Simulations of Academic Research: Practices of Information Use around the First-Year Composition Assessed Research Paper at a Middle East University

Norman George Williams, B.Ed, M.Ed.

June 2024

This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

Department of Educational Research
Lancaster University
UK

Abstract

Simulations of Academic Research: Practices of Information Use around the First-Year Composition Assessed Research Paper at a Middle East University

Norman George Williams

On entering university, undergraduates face a challenging transition into novel practices around information use. At institutions in the United States and at overseas universities which follow the US model, undergraduates typically take one or more First-Year Composition (FYC) courses to familiarise them with writing at tertiary level in preparation for their disciplinary study; the assessed research essay remains a key element of assessment on these courses. FYC courses and the FYC research paper are also considered key sites for the development of freshman information literacy (IL). The current study takes place at a university in the Middle East. Student and faculty interview data is analysed through a social practice lens, firstly to map practices of information use around the FYC research paper assessment and secondly to explore factors, internal and external, which shape these practices. Findings related to these practices include a superficial engagement with information sources, basic search practices and a neglect of practices around personal information management (PIM). The prescribed structure of the written research paper itself is found to exert a strong influence on related information practices and normative understandings. Students' conceptualisations of the FYC research essay task are also found to shape practices around information use. Finally, evidence emerges of censorship and self-censorship at the site in relation to the research foci deemed appropriate; this aligns with restrictions in national media. A key implication of these findings is the need to reconceptualise FYC tasks as *simulations* of future information use. The benefits of such a reconceptualisation and related changes to FYC faculty roles within their institutions are discussed.

262 words

Table of Contents

List of Figures and Tables

Acknowledgements

I would like to thank Malcolm Tight for his support and encouragement.

I would like to thank Cathy Journeaux. Her love and belief in me during this process, as in everything, has made all the difference.

Author's Declaration

The following thesis is entirely my own work. No part of this thesis has previously been submitted for the award of a higher degree at Lancaster University or elsewhere. At the time of submission, no part of this thesis has been published.

The word count (excluding abstract, references) is 45,146.

Norman Williams

1. Introduction

Information Literacy (IL)—the ability to "acquire and use information" (Eisenberg, 2008, p. 39)—enhances employability (Johnston & Webber, 2003) and is intrinsic to lifelong learning (Johnston, 2020). The ability to manage and evaluate information is seen as a prerequisite to social and political engagement in a "post truth" world (Bluemle, 2018; Lewandowsky, 2020). IL allows private citizens to avoid fraud and manage privacy online and empowers marginalised groups to participate more actively and confidently in their societies (CILIP (Chartered Institute of Library and Information Professionals), 2018). The past decade has seen considerable attention to IL in tertiary education, including a major revision of the way in which IL is conceptualised by the Association of College and Research Libraries (*Framework for Information Literacy for Higher Education, 2015)*. Particular attention has been paid to the freshman year, a liminal year (Palmer et al., 2009; Purdy & Walker, 2013) when students are expected to develop a new research identity; this process often involves the abandonment of familiar practices of information use which are deemed deficient or inappropriate to a tertiary education context (Purdy & Walker, 2013).

First-Year Composition (FYC), a freshman writing course included in the majority of undergraduate programmes in the US and taught at many universities which adopt the US model, has been suggested as the ideal site for the socialisation of new undergraduates into the practices of information use which they will be expected to adopt (Artman et al., 2010; Norgaard, 2003); the FYC research paper, commonly implemented as a major assessment on FYC courses, would seem to present an ideal opportunity for the consolidation of novel rules, understandings and practices related to information use. However, research based on the student writings emerging from this assessed task highlight several serious deficiencies in freshman information use (Howard et al., 2010; Jamieson, 2016; Jamieson & Howard, 2013; Scheidt et al., 2016) leading some researchers to advocate for the abandonment of the classic FYC research paper (Blackwell-Starnes, 2016). Studies into this area have frequently conceptualised IL as a set of skills, the better to highlight skills deficiencies among early undergraduates (e.g. Gross & Latham, 2012).

