic staff, by introducing to them the stages which their students are going through when researching, the resources available through the library and showcasing the importance of working with librarians and library staff to best prepare students. As technology and the fashion industry continue to evolve, preparing fashion students in university for their futures in industry will evolve as well. Fashion and technologies such as AR, VR, and most recently AI such as ChatGPT, will continue to collaborate in many aspects of the fashion world. Being as these are emerging technologies and fields, there may be a growing opportunity for more information behavior or LIS-based research in this area. This is based on past “new” technologies emerging, such as the internet and personal computers, changing information behavior. The emergence of technologies such as these had great effect, and it is reasonable to say that the more AR, VR and similar technologies become commonplace, research into how this affects LIS, the fashion industry and information behavior will present itself. As of the time of writing this thesis, there has been a recent surge in the publication of literature focused on this topic, please see; Lee, Lee and Jeong, 2021; Polyportis, 2024; and Pham, Thi and Duong, 2024.

This research offers insight into the information behavior of an under-researched demographic, outlining the emotions, thoughts and feelings they are going through when

researching. Central to this inquiry is the library; although students are obtaining resources from many different sources and are reluctant to consult a formal mediator when researching, this does not negate the importance of libraries or qualified librarians. Librarians are developing collections and keeping abreast of the changes in industry, technologies and trends to give their students access to the best possible resources to ensure their success.

This research also provides librarians' insights into if, and when students are approaching them for aid during their research process, and what their emotions are during this process. This is helpful information for librarians, as it will enable librarians to help combat the uncertainty and anxieties students are facing to deliver the best possible service and library experience to them.

## 7.3 Unexpected Results

As well as answering the three main research questions, this study also presented some unexpected results. Most notably, a high percentage of fashion students involved in this research reported experiencing optimism at the beginning stages of their search process. Historically, Kuhlthau identified high levels of apprehension and uncertainty at the beginning of the research process, and I was surprised to see such a high percentage of students reporting feeling optimistic at this stage. Although Kuhlthau also reported a low percentage of students seeking out a formal mediator, the apprehension these students showed at doing so themselves was a supervising result. The students in this study are aware of the services the library offers to them, but do not seem keen on attending workshops or approaching library staff.

Based on the data from this study, as presented in Chapter Five, I find that the students are keenly aware of the resources and services that the library offers, such as tutorials and workshops, and are not using these to their full advantage. Students are told and nearly constantly reminded about the services the library offers. Signage detailing this information is also posted all throughout the library, but throughout the universities' campuses as well.

Librarians have reported low attendance records for workshops, even for workshops on subjects that students are requesting aid in. As the librarians are not able to meet with each student individually, they schedule and promote these specific workshops to reach more students all inquiring about the same or similar subject matter. The students then are hesitant to attend the workshops and instead go without intervention for their information need. I believe that this is due to anxiety, either library focused or of a more general variety. The one-to-one tutorials record a much higher attendance rate, and I believe that this is also due to anxiety. In this instance, the students do not have to speak or ask

questions in front of their peers, and they are able to talk one-on-one with the librarian.

The students do not also have to share the context or any details of their work or research with their peers.

## 7.4 Limitations

There are limitations and shortcomings to this research project. For this project, fashion students were studied as a broad category. Since this project was the first investigation into the information behavior of fashion students, the scope of this research is quite wide. There was no specificity within the demographic, but as this was the first investigation of its kind, starting with such a wide scope leaves space for more research in the future. There is room for future investigation of the information behavior of cohorts within the “fashion student” demographic, such as an investigation into fashion design students or fashion media students. Using students as the base demographic for this project also produced some limitations. Students are inherently busy, and this notion was reflected in the response rates for the students during this research. Compared to the librarian respondents for the questionnaires and interviews, the student response rate was low. Librarian participants were also mostly from England, though there were more respondents from other locations in the UK than the student cohort. This of course presents a shortcoming to this project, as the aim of this project was to include the entirety of the UK, and not just England.

The small pool of participants was a shortcoming for this research. Although the number of participants was lower than originally hoped in terms of the questionnaires and the interviews of the students, there was a high number of students that were observed for this research. Another shortcoming of this research was that the participants mostly came from England. This research focuses on the entirety of the UK, and institutions from England, Scotland, Northern Ireland and Wales were contacted for either students or staff to participate. Most of those institutions who responded to the call for participants were in England. This is likely due to England having the most fashion-centered degree programs available. This study was originally focused solely on undergraduate students. Due to the fears of a low response rate since students were the target demographic, it was decided to

then include Master's level postgraduates into the student cohort. Unfortunately, it was not within the scope of this research project to investigate the differences between the undergraduates' and the postgraduates' information behavior.

## 7.5 Room for Further Investigation

This thesis relays a study of fashion students from an LIS perspective featuring a wide scope of students within the UK. Due to the broad nature of this thesis, there are many aspects that are suitable for more detailed investigation. There are multiple different avenues in which further investigation would be appropriate and beneficial to the field's literature. Gender identity was also not taken into consideration for this thesis, and neither was age. The main requirement for student participants was to be currently enrolled in a university-level fashion-based course. There is room for future studies featuring these two aspects as main components of research questions. As stated in the limitations section of this chapter, it was not within the scope of this research to do an investigation into the differences between undergraduate and post-graduate fashion students and their information behavior. Due to this, there is room for future research into this, as well as for studies of undergraduate and postgraduate students separately. As this study only focused on the UK, there are many possibilities for future studies of the information behavior of fashion students in different locations around the globe. More research on smaller scopes of fashion students, or case studies featuring fashion students in certain programs or universities would also be within the scope of future research and investigations. This study also presents a broader question regarding Kuhlthau's model holding in this post-COVID-19 higher education environment. My study does not investigate the information behavior of other demographics of students in the UK, but there is a distinct possibility that the trends that are occurring in UK fashion students are also occurring within other demographics of students.

It was not within the scope of this study to address on the ability of fashion students to assess the value of information. This is due to the librarians' role as mediators, which is to aid students in finding the relevant resources. The librarians do not, however, typically analyze

and grade assessments. This presents an opportunity for future research involving educators. This is especially relevant due to the increase in use of AI and tools similar to ChatGPT.

## 7.6 The Impacts of COVID-19 Pandemic

Over the last four years, the world has been in and out of lockdowns, social distancing, and bouts of self-isolation. The COVID19 pandemic has affected all aspects of everyday life, as well as this PhD. The research for this PhD began three weeks before the announcement of the first lockdown in the UK. Literature has shown that Due to the COVID-19 pandemic, library usage among students fell, and library instruction decreased significantly due to the adoption of online learning (Adetayo, Komolafe and Olalere, 2022). Despite the information and resources that are available via the library, many undergraduate students did not utilize this resource before the start of the pandemic (Temim et al., 2021). This, in conjunction with lockdowns and the switch to online learning, has had an impact on university students of all demographics (Adetayo, Komolafe and Olalere, 2022). Although the online component of libraries was available to students during this time, there was still reported to be very little online library usage during the COVID-19 pandemic and its subsequent lockdowns (De Groote and Scoulas, 2021). The COVID-19 pandemic had significant psychological impacts on college and university students. These impacts include depression, anxiety, and stress (Anteneh, et al., 2023). From this research, I believe that the pandemic has also impacted how fashion students approach librarians and search for fashion-related information. Students reported that they were less likely to use the library, instead relying on the internet and social media to solve their information needs. Students are gravitating towards online resources more so than those available in the physical space. This can be due to a multitude of reasons, but students either in university or beginning university spent many of their formative and school age years in an environment that was majority online based. I do believe that this has affected, even minimally, their information behavior. The effects of COVID-19 on this demographic would also be worthy of future investigation.

## 7.7 Modified ISP Model

In this section, I will present a modified version of the ISP model. The amended model uses the original model in which Kuhlthau presented her six stages; please see Figure Thirteen. I kept this as the base for my updated model, as the goal of this was to showcase the ISP model in a wider context. With the amended model, please see Figure Fourteen, I specifically wanted to bring attention to external forces, and how they directly affect how students go through the already established six stages. These outside forces are the context of the search for information. Kuhlthau does not include this aspect in her model, nor in the presentation of her research findings. My model presents the context, which is shown visually as the ovals presented around Kuhlthau's original six stages. These ovals showcase four categories of outside forces, listed here as:

1. Information need
2. Information location
3. Format of information
4. Outside pressures

Information need, or why the information seeker begins their search, is not addressed in Kuhlthau's research, but is a main aspect of my research questions. I address it here, as the intention for the information search for fashion students may be due to inspiration purposes, assessments or final projects. Kuhlthau does not directly acknowledge where information is gathered during an information seekers search, as her cohort of participants were exclusive library users. This research has shown that contemporary fashion students obtain information resources from a variety of locations, both physical such as a brick-and-mortar libraries or materials libraries and online, via websites, social media or the online library portal. As the format of documents and information resources used by fashion students is a central facet of

my research, it was important to include this in the amended model. Finally, I have also added an oval addressing the outside pressures contemporary students face, such as time restrictions, lack of tutorial booking availability, information overload, lack of relevant resources, global crisis and information literacy. These aspects are presented outside of the written stages and their associated emotions to demonstrate how these outside aspects affect fashion students and their research process. I included the red arrows, with the points going in both directions above the six stages to demonstrate that stages can be gone through non-linearly or out of the established order. The blue Xs indicate that stages in the research process are sometimes skipped altogether by fashion students. The green arrows going up and down and back and forth show that emotions change throughout the information search process, sometimes improving (gaining confidence) and sometimes declining (no sense of joy or contentment by the end of the search).

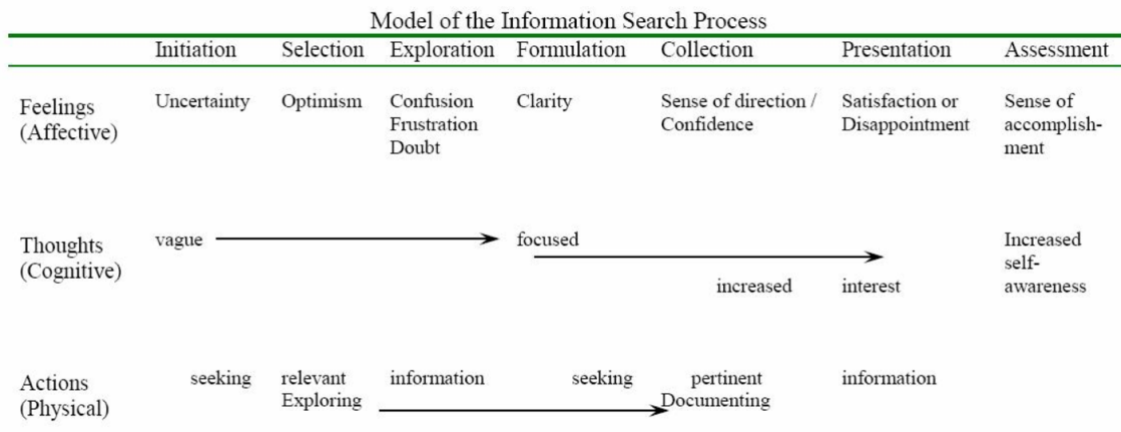


Figure Thirteen. The ISP model developed by Kuhlthau, 2003.

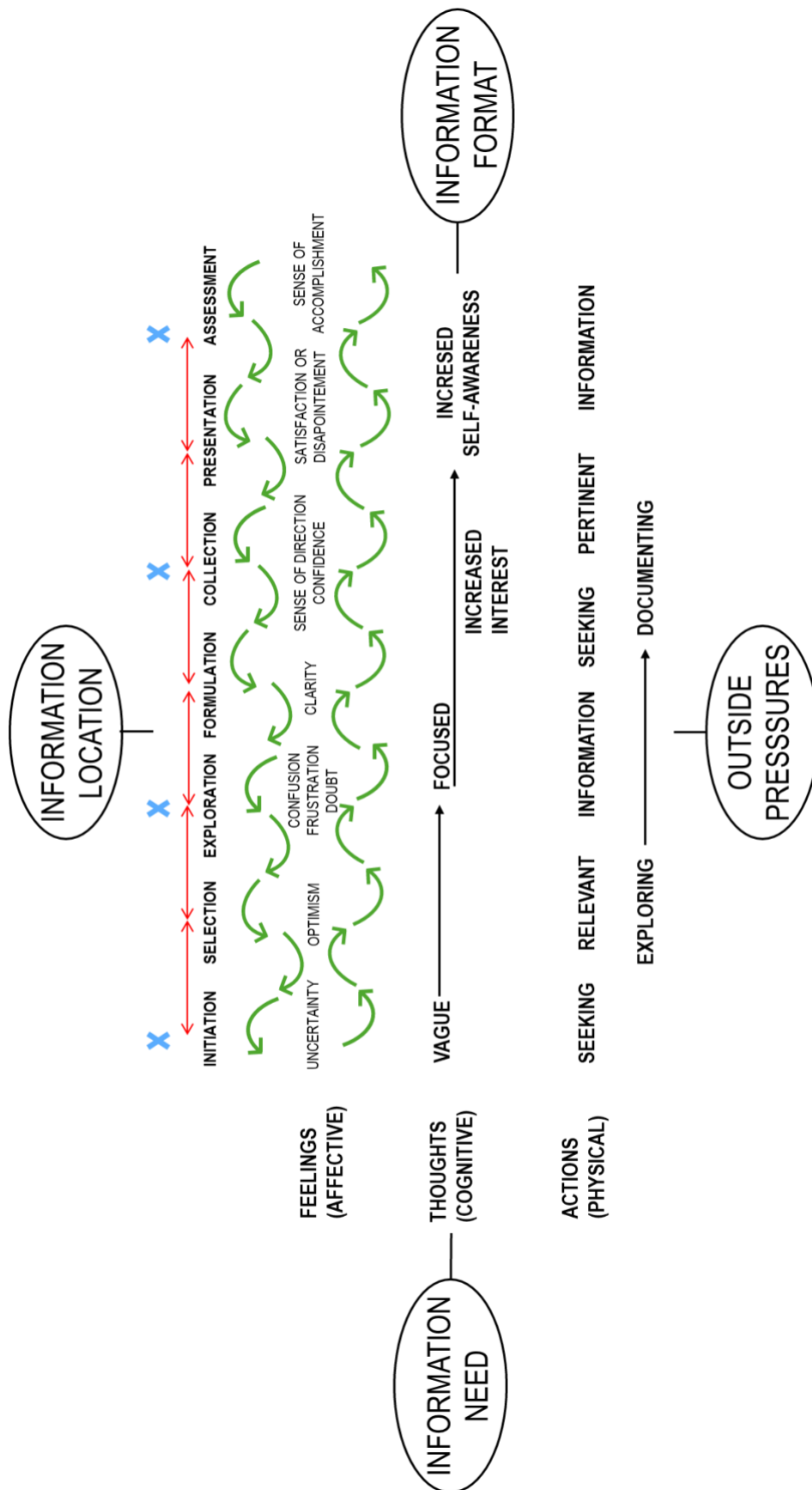


Figure Fourteen. The Amended ISP Model, developed by Cummings, 2025.

## 7.8 Final Remarks and Recommendations

The library and its resources are at the center of this thesis and research. The importance of the university library cannot be ignored in academic activities and success of students. Jan and Anwar state that “by providing access to the required information and intellectual resources, libraries can greatly affect students’ learning process and overall academic performance” (2019, p. 39). Stemming from this sentiment, there is a well-established collection of published literature regarding the positive relationship between the use of the library, students’ grades and degree attainment (Jan and Anwar, 2019; Goodall and Pattern, 2011; and Stone and Ramsden, 2013).

Although this research confirmed the usefulness of the ISP model when investigating this demographic, new findings have been uncovered as well. With the introduction of the internet and different types of resources, fashion students specifically are not using the library to their full advantage. This confirms a wider trend of students that has been presented in the literature, that demonstrates that even before the COVID-19 pandemic, student visits to the library had decreased over a fifteen-year period (De Groote and Scoulas, 2021).