As a counterbalance to research which highlights IL skills deficits, phenomenographers have worked to uncover how IL is experienced at undergraduate level (e.g. Limberg, 2007), some of these focussing on first-year students (e.g. Lupton, 2008). Social practice theory has

been broadly applied to the study of IL (e.g. Lloyd, 2012; Olsson & Lloyd, 2017) but has, as yet, not been exploited to shed light on practices of information use in First-Year Composition and, specifically the information practices in evidence as students work towards the completion of the FYC assessed research essay.

The current study situates itself in this research gap; it maps and analyses the practices around information use in relation to the completion of the FYC research paper. Towards this research goal, data from both FYC students and faculty at Zayed University, a tertiary education institution in the UAE, is collected and analysed. The remainder of this introductory section examines conceptual frameworks used to study IL, the conceptions of practice theory which inform the current study, First-Year Composition and its relationship to IL and, finally, the national and institutional research contexts.

1.1. Conceptual Frameworks for defining and interrogating information literacy

A number of competing analytical models have been used to map the field of IL. Some of these have been developed by IL specialists themselves while others represent the application of existing epistemological lenses.

1.1.1. "Home grown" frameworks

Mid-range "home grown" models include the IL-as-a-set-of-discrete-skills model, which was particularly influential in research into IL in the context of secondary and tertiary education (see Gross & Latham, 2007, 2012). While useful, this conception of IL is now seen as incomplete in that it ignores the role of context (Elmborg, 2006) and the socially mediated nature of information use (Jacobson & Mackey, 2013). A second such model, task-focussed IL research (see Byström & Järvelin, 1995) does acknowledge to some extent the situated nature of information use and, for example, the importance of the roles adopted by users (Talja & Nyce, 2015). However, a focus on tasks as a unit of analysis may fail to fully recognise ways in which processes of enactment are shaped by the discourse communities where they take place (Limberg, 2007).

Also "home grown" in that they have been developed over four decades by the information science community are models that fall under the umbrella term "information behaviour". Models of information behaviour are more ambitious in that they attempt to account

for a reasonably full range of information-related behaviours and also explore both affect and cognition as factors in shaping information use (e.g. Kuhlthau et al., 2008; Wilson, 2000). More recent information behaviour models do more to acknowledge the role of context in shaping information behaviour (e.g. Wilson, 2006) although these models still fail to fully acknowledge the socially situated nature of information use (Olsson & Lloyd, 2017). They have also been criticised for an excessive emphasis on the information search process (Savolainen, 2007); by the admission of key writers on information behaviour, they have been relatively ineffective in shedding light on information need (Wilson, 2006) and have also done little to explore personal information management.

1.1.2. Imported frameworks

More recently, theories of learning and knowing developed outside of IL have served to reshape ways in which IL practitioners talk about and investigate information use. Of these, the two most influential are Meyer and Land's threshold concepts (2003) and Marton and Booth's variation theory (1997). The former provides a novel way of conceptualising IL; one that organises the field around key (often "troublesome") concepts that, once grasped, transform information users' perspective on information use (Townsend et al., 2016) serving as a portal to "new conceptual terrain in which things formerly not perceived come into view" (Land et al., 2014, p. 200). Threshold concepts of IL have been adopted as an organising principle of the most recent ACRL *Framework for Information for Higher Education* (2015), arguably the most influential framework for IL in tertiary education (see Townsend et al., 2016 for a discussion of how this review was managed). Largely as a result of their role in underpinning the ACRL framework, threshold concepts have also come to influence approaches to IL instruction at tertiary level (e.g. Bravender et al., 2015; Brunetti et al., 2014). Indeed, as Cousin (2009) points out, Meyer and Land's incorporation and exploration of liminality in engaging with threshold concepts helps to shed light on the teaching and learning process and the multiple ways in which learners engage with "troublesome" concepts. As an analytical framework to underpin IL research, however, the threshold concepts model has been less widely adopted. This may in part be due to the fact that both novices and more expert respondents find it difficult to identify and map their field's threshold concepts (Shinners-Kennedy & Fincher, 2013).