By not using the resources the library provides and not engaging with the library staff via one-to-one tutorials or workshops, the students are not using a vital component that is there for them to use and most importantly, to acquire more knowledge and learn. Libraries must continue to advertise the services they offer to students and provide the most up-to-date and relevant collections of resources possible. For contemporary students to be academically successful, the library must be a space, both online and in-person, that cultivates and supports students, academics and faculty, providing all with resources and support. I recommend lecturers implement the requirement of students to attend tutorials and workshops, especially for classes featuring first-year students. This allows students to become comfortable with the process of interacting with the librarians and engaging with the library resources.

Librarians supporting fashion students must keep abreast of changing aspects and developments of the fashion industry and fashion within higher education to maintain a high standard of resources within their collection. To do this, librarians should consider attending industry events, conferences and meet-up groups of other librarians and those in the fashion industry, either in-person or online. Librarians must also keep in mind the emotions, thoughts and feelings of their students, and tailor their services to them as much as possible, so students know that the library is a comfortable and open environment to come to when researching. The effects of the COVID-19 pandemic on students, both academically and socially, should also be at the forefront of the librarian's minds. Mental health services available to students by the university should also be promoted regularly, as outside stressors and anxiety have an impact on students and their information behavior.

This research also demonstrates the fundamental changes of technologies; this contributes to the wide range of documents and resources that are available to current students. With these developments, information literacy has become a core and fundamental issue in the minds of educators and librarians. I recommend lectures, workshops and other educational material on the importance of information literacy, as well as the strong recommendation or requirement by lecturers that students should use library-provided resources for assessments.

The information literacy of current university students, including fashion students, requires improvement, which is only possible through collaboration and guidance. This is possible through creating a friendly and positive university environment, curriculum reform, collaboration between faculty and academic support staff, adequate library spaces, and curated library collections (Wang et al., 2023). For fashion students to complete their studies adequately and enter industry, there needs to be cultivation and enhancement of their information literacy to allow them to successfully use information resources. Therefore,

contemporary fashion students require enhanced information literacy curriculum and library instruction, the collaboration of lecturers and academic staff and librarians and support staff, and continued library exposure within courses and consistent library instruction.

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**PARTICIPANT INFORMATION SHEET**  
**For Interviews- Both Librarians and Students**

REC reference number: ETH2324-0132

Date: September 1, 2023

Version 1 of information sheet.

Title of the study: The information behavior of fashion students in the UK

Principle researcher: Rachel Cummings

I, Rachel Cummings, the researcher, would like to invite you to participate in a research study. Before you decided if you would like to take part, it is important that you understand why the research here is being done, and what it would involve for you. Please take the time to read the following information carefully, and if you wish, you may discuss this with others. Please reach out to me, Rachel Cummings, if there is any information that is not clear, or if you would like any more information or have any questions at all. This copy of the information sheet is yours to keep.

**Why is this study being undertaken? The purpose of the study:**

This study in efforts to research and understand the information behavior of fashion students. This demographic is an under-researched area, and this research here will provide invaluable information to the fields of library and information science and fashion studies. This study is also being conducted in partial fulfillment of the degree of PhD in library and information science. This portion of the study involves the observation of fashion students in their natural information seeking environment. The data from the observation is being used as a supplementary research method in order to strengthen the rest of the study's data that was derived from other research methods.

**Why have you been invited to take part?**

You have been asked to take part in this study due to your current status as a fashion student, or a librarian working with fashion students.

**What will happen if you take part?**

The interview will take between 1-2 hours, but can be stopped at any time if the participant wishes. As a student who is willing to take part in this study, please note and understand that being an interview participant will have no effect on assignments, marks or future studies. As a librarian taking part in the study, there is no financial or professional effect.

**Do you have to take part?**

Participation in this study is completely voluntary, and you may choose not to participate in a part or in all parts of the project. You can withdraw from the project at any stage, and there

will be absolutely no disadvantage or penalization in any way. It is up to you if you would like to participate in the project. If you do decide to take part, you will be asked to sign a consent form. If you do decide to take part in the project you are still free to withdraw at any time, and without giving a reason.

**What do you have to do if you take part?**

You will be expected to meet with me, the researcher, either in person at a neutral location or on Microsoft teams to participate in a semi-structured interview about your experience being either a fashion student in the UK or a librarian working with fashion students. The interview will be recorded and then transcribed.

**Data protection:**

All data will be analyzed anonymously. Due to this, and in order to keep the anonymity of the project, once the data has been anonymized, participants will no longer be able to withdraw their data from the study, once the interview and analyzation of the transcript is complete. If you do decide to withdraw from the study before this stage, i.e. when the interview is taking place, all data collected up until that point will be destroyed. Data will be stored on a password protected laptop, and once the project is completed, the notes and loose data will be destroyed in order to protect complete anonymity to those who participated. The voice recording of the interview will be destroyed after transcription of the interview. The transcriptions will be stored on a password protected laptop, and will be destroyed after the final thesis is turned in. There will be no identifying information on the transcriptions.

**What is expected of you as a participant?**

If you are willing to be a participant in this study, there are a few things that are expected of you, the participant. As a participant, you will be expected to answer questions and engage in conversation with me, the researcher. If you are uncomfortable at any time, please let the researcher know. There is no penalty for withdrawing consent at any time during the interview.

**What are the benefits of taking part in this study?**

The benefits of taking part of this study would be contributing to the under researched area of the information behavior of fashion students as well as to gain insight on the changing nature of fashion documents and the effects it has on students. Participation of this study would help to complete the partial fulfillment of the researcher's (Rachel Cummings') PhD in Library and Information Science, and any type of participation is greatly and genuinely appreciated.

**What will happen to the results of this study?**

This study will be used in partial fulfillment for the degree of PhD in library and information science. There is a possibility of the future publication of this study, as well as publication of the thesis as a whole. Participation will remain anonymous and if the possibility of future publication does arise, the anonymity of those who chose to take place will remain intact. If the study is published in some way, at any point, participants are welcome to and encouraged to contact the researcher in order to gain a copy of the published work.

**What are the foreseeable disadvantages and risks of taking part?**

There are no identifiable risks or disadvantages if the participant chooses to take part.

**Who will review the study?** This study has been approved by City, University of London (insert which committee here) Research Ethics Committee.

Data privacy statement: City, University of London is the sponsor and the data controller of this study based in the United Kingdom. This means that we are responsible for looking after your information and using it properly. The legal basis under which your data will be processed is City's public task. Your rights to access, change or move your information are limited, as we need to manage your information in a specific way in order for the research to be reliable and accurate. To safeguard your rights, we will use the minimum personally identifiable information possible (for further information please see <https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/public-task/>).

City will use your name and contact details to contact you about the research study as necessary. If you wish to receive the results of the study, your contact details will also be kept for this purpose. The only people at City who will have access to your identifiable information will be members of the research team, and, if appropriate, individuals with responsibility for monitoring and auditing at City, including of research projects. There may be occasions when regulatory authorities may access research data in accordance with their statutory powers. City will keep identifiable information about you from this study for xxx years after the study has finished.

You can find out more about how City handles personal data by visiting <https://www.city.ac.uk/about/governance/policies/data-protection-policy>. You can also read City's general privacy notice by visiting <https://www.city.ac.uk/about/governance/policies/general-privacy-notice>. If you are concerned about how we have processed your personal data, you can contact the Information Commissioner's Office (ICO) directly <https://ico.org.uk/>.

What if there is a problem?

If you, the participants, have any problems, concerns, or questions about this study, you are invited to and encouraged to speak to a member of the research team. If after this you remain unhappy and would like to issue a formal complaint, you can do this through City, University of London's complaints procedure. In order to complain about the study, you need to phone 020 7040 3040 and ask to speak to the secretary to senate research ethics committee and inform them of the name of the project. You may also write to the secretary at:

Annah Whyton  
Research & Enterprise Office  
Research Integrity Manager  
City, University of London, Northampton Square  
London, EC1V 0HB  
Email: [senaterec@city.ac.uk](mailto:senaterec@city.ac.uk)

Insurance:

City University London holds insurance policies which apply to this study, subject to the terms and conditions of the policy. If you feel you have been harmed or injured by taking part in this study you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Further information and contact details:

Contact information for Dr. Lyn Robinson and Minna Vuohelainen the supervisors of this research project:

[REDACTED]

[REDACTED]

Thank you for taking the time to read this information sheet.

**Participant Information Sheet  
For Librarians  
Scoping Study Questionnaire**

I, Rachel Cummings, the researcher, would like to invite you to participate in a research study. Before you decided if you would like to take part, it is important that you understand why the research here is being done, and what it would involve for you. Please take the time to read the following information carefully, and if you wish, you may discuss this with others. Please reach out to me, Rachel Cummings, if there is any information that is not clear, or if you would like any more information or have any questions at all. This copy of the information sheet is yours to keep.

**Why is this study being undertaken? The purpose of the study:**

This study in efforts to research and understand the information behavior of undergraduate fashion students. This demographic is an under-researched area, and this research here will provide invaluable information to the fields of library and information science and fashion studies. This study is also being conducted in partial fulfillment of the degree of PhD in library and information science. This portion of the study is the scoping study, which involves a quantitative questionnaire. The questionnaire is being used to establish the broader aims of the study, and serve as a guideline for further research in this study. The scoping study is being conducted in order to provide me, the researcher, with a base of research knowledge in order to build upon the research in the following stages of the project.

You have been asked to take part in this study due to your profession and experience working with fashion students. As an employee, please note that taking part in this study or not taking part in this study will have no effect on employment or promotional prospects, now or in the future.

Alternative for second cohort: You have been asked to take part in this study due to your current status as a fashion student. As a student who is willing to take part in this study, please note and understand that this questionnaire will have no effect on assignments, marks or future studies.

Participation in this study is completely voluntary, and you may choose not to participate in a part or in all parts of the project. You can withdraw from the project at any stage, and there will be absolutely no disadvantage or penalization in any way. It is up to you if you would like to participate in the project. If you do decide to take part, you will be asked to sign a consent form. If you do decide to take part in the project you are still free to withdraw at any time, and without giving a reason.

All data will be analyzed anonymously. Due to this, and in order to keep the anonymity of the project, once the data has been anonymized, participants will no longer be able to withdraw their data from the study, once they have submitted the questionnaire. If you do decide to withdraw from the study before this stage, all data collected up until that point will be destroyed. Data will be stored on a password protected laptop, and once the project is completed, the notes and loose data will be destroyed in order to protect complete anonymity to those who participated.

If you are willing to be a participant in this study, there are a few things that are expected of you, the participant. You will be expected to complete an online questionnaire, taking approximately 10-25 minutes to complete.

If you do decide to take part in the project, you will do so in the comfort of your own home, or wherever is comfortable for you to fill in the questionnaire, as this questionnaire is all online and to be done within the participants own time, within the time frame given to send in the completed questionnaire.

A disadvantage that may occur when taking part in this study would be the time spent on being a participant. I, the researcher, try to minimize the time restraint by making the questionnaires online and accessible in the participants own time, in a space of their own choosing.

The benefits of taking part of this study would be contributing to the under researched area of the information behavior of undergraduate fashion students as well as to gain insight on the changing nature of fashion documents and the effects it has on students. Participation of this study would help to complete the partial fulfillment of the researcher's (Rachel Cummings') PhD in Library and Information Science, and any type of participation is greatly and genuinely appreciated.

#### **What will happen to the results of this study?**

This study will be used in partial fulfillment for the degree of PhD in library and information science. There is a possibility of the future publication of this study, as well as publication of the thesis as a whole. Participation will remain anonymous and if the possibility of future publication does arise, the anonymity of those who chose to take place will remain intact. If the study is published in some way, at any point, participants are welcome to and encouraged to contact the researcher in order to gain a copy of the published work.

Who will review the study? This study has been approved by City, University of London (insert which committee here) Research Ethics Committee.

If you, the participants, have any problems, concerns, or questions about this study, you are invited to and encouraged to speak to a member of the research team. If after this you remain unhappy and would like to issue a formal complaint, you can do this through City, University of London's complaints procedure. In order to complain about the study, you need to phone 020 7040 3040 and ask to speak to the secretary to senate research ethics committee and inform them of the name of the project. You may also write to the secretary at: Anna Ramberg  
Research Integrity Manager  
City, University of London, Northampton Square  
London, EC1V 0HB  
Email: [REDACTED]

Further information and contact details:

Contact information for Dr. Lyn Robinson, the supervisor of this research project:

[REDACTED]

Thank you for taking the time to read this information sheet.

**Participant Information Sheet  
For Students  
Scoping Study Questionnaire**

I, Rachel Cummings, the researcher, would like to invite you to participate in a research study. Before you decided if you would like to take part, it is important that you understand why the research here is being done, and what it would involve for you. Please take the time to read the following information carefully, and if you wish, you may discuss this with others. Please reach out to me, Rachel Cummings, if there is any information that is not clear, or if you would like any more information or have any questions at all. This copy of the information sheet is yours to keep.

Why is this study being undertaken? The purpose of the study:

This study in efforts to research and understand the information behavior of fashion students in the UK. This demographic is an under-researched area, and this research here will provide invaluable information to the fields of library and information science and fashion studies. This study is also being conducted in partial fulfillment of the degree of PhD in library and information science. This portion of the study is that of a questionnaire, which involves both open ended and closed ended questions. The questionnaire is being used in order to gain a deeper understanding of the resources that fashion students are looking for, using and wanting.

You have been asked to take part in this study due to your current status as a fashion student. As a student who is willing to take part in this study, please note and understand that this questionnaire will have no effect on assignments, marks or future studies.

Participation in this study is completely voluntary, and you may choose not to participate in a part or in all parts of the project. You can withdraw from the project at any stage, and there will be absolutely no disadvantage or penalization in any way. It is up to you if you would like to participate in the project. If you do decide to take part, you will be asked to sign a consent form. If you do decide to take part in the project you are still free to withdraw at any time, and without giving a reason.

All data will be analyzed anonymously. Due to this, and in order to keep the anonymity of the project, once the data has been anonymized, participants will no longer be able to withdraw their data from the study, once they have submitted the questionnaire. If you do decide to withdraw from the study before this stage, all data collected up until that point will be destroyed. Data will be stored on a password protected laptop, and once the project is completed, the notes and loose data will be destroyed in order to protect complete anonymity to those who participated.

If you are willing to be a participant in this study, there are a few things that are expected of you, the participant. You will be expected to complete an online questionnaire, taking approximately 15-25 minutes to complete.

If you do decide to take part in the project, you will do so in the comfort of your own home, or wherever is comfortable for you to fill in the questionnaire, as this questionnaire is all online and to be done within the participants own time, within the time frame given to send in the completed questionnaire.

A disadvantage that may occur when taking part in this study would be the time spent on being a participant. I, the researcher, try to minimize the time restraint by making the questionnaires online and accessible in the participants own time, in a space of their own choosing.

The benefits of taking part of this study would be contributing to the under researched area of the information behavior of undergraduate fashion students as well as to gain insight on the changing nature of fashion documents and the effects it has on students. Participation of this study would help to complete the partial fulfillment of the researcher's (Rachel Cummings') PhD in Library and Information Science, and any type of participation is greatly and genuinely appreciated.

#### **What will happen to the results of this study?**

This study will be used in partial fulfillment for the degree of PhD in library and information science. There is a possibility of the future publication of this study, as well as publication of the thesis as a whole. Participation will remain anonymous and if the possibility of future publication does arise, the anonymity of those who chose to take place will remain intact. If the study is published in some way, at any point, participants are welcome to and encouraged to contact the researcher in order to gain a copy of the published work.

Who will review the study? This study has been approved by City, University of London Research Ethics Committee.

If you, the participants, have any problems, concerns, or questions about this study, you are invited to and encouraged to speak to a member of the research team. If after this you remain unhappy and would like to issue a formal complaint, you can do this through City, University of London's complaints procedure. In order to complain about the study, you need to phone 020 7040 3040 and ask to speak to the secretary to senate research ethics committee and inform them of the name of the project. You may also write to the secretary at: Anna Ramberg  
Research Integrity Manager  
City, University of London, Northampton Square  
London, EC1V 0HB  
[REDACTED]

Further information and contact details:

Contact information for Dr. Lyn Robinson, the supervisor of this research project:  
[REDACTED]

Thank you for taking the time to read this information sheet.