Numerous IL specialists have also adopted phenomenography and variation theory (Marton & Booth, 1997; Marton & Pong, 2005) both as a basis for a pedagogy of IL and as a framework for its investigation. Phenomenography explores variations in the ways in which individuals experience or conceptualise a phenomenon (Marton & Pong, 2005). It is widely used by IL researchers; phenomenography has been used to explore variation in the way that faculty understand IL (Boon et al., 2007; Webber & Johnston, 2005) and it has provided the analytical foundation for numerous studies into undergraduate conceptions of IL (e.g. Edwards, 2005; Maybee, 2006). An early phenomenographic exploration of undergraduate IL by C. S. Bruce (1998) is now seen as seminal and subsequent work by Limberg (2000) and Lupton (2008) have served to further popularise phenomenography as a tool to explore how undergraduates use information.

1.1.3. Practice Theory applied to information literacy

IL professionals' adoption of practice theory has been relatively recent when compared, for example, to phenomenography. Christine Bruce was already publishing empirical work based on the phenomenographic analysis of situated IL before 2000 (e.g. C. S. Bruce, 1998). It was not until the following decade that publications exploring a social practice approach to the interrogation of situated information use appeared (e.g. Savolainen, 2007; Talja et al., 2005; Tuominen et al., 2005). Practice theory has since been contrasted with phenomenography (Limberg et al., 2012), with task-focused research (Byström & Lloyd, 2012; Talja & Nyce, 2015) and with the information behaviour model (Cox, 2012; Savolainen, 2007). It has been claimed that a closer focus on the doings and sayings around information use could help to move empirical studies of IL beyond a focus on the individual user (Cox, 2012) and their cognition (Olsson & Lloyd, 2017; Savolainen, 2007; Talja et al., 2005); that a practice approach to the interrogation of IL allows for the proper attention to tool use (Limberg et al., 2012; Tuominen et al., 2005) and that the role of task in information use can only be fully apprehended when it is explored as an element of situated information use (Talja & Nyce, 2015).

Pilerot et al (2017) report a very considerable increase in the incorporation of practice theory into articles on information use from 2005 onwards. They also point towards some divergence among these publications both in terms of the conceptions of practice that they take as their foundation and the ends to which they employ practice theory, an area also explored by

Cox (2012). Wenger and Lave tend to be enlisted in studies that focus on information literacy education and socialisation into situated information use (e.g. Pilerot et al., 2017) or the negotiation of identities contingent on information practices (e.g. Cox, 2012). Examples of writing with these foci include Wang (2007) and Wang et al. (2011). Schatzki, on the other hand, tends to be referenced in research whose focus is the mapping of routinized patterns of situated, goal-oriented information use (Cox, 2012; Pilerot et al., 2017). Studies in this latter category place a greater emphasis on how situated information practices are negotiated, replicated and subtly changed (e.g. Lloyd, 2012), on the tacit understandings that shape them (e.g. Francke et al., 2011), the role of artefacts (e.g. Alexandersson & Limberg, 2003), the *relatings* (i.e. the "intersubjective space" (Lloyd, 2014, p. 104) that situated information users construct and share as part of their information use) and, finally, the teleo-affective structure of information practices shaped by undergraduate and postgraduate written assignments (e.g. Schreiber, 2014, 2017). It would be unfair and inaccurate to paint this latter group as unconcerned with how recent arrivals are socialised into situated information practices; Lloyd's (2012) emphasis on negotiation during practice enactment partly addresses mechanisms of socialisation. However, pedagogy and mechanisms of IL socialisation are not their primary concern. Indeed, Schatzki (2017) himself contends that learning how to perform the doings, sayings and relatings of a practice is integral to and inseparable from going on in the practice itself; practice theory "does not foster a new conception of learning" (p. 23).