## Appendix D

### **PARTICIPANT INFORMATION**

#### **For Observation of Fashion Students**

I, Rachel Cummings, the researcher, would like to invite you to participate in a research study. Before you decided if you would like to take part, it is important that you understand why the research here is being done, and what it would involve for you. Please take the time to read the following information carefully, and if you wish, you may discuss this with others. Please reach out to me, Rachel Cummings, if there is any information that is not clear, or if you would like any more information or have any questions at all. This copy of the information sheet is yours to keep.

#### **Why is this study being undertaken? The purpose of the study:**

This study in efforts to research and understand the information behavior of fashion students. This demographic is an under-researched area, and this research here will provide invaluable information to the fields of library and information science and fashion studies. This study is also being conducted in partial fulfillment of the degree of PhD in library and information science. This portion of the study involves the observation of fashion students in their natural information seeking environment. The data from the observation is being used as a supplementary research method in order to strengthen the rest of the study's data that was derived from other research methods.

You have been asked to take part in this study due to your current status as a fashion student. As a student who is willing to take part in this study, please note and understand that being an observation participant will have no effect on assignments, marks or future studies.

Participation in this study is completely voluntary, and you may choose not to participate in a part or in all parts of the project. You can withdraw from the project at any stage, and there will be absolutely no disadvantage or penalization in any way. It is up to you if you would like to participate in the project. If you do decide to take part, you will be asked to sign a consent form. If you do decide to take part in the project you are still free to withdraw at any time, and without giving a reason.

All data will be analyzed anonymously. Due to this, and in order to keep the anonymity of the project, once the data has been anonymized, participants will no longer be able to withdraw their data from the study, once the observation is complete. If you do decide to withdraw from the study before this stage, i.e. when the observation is taking place, all data collected up until that point will be destroyed. Data will be stored on a password protected laptop, and once the project is completed, the notes and loose data will be destroyed in order to protect complete anonymity to those who participated.

If you are willing to be a participant in this study, there are a few things that are expected of you, the participant. As a participant, you will be expected to research in the library as if, I, the researcher am not there. We will not have any direct interactions or conversations, bar those about consent and participation. You will not be solely focused on, but if you are uncomfortable in anyway or would like to stop the observation participation, please let me know.

The benefits of taking part of this study would be contributing to the under researched area of the information behavior of fashion students as well as to gain insight on the changing nature of fashion documents and the effects it has on students. Participation of this study would help to complete the partial fulfillment of the researcher's (Rachel Cummings') PhD in Library and Information Science, and any type of participation is greatly and genuinely appreciated.

### **What will happen to the results of this study?**

This study will be used in partial fulfillment for the degree of PhD in library and information science. There is a possibility of the future publication of this study, as well as publication of the thesis as a whole. Participation will remain anonymous and if the possibility of future publication does arise, the anonymity of those who chose to take place will remain intact. If the study is published in some way, at any point, participants are welcome to and encouraged to contact the researcher in order to gain a copy of the published work.

**Who will review the study?** This study has been approved by City, University of London (insert which committee here) Research Ethics Committee.

If you, the participants, have any problems, concerns, or questions about this study, you are invited to and encouraged to speak to a member of the research team. If after this you remain unhappy and would like to issue a formal complaint, you can do this through City, University of London's complaints procedure. In order to complain about the study, you need to phone 020 7040 3040 and ask to speak to the secretary to senate research ethics committee and inform them of the name of the project. You may also write to the secretary at: Anna Ramberg  
Research Integrity Manager  
City, University of London, Northampton Square  
London, EC1V 0HB  
Email: [REDACTED]

Further information and contact details:

Contact information for Dr. Lyn Robinson, the supervisor of this research project:

[REDACTED]

Thank you for taking the time to read this information sheet.

## Appendix E

### Informed Consent Form

Leader Investigator: Rachel Cummings

REC reference number: TBD

Title of the Study:

Please tick  
or  
initial box

|    |                                                                                                                                                                                                                                                                                                                           |  |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1  | I confirm that I have read and understood the participant information dated for the above study. I have had the opportunity to consider the information and ask questions which have been answered satisfactorily.                                                                                                        |  |
| 2. | I understand that my participation is voluntary and that I am free to withdraw without giving a reason without being penalised or disadvantaged.                                                                                                                                                                          |  |
|    | I understand that I will be able to withdraw my data up to before the questionnaire is complete, as the questionnaire is anonymous.                                                                                                                                                                                       |  |
|    | I agree to the interview being audio recorded if applicable                                                                                                                                                                                                                                                               |  |
|    | I agree that my anonymous data may be made open access e.g. journal publication                                                                                                                                                                                                                                           |  |
|    | I agree to City recording and processing this information about me. I understand that this information will be used only for the purpose(s) explained in the participant information and my consent is conditional on City complying with its duties and obligations under the General Data Protection Regulation (GDPR). |  |
|    | I would like to be informed of the results of this study once it has been completed and understand that my contact details will be retained for this purpose.                                                                                                                                                             |  |
|    | I agree to take part in the above study.                                                                                                                                                                                                                                                                                  |  |

\_\_\_\_\_  
Name of Participant                      Signature                      Date

\_\_\_\_\_  
Name of Researcher                      Signature                      Date

When completed, 1 copy for participant; 1 copy for researcher file.

## Appendix F

### Questionnaire 2 Students:

Digital Fashion: These questions are about your awareness and use of digital fashion resources

What do you understand by the phrase ‘digital fashion’?

Do you use resources related to digital fashion? Yes, no, sometimes,

What are the resources for digital fashion that you find and use the most? Please list/explain

Do you search for resources related to digital fashion?

Do you encounter any difficulties or frustrations when searching for digital fashion resources?

Are there any digital fashion resources that you would like to access via your institution, but cannot as they are unavailable?

During the course of your education, have you ever learned about VR and AR technologies in the fashion industry? Do any examples come to mind? If not, is information on VR and AR technologies planned for inclusion in your course?

Do you feel that you have adequate resources that relate to digital fashion?

ISP Model: these are questions about your course related information behavior more generally

Do you ask friends and/or a librarian for help finding resources for your assignments or research projects? If yes, can you explain why you choose them?

If you consult a librarian, are you seeking help for a specific assignment or task? Please explain

How do you feel when you encounter a large amount of information/resources? Please explain (can be a list of key words or paragraph form).

Do you face any challenges when researching? If yes, please explain the challenges

When consulting a librarian, do you feel a sense of anxiety? Yes. No. Sometimes.  
If answering yes or sometimes, please explain

Are you intimidated when entering the library and using the resources and facilities? Yes, no, sometimes

Do you feel that you are able to adequately resolve your information problems? Yes. No. Sometimes.

What devices do you use when you are looking for fashion information and resources?

Do you have issues in gaining access to needed devices in order to search for fashion information?

Does anxiety during the research process hinder you when researching fashion information? If yes, please explain. No. sometimes.

Do you use more informal mediators, such as friends, because you feel anxious when approaching a librarian? Please explain

these are questions about where you find both digital and physical resources, to answer questions that the ISP model does not touch upon, such as where you get resources, what resources you use the most and why you are looking for fashion resources.

Which fashion resources do you use most often?

Are the resources that you use the most located from your institution's library either in person or online? If not where are they located?

Do you use the physical resources of the library more, or those that are available through the library online? Physical, Online, Neither, Both at equal amount

What fashion resources do you wish you could have access to in the library? Please list or explain

In your opinion, what are the best fashion information resources that are offered in the library?

Why are you looking for fashion information resources?

What careers/industries would you like to go into when you are done with your studies? Please list

What fashion resources do you use most often?

## Appendix G

### **Questionnaire 2 Professionals:**

#### Digital Fashion:

Do you think that students are aware of changes in the fashion industry, such as the introduction of digital fashion? Yes, no, not sure

Are there digital fashion resources available for students from your library? Yes, no, not sure.

If yes to the question above, which digital fashion resources are available? Please list/explain

How do you feel librarians are coping with digital fashion resources? Please explain

Are students checking out or using digital fashion resources? Yes, no, sometimes

Do you feel you are confident in your knowledge of new and digital fashion documents/resources? Yes. No. Please also explain

Are you familiar with VR and AR fashion documents?

Do you feel students have access to enough AR and VR fashion resources?

#### ISP Model:

Why do students come to you for assistance?

Do they seem nervous or anxious? Please explain

How do you think we could combat library anxiety for students? Please explain

Do you feel students have the ability to research in the library for information resources? If not how could their skills be improved?

Are there any limitations to providing fashion students with adequate resources? Please explain

In your opinion, what are ways that we can combat library anxiety for students? Please explain

Which resources are the students reaching for the most? Please list/explain

Are there adequate physical resources for fashion students? Please explain

Do you feel that the students are prepared for their future in industry etc. with the resources we are providing?

## Appendix H

### Scoping Study Questionnaire for Students

Are you consulting a librarian when searching for information? A. Often B. Sometimes C. Rarely D. Never

Do you find that you use an informal mediator, such as a friend, more than you use a formal mediator, such as a librarian? A. I use informal mediators/friends more B. I use a formal mediator, such as a librarian more C. I use both an equal amount D. I don't use either

Do you go to a librarian only when feeling "stuck" or confused? A. Yes B. No

Are you overwhelmed with the amount of information/resources that you encounter? A. Yes B. No

Are you underwhelmed with the amount of information/resources that you encounter? A. Yes B. No

Do you experience any type of anxiety when searching for information? A. Yes B. No  
How often? A. very often B. Occasionally C. Not often D. Never

Do you experience and feelings of uncertainty when searching for information? A. yes B. no C. sometimes

Do you feel a sense of relief or joy when finding a relevant resource? A. Yes B. no

Do you feel a sense of confidence by the end of the research period? A. Yes B. No C. Sometimes

What are your feelings before starting to research for information?

A. Feeling excited and optimistic B. Feeling anxious C. Feeling confused D. Feeling like I will fail.

What are your thoughts and feelings during the information collecting process?

- A. Same as the start- Anxious B. Same as the start- Anxious C. Feeling less confused and anxious D. Feeling more confused and anxious.

During the collection of information, what is the most important factor(s) that affect your research and its design? A. Access to information resources B. Knowledge of library services and search engines C. relationship with the librarian D. the understanding of the assignment

Where is the first place you look at for information resources?

- A. Google B. Library C. Online Library and databases D. Wikipedia E. Ask friends F. Other

How often do you consult a librarian during your research?

How often do you consult a friend during your research?

What challenges do you face when researching?

- A. Poor internet connection. B. limited physical resources in the library C. Lack of support D. lack of understanding of the online library/resources

What devices do you use when conducting research?

- A. Smart phone B. Personal laptop/PC C. Ipad or tablet D. none E. other

Do you have internet access at home? A. yes B. no

How often do you use the library website and databases? A. Often B. Occasionally C. Not often D. Never

Where are you getting your fashion resources? A. Library B. Online Library C. Elsewhere online D. Other E. all of the above.

What resources are you using when consulting the library? A. Books B. Journals C. Magazines D. All of the above E. None of the above

## Appendix I

### **Scoping Study Questionnaire for Professionals**

what resources do you see students reaching for the most?

Do you believe that students are taught how to adequately use the library?

Do you believe that students are taught how to successfully research?

How often do you go to the library?

How do you feel when you find a relevant source of research?

Where do you go for resources? Do you have any “go-to” places for information?

How do you feel when you begin looking for information?

What resources are you finding when looking for information?

Are library resources geared towards helping students with new technologies and resources?

How do you identify your research problems? By talking, quick searches, etc.

How do you resolve your research problems? Going to a librarian?

Appendix J  
Observation notes for library A

|           |            |                      |                      |                      |
|-----------|------------|----------------------|----------------------|----------------------|
| Student A | Uni device | Personal Device<br>X | Physical<br>resource | Online resource<br>X |
| Student B |            | X                    | X                    |                      |
| Student C | X          | X                    | X                    | X                    |
| Student D | X          |                      |                      | X                    |
| Student E | X          |                      |                      | X                    |
| Student F | X          |                      |                      | X                    |
| Student G | X          |                      |                      | X                    |
| Student H | X          |                      |                      | X                    |
| Student I | X          |                      |                      | X                    |
| Student J | X          |                      |                      | X                    |
| Student K | X          |                      |                      | X                    |
| Student L | X          |                      |                      | X                    |
| Student M |            |                      | X                    |                      |
| Student N |            |                      | X                    |                      |
| Student O |            |                      |                      |                      |
| Student P |            | X                    |                      | X                    |
| Student Q | X          |                      |                      | X                    |
| Student R |            | X                    |                      | X                    |
| Student S | X          |                      |                      | X                    |
| Student T | X          |                      |                      | X                    |
| Student U |            |                      |                      |                      |
| Student V |            |                      |                      |                      |
| Student W |            |                      |                      |                      |
| Student X |            |                      |                      |                      |
| Student Y |            |                      |                      |                      |

|           |  |  |  |  |
|-----------|--|--|--|--|
| Student Z |  |  |  |  |
|-----------|--|--|--|--|

Observation notes 25<sup>th</sup> May 2023:

Student O was not using a device or resources, they approached the “gateway” desk asking for help locating a resource in the library.

General notes: REDACTED has just acquired a small materials library collection, it is not on display to students yet, and the librarian is looking to expand it. There is only one fashion librarian. The librarian is now undertaking a PGCert course. The gateway staff had a little free coffee, tea and biscuit stand in the library to encourage the students to get into the library. This was a special event and does not happen every day but there were quite a few students there and they ran out of tea and cookies by the end of the event.

#### Appendix K Observation notes for library A

| Student A | Uni device | Personal Device<br>X | Physical<br>resource | Online resource |
|-----------|------------|----------------------|----------------------|-----------------|
| Student B |            | X                    |                      | X               |
| Student C | X          |                      |                      | X               |
| Student D | X          |                      |                      | X               |
| Student E | X          |                      |                      | X               |
| Student F |            | X                    |                      | X               |
| Student G |            |                      | X                    |                 |
| Student H |            | X                    |                      |                 |
| Student I |            |                      | X                    |                 |
| Student J |            |                      | X                    |                 |
| Student K |            | X                    |                      | X               |
| Student L | X          | X                    |                      | X               |
| Student M | X          |                      |                      | X               |
| Student N | X          | X                    | X                    | X               |
| Student O |            | X                    | X                    | X               |
| Student P | X          |                      |                      | X               |
| Student Q | X          |                      |                      | X               |
| Student R | X          |                      |                      | X               |
| Student S |            | X                    |                      | X               |
| Student T |            | X                    |                      | X               |
| Student U |            | X                    |                      | X               |
| Student V |            |                      | X                    |                 |
| Student W | X          |                      |                      | X               |

|           |   |  |  |   |
|-----------|---|--|--|---|
| Student X | X |  |  | X |
| Student Y |   |  |  |   |
| Student Z |   |  |  |   |

## Observation Notes March 2023

Each course at the uni has a studio for the students to work, and a lot of them choose to work here even when class is not in session. These studios sometimes have little ‘mini collections’ that are not a part of the library collection. These collections include books, magazines and zines, and look books.

The uni is filled with collaborative spaces to work, and there are few single desks, there are also a lot of IT spaces throughout the uni (not in the library) that feature computer labs for students to use.

According to the librarian the resources that students use depend entirely on the course they are enrolled in.

There is no single librarian reference desk on this campus. There is instead a “gateway” desk that is there to assist students with all uni needs, and not just library help. To see the librarian directly students, need to book a tutorial online, or email the librarian directly.

Students A-E were all in the library when it was quiet, as lectures were going on at those times.

Online resources that were seen to be used: online library catalogue, online archives, online databases, online color library, online journal articles, consumer reports and statistics, fashion sketches.

Student W- using online resources about VR and AR technologies!