In terms of the contexts where practice theory has been used to interrogate information use, some key investigators have chosen to focus on professional contexts (Lloyd, 2005, 2014). In educational contexts, information use in primary education (Alexandersson & Limberg, 2003), secondary education (Francke et al., 2011), among PhD candidates (Pilerot, 2016) and among students at the later stages of their undergraduate and postgraduate programmes (Schreiber, 2014, 2017) have been examined through the lens of practice theory. However, proponents of the information practice model have devoted relatively little attention to the initiation of undergraduates into information use in tertiary education. The current study explores information use in this particular context with specific attention to how first-year undergraduates experience information use as part of first-year composition courses.

1.2. Conceptions of Practice Theory that have informed the current investigation

The tenets of social practice theory that inform the current study are broadly derived from the work of Schatzki. Practices are held to be arrangements of general understandings (conceptions of how things are or should ideally be), practical understandings (understandings of how to achieve or carry out a particular activity), rules (unlike general understandings, these are explicit attempts to shape actions within a practice) (Schatzki, 2001, 2012). Practices hang together in teleological hierarchies; they are shaped towards "a person's end: it is that for the sake of which she acts" (Schatzki, 2012, p. 15) these ends not only "top off" practices but also provide the practice with a teleo-affective structure that shapes the emotions and moods appropriate to those participating in the practice (p. 16). Some practice theorists also list materials, artefacts and "tangible physical entities" (Shove et al., 2012, p. 15) as intrinsic to practices. Schatzki (2012), however, chooses to delineate practices from "material arrangements" but holds that these two groups form inseparable "bundles" (p. 16). By considering practices to be separate from, if inextricably linked to, the material world, Schatzki (2012) opens up space to examine the relationships between these two groups. One such relationship, he theorises, is causal; practices can act on the material world, causing it to be altered, while the various elements of the material world and their availability can facilitate or discourage certain practice options. Finally, practices and practice bundles that are still "alive" (i.e. that continue to be performed) will change subtly during each performance, possibly incorporating new activities (Schatzki, 2012; Shove et al., 2012).

1.3. First-Year Composition (FYC) and information literacy

University programmes in the US typically include one or two FYC courses in students' first year of study (Harrington et al., 2001) and these courses have been adopted at overseas branch campuses (Rudd & Telafici, 2017) and at institutions that take US tertiary education model as their template (Arnold, 2016). FYC, particularly in these latter contexts, is sometimes understood as an induction into generic academic writing, laying a foundation for later development when undergraduates write within their disciplinary courses. However, some Composition specialists reject this description, positioning FYC instead as a course that:

> improve[s] students' ***understanding*** of writing, rhetoric, language, and literacy in a course that is topically oriented to reading and writing as

> scholarly inquiry and encouraging more realistic understandings of writing. (emphasis added)
>
> (Downs & Wardle, 2007, p. 553)

FYC courses are normally situated within the General Education programmes of the institutions where they are offered (Fosen, 2006) and typically do not explore concepts central to the disciplines students have chosen (indeed, the first-year students taking these courses may not yet have committed to a specific BA programme). FYC courses are, as a result, flexible in their topic focus and students are likely to have some agency in choosing what they explore through reading and writing, as seen in the FYC learning outcome from a US institution:

> help students learn how to find worthwhile subjects to write about and how to generate interesting ideas about them.
>
> (Fosen, 2006, p. 17)

Faculty delivering these courses are drawn from several backgrounds, including literature and English as a Foreign Language, as well as Composition itself. It is not uncommon for FYC courses to be delivered by Master's qualified faculty or by students currently enrolled on appropriate postgraduate programmes (Fosen, 2006).

The FYC conception of Composition as scholarly inquiry is closely linked to assessment; the "research essay" assignment is an integral part of FYC courses (Norgaard, 2003) and FYC course learning outcomes frequently contain explicit references to various facets of information use (Fosen, 2006). Both among IL specialists and Composition faculty, there have been calls for a more substantial focus on IL in FYC (Artman et al., 2010; Maid & D'Angelo, 2016; Mery et al., 2012; Norgaard, 2003; Purdy & Walker, 2013; Scheidt et al., 2016). The highly situated nature of information use on FYC courses is seen as an ideal context for IL development (Maid & D'Angelo, 2016; McCracken & Johnson, 2015), and the typical "one shot" involvement by IL specialists, a single visit to FYC classrooms to "cover" IL instruction, is seen as grossly insufficient (Artman et al., 2010; Mery et al., 2012). While faculty delivering FYC courses represent a relatively heterogenous group in terms of their academic backgrounds and

qualifications, the conception of IL as a set of basic skills that can be taught in isolation may still be widespread (Downs & Wardle, 2007; Norgaard, 2004). Published FYC course materials may reinforce the conceptualisation of IL as a finite set of skills to be acquired and deployed in a fixed, linear order as part of the process of scholarly research (Purdy & Walker, 2013).

1.4. Research Context

The research focus of the current investigation will be the information practices that develop around the assessed research essay task on undergraduate FYC courses at Zayed University, Abu Dhabi, United Arab Emirates.

The UAE is a federation of seven emirates, of which Abu Dhabi is the largest and most affluent. The UAE is considered socially liberal in comparison to neighbouring Gulf Cooperation Council states. However, sexual activity between same-sex couples is outlawed and trans rights do not exist; censorship ensures that these groups are not represented in film and other popular media (*United Arab Emirates*, 2019). Women enjoy greater freedoms than in many neighbouring countries; females drive, tertiary education is provided free for all Emirati women and female involvement in the workforce is increasing. Local media regularly highlights the progress that has been made towards greater freedoms for women in the country (Müller & Camia, 2023). News media, film and other media are subject to censorship, a situation that is largely supported by UAE nationals (J. D. Martin et al., 2020).

Established in 1998, Zayed University (ZU) is the youngest and smallest in terms of enrolment of the three tertiary institutions funded by the UAE federal government. ZU was initially founded to cater exclusively to female students and it was not until 2008 that males were first enrolled. Although the male/female ratio in the ZU student body is not published by the university (Zayed University, Office of Institutional Research, n.d.), male participation remained negligible in 2018/2019 at the time when the data for the present study were collected. The BSc in Business Sciences is by far the most popular ZU undergraduate programme, accounting for

over a quarter of all enrolments. Also relatively popular are degree programmes in International Studies and in Communication and Media Sciences.

Uniquely among UAE federal tertiary institutions, ZU undergraduate programmes incorporate a year of General Education. Students are not obliged to declare a major during their first year of study and instead take General Education Common Core (GECC) courses through their freshman year with some GECC courses continuing into their third semester. The GECC in its application at US institutions aims to prepare "graduates to be successful and reflective citizens and leaders, and to make a difference in local and global communities" (*General Education (Common Core) Requirements: CGES Catalog*, n.d.). In the Middle Eastern context, it is adapted to reflect local governmental priorities; the ZU GECC contains courses on Arabic Concepts, Islamic Civilisation and Emirates Studies, to reinforce cultural and linguistic identity that may have been somewhat undermined by the recent adoption of English medium education at primary and secondary level. A GECC course on Entrepreneurship reflects a national push to foster private industry. The Methods of Scientific Research and Development course, taken in the second semester, aims to encourage active involvement in empirical research. Significant among ZU's GECC offerings are three English Composition courses running through the three first semesters of study. These courses engage learners in producing descriptive, persuasive and argumentative texts on a range of topics. The second and third of these composition courses both include a researched essay task as a major element of assessment.

Undergraduates at Zayed University come from a broad range of educational backgrounds. A small minority have attended one of the 63 high-schools offering a UK or US curriculum or the international baccalaureate in Abu Dhabi. Some have also attended English medium high-schools administered under the Abu Dhabi Education Council's (ADEC) Private and Public Partnerships scheme. The majority, however, have experienced a "partial immersion" at public, federally-funded schools