Physical resources seen to be in use: books, magazines, fashion sketches.

No materials collection that is a part of the library.

When using a desktop, there is a single sign in when looking for resources, to make it easier for the students. (is this why so many were using desktops?)

Some students were in the library working on assignments, essays and PowerPoints, and not necessary researching. (are they researching elsewhere?)

Observation times 11:45-1:00 pm and 2:00-3:00 pm.

## Appendix L

Observation Notes 2 March 28<sup>th</sup>, 2023: workshop held by Librarian A and sponsored by Library A

Trend forecasting workshop with first year students on a fashion elective course, with mixed majors that all relate to fashion. The workshop was held by the librarian (A) in conjunction with the module leader during class time. The workshop was held in the classroom. The workshop was to show students how and where to find online fashion resources.

The students were all using their own laptops, there were no university provided devices available in the room.

The session was conducted fully by the librarian, and the students have had sessions like this before.

This particular workshop was focused on conducting visual research and critical thinking and visual resources.

The students were asked, “where do you go to get inspiration?” and these were some of the answers: Instagram, pinterest, tik tok, google scholar, museums, talking to people/friends.

The students of the class were placed into groups for an activity. The librarian was then walking around the room to answer questions and approaches each group.

The students are relying more on each other, and not so much the librarian. The students ask the librarian questions when he approaches there group to see how they are progressing, but they are not calling him over for help or asking him outright.

At one point during the workshop a student, when asked about the current themes of the industry said, “tech, metaverse and virtual fashion design” – they are seeing the changes of the industry.

The librarian also took this opportunity to teach the students how to use the library databases in order to conduct research.

The library: 1:30-2:15: Library A

| Student A | Uni device | Personal Device<br>X | Physical<br>resource X | Online resource |
|-----------|------------|----------------------|------------------------|-----------------|
| Student B |            | X                    | X                      | X               |
| Student C | X          | X                    |                        | X               |
| Student D | X          |                      |                        | X               |
| Student E | X          |                      |                        | X               |
| Student F |            | X                    | X                      |                 |
| Student G |            | X                    |                        | X               |
| Student H |            | X                    |                        | X               |
| Student I |            | X                    |                        | X               |
| Student J | X          | X                    |                        | X               |
| Student K |            |                      |                        |                 |
| Student L |            |                      |                        |                 |
| Student M |            |                      |                        |                 |
| Student N |            |                      |                        |                 |
| Student O |            |                      |                        |                 |
| Student P |            |                      |                        |                 |
| Student Q |            |                      |                        |                 |
| Student R |            |                      |                        |                 |
| Student S |            |                      |                        |                 |
| Student T |            |                      |                        |                 |
| Student U |            |                      |                        |                 |
| Student V |            |                      |                        |                 |
| Student W |            |                      |                        |                 |
| Student X |            |                      |                        |                 |
| Student Y |            |                      |                        |                 |
| Student Z |            |                      |                        |                 |

NOTES:

Multiple students were using their own devices, as well university provided ones. This was used really as: using own device for research and resources, and using the uni device to complete the task/assignment.

Resources that were being used: online journals, e-books, print textbooks, fashion photography photos, printed out fashion sketches, fashion blogs, fashion online magazine articles, fashion websites/blogs, online fashion show videos.

Some students were using multiple resources at a time.

Appendix M  
Observation notes for library B

| Student A | Uni device | Personal Device | Physical resource X | Online resource |
|-----------|------------|-----------------|---------------------|-----------------|
| Student B |            |                 | X                   |                 |
| Student C |            | X               | X                   |                 |
| Student D |            |                 | X                   |                 |
| Student E |            |                 | X                   |                 |
| Student F |            | X               |                     | X               |
| Student G |            |                 | X                   |                 |
| Student H |            | X               | X                   | X               |
| Student I |            | X               |                     | X               |
| Student J |            |                 | X                   |                 |
| Student K |            | X               | X                   |                 |
| Student L |            |                 | X                   |                 |
| Student M |            | X               |                     | X               |
| Student N |            | X               | X                   | X               |
| Student O |            |                 | X                   |                 |
| Student P |            | X               |                     | X               |
| Student Q |            |                 | X                   |                 |
| Student R |            |                 | X                   |                 |
| Student S |            |                 | X                   |                 |

|           |   |   |   |   |
|-----------|---|---|---|---|
| Student T |   |   | X |   |
| Student U |   | X | X |   |
| Student V |   | X |   | X |
| Student W | X |   |   | X |
| Student X |   |   | X |   |
| Student Y |   |   | X |   |
| Student Z |   |   | X |   |

For the table above: this is the library (regular collection) Observation Notes 24<sup>th</sup> of April 2023. 3pm:

At this time, the library was extremely busy. Many students were working collaboratively and had completely spread themselves out. They seemed comfortable in the library amongst the resources and seemed to know the collection well. This was also fairly far into the academic year, and this could be different in the beginning of the year, especially for new students.

Resources being used: physical library books, printed out fashion photos and sketches, online library and archive catalogues and databases, physical magazines, online fashion blogs, printed out and hand drawn fashion sketches, physical fashion textbook, online journal articles, digital fashion sketches, online fashion photography, printed out journal article, physical fashion photography book,

| Student A | Uni device | Personal Device | Physical resource X | Online resource |
|-----------|------------|-----------------|---------------------|-----------------|
| Student B |            | X               |                     | X               |
| Student C |            | X               |                     | X               |
| Student D |            | X               |                     | X               |
| Student E |            | X               |                     | X               |
| Student F |            | X               | X                   |                 |
| Student G |            | X               |                     | X               |
| Student H |            |                 | X                   |                 |
| Student I |            |                 | X                   |                 |
| Student J |            | X               |                     | X               |
| Student K |            |                 | X                   |                 |
| Student L |            | X               |                     | X               |
| Student M |            | X               |                     | X               |
| Student N |            | X               |                     | X               |
| Student O |            |                 |                     |                 |
| Student P |            |                 |                     |                 |
| Student Q |            |                 |                     |                 |
| Student R |            |                 |                     |                 |
| Student S |            |                 |                     |                 |
| Student T |            |                 |                     |                 |
| Student U |            |                 |                     |                 |
| Student V |            |                 |                     |                 |

|           |  |  |  |  |
|-----------|--|--|--|--|
| Student W |  |  |  |  |
| Student X |  |  |  |  |
| Student Y |  |  |  |  |
| Student Z |  |  |  |  |

The table above is the main library from 3:30 pm April 28<sup>th</sup> 2023:

Resources being used: online fashion photos, online fashion blogs, online fashion photos on pinterest, online runway photos, fashion journal articles, online fashion archives, physical fashion books, fashion magazines, printed out journal article, fashion museum website, online written transcript of interviews with fashion designers, online fashion photography archive.

| Student A | Uni device | Personal Device | Physical resource | Online resource |
|-----------|------------|-----------------|-------------------|-----------------|
| Student B |            |                 | X                 |                 |
| Student C |            |                 | X                 |                 |
| Student D |            |                 | X                 |                 |
| Student E |            |                 | X                 |                 |
| Student F |            |                 | X                 |                 |
| Student G |            |                 | X                 |                 |
| Student H |            |                 | X                 |                 |
| Student I |            |                 | X                 |                 |
| Student J |            |                 | X                 |                 |
| Student K |            |                 | X                 |                 |
| Student L |            |                 | X                 |                 |
| Student M |            |                 | X                 |                 |
| Student N |            |                 | X                 |                 |
| Student O |            |                 | X                 |                 |
| Student P |            |                 | X                 |                 |
| Student Q |            |                 | X                 |                 |
| Student R |            |                 | X                 |                 |
| Student S |            |                 | X                 |                 |
| Student T |            |                 | X                 |                 |
| Student U |            |                 | X                 |                 |
| Student V |            |                 | X                 |                 |
| Student W |            |                 | X                 |                 |
| Student X |            |                 | X                 |                 |
| Student Y |            |                 | X                 |                 |
| Student Z |            |                 |                   |                 |

The table above is for the materials library from 4pm on April 28<sup>th</sup> 2023:

Student S- approached the staff of the materials library to ask for guidance and advice on resources for dissertation.

Student Y- student approached the materials library librarian asking for a specific resource/material. The librarian then showed the student different options around the materials library that were available, the librarian went into the back office to collect more examples of materials that might interest the student, also opened the display case (which was locked) to show the student further, more fragile resources.

Materials used in the materials library: fabric samples, metal sample, plastic samples, physical color/paint catalogue, sandpaper sample, wood sample, cork sample, mirror/glass samples, reference books in the ML library, shirt on mannequin in ML library display, foam sample, cladding sample, cotton sample, fur samples, pottery featured in the cases, jewelry samples, rubber samples, sustainable materials catalogue.

## Appendix N

April 24<sup>th</sup> 2023, library B and materials library (ML) 3pm-6pm:

| Student A | Uni device | Personal Device | Physical resource<br>x | Online resource |
|-----------|------------|-----------------|------------------------|-----------------|
| Student B |            |                 | x                      |                 |
| Student C |            | x               | X                      |                 |
| Student D |            |                 | X                      |                 |
| Student E |            |                 |                        |                 |
| Student F |            | x               |                        | x               |
| Student G |            |                 | x                      |                 |
| Student H |            | x               | x                      |                 |
| Student I |            | x               | x                      | x               |
| Student J |            |                 | x                      |                 |
| Student K |            | x               | x                      |                 |
| Student L |            |                 | x                      |                 |
| Student M |            | x               |                        | x               |
| Student N |            | x               | x                      | x               |

|           |   |   |   |   |
|-----------|---|---|---|---|
| Student O |   |   | x |   |
| Student P |   | x |   | x |
| Student Q |   |   | x |   |
| Student R |   |   | x |   |
| Student S |   |   | x |   |
| Student T |   |   | x |   |
| Student U |   | x | x |   |
| Student V |   | x |   | x |
| Student W | x |   |   | x |
| Student X |   |   | x |   |
| Student Y |   |   | x |   |
| Student Z |   |   | x |   |

| Student A 1 | Uni device | Personal Device | Physical resource<br>x | Online resource |
|-------------|------------|-----------------|------------------------|-----------------|
| Student B 1 |            | x               |                        | x               |
| Student C 1 |            | x               |                        | x               |
| Student D 1 |            | x               |                        | x               |
| Student E 1 |            | x               |                        | x               |
| Student F 1 |            | x               | x                      |                 |
| Student G 1 |            | x               |                        | x               |
| Student H 1 |            |                 | x                      |                 |
| Student I 1 |            |                 | x                      |                 |
| Student J 1 |            | x               |                        | x               |
| Student K 1 |            |                 | x                      |                 |
| Student L 1 |            | x               |                        | x               |
| Student M 1 |            | x               |                        | x               |
| Student N 1 |            |                 |                        |                 |
| Student O 1 |            |                 |                        |                 |
| Student P 1 |            |                 |                        |                 |
| Student Q 1 |            |                 |                        |                 |
| Student R 1 |            |                 |                        |                 |
| Student S 1 |            |                 |                        |                 |
| Student T 1 |            |                 |                        |                 |
| Student U 1 |            |                 |                        |                 |
| Student V 1 |            |                 |                        |                 |
| Student W 1 |            |                 |                        |                 |
| Student X 1 |            |                 |                        |                 |
| Student Y 1 |            |                 |                        |                 |
| Student Z 1 |            |                 |                        |                 |

From 5pm to 6pm. Some in ML

| Student A 2 | Uni device | Personal Device | Physical resource | Online resource        |
|-------------|------------|-----------------|-------------------|------------------------|
| Student B 2 |            |                 | X                 |                        |
| Student C 2 |            |                 | X                 |                        |
| Student D 2 |            |                 | X                 |                        |
| Student E 2 |            |                 | X                 |                        |
| Student F 2 |            |                 | X                 |                        |
| Student G 2 |            |                 | X                 |                        |
| Student H 2 |            |                 | X                 |                        |
| Student I 2 |            |                 | x                 |                        |
| Student J 2 |            |                 |                   | Approached staff       |
| Student K 2 |            |                 | X                 |                        |
| Student L 2 | x          |                 |                   | x                      |
| Student M 2 |            |                 | X                 |                        |
| Student N 2 |            |                 | X                 |                        |
| Student O 2 |            |                 | X                 |                        |
| Student P 2 |            | x               |                   | x                      |
| Student Q 2 |            | x               |                   | x                      |
| Student R 2 |            |                 | x                 |                        |
| Student S 2 |            |                 | x                 |                        |
| Student T 2 |            |                 | x                 |                        |
| Student U 2 |            |                 | x                 |                        |
| Student V 2 |            |                 | x                 | Approached staff in ML |
| Student W   |            |                 |                   |                        |
| Student X   |            |                 |                   |                        |
| Student Y   |            |                 |                   |                        |
| Student Z   |            |                 |                   |                        |

Student J2: approached the staff at the “learning zone”

Student V2: Approached the materials librarian asking for help locating a specific resource in the materials library, librarian opens display case so student can get closer look at resources.

Materials Library 4pm:

| Student A | Uni device | Personal Device | Physical resource | Online resource |
|-----------|------------|-----------------|-------------------|-----------------|
| Student B |            |                 |                   |                 |
| Student C |            |                 |                   |                 |
| Student D |            |                 |                   |                 |
| Student E |            |                 |                   |                 |

|             |  |   |   |   |
|-------------|--|---|---|---|
| Student F   |  |   |   |   |
| Student G   |  |   |   |   |
| Student H   |  |   |   |   |
| Student I   |  |   |   |   |
| Student J   |  |   |   |   |
| Student K   |  |   |   |   |
| Student L   |  |   |   |   |
| Student M   |  |   |   |   |
| Student N 1 |  | x |   | x |
| Student O 1 |  |   | x |   |
| Student P 1 |  |   | X |   |
| Student Q 1 |  |   | X |   |
| Student R 1 |  |   | X |   |
| Student S 1 |  |   | X |   |
| Student T 1 |  |   | X |   |
| Student U 1 |  |   | X |   |
| Student V 1 |  |   | X |   |
| Student W 1 |  |   | X |   |
| Student X 1 |  |   | X |   |
| Student Y 1 |  |   | X |   |
| Student Z 1 |  |   | X |   |

Resources used in the materials library: fabric samples, garments on mannequins, foam samples, cladding sample, cotton samples, wood samples, fur/feaux fur samples, pottery pieces, jewelry pieces, rubber samples, physical books for reference only, plastic samples, paint samples, sandpaper, color/paint catalogue book, cork samples, mirror type samples.

General observations:

Researcher is visiting fairly far into the academic year, the students are familiar with the materials collection and with the library as a whole- this might be different towards the beginning of the year, especially with first year students.

The students are generally all collaborating with each other, there are very few working/researching on their own.

Resources used in the regular areas of the library:

Physical library books, magazines, fashion online blogs, fashion textbooks, printed out fashion sketches, catwalk photos, digital fashion sketches, printed out journal articles, online journal articles, online fashion archive, online library catalogue, fashion photos on Pinterest, runway photos and fashion archive online, museum websites, online transcripts of interviews with models and designers,

## Appendix O

### Student Interview Questions:

Have you had any formal training with programs such as CAD, Cloe or Procreate? If so, by whom?

Have you had any workshops/training from the library?

Are the resources you have in the library preparing you for your future career?

how could you have been better prepared for university level researching?

What sources, systems or services from the library might be helpful to you?

Did you know that librarians would be aware of digital and fashion resources?

Is the cost of subscription a hinder?

If consulting a librarian for research help, what stage of the research process are you in?

Are you asking for help because you encountered too much information and feel overwhelmed?

## Appendix P

### Professionals Interview Questions:

What digital fashion resources are available to your students?

Since fashion is so multidisciplinary, how important do you feel specialist librarians are in the university library?

are students aware of librarians and their expertise?

Do you have a reference desk?

Are students booking tutorials with you?

Is there anything that you think we as librarians could do to make the process less stressful?

Do you have any formal training with the programs?

how could students be better prepared for entering university level researching?

Do you see a shift in confidence in the students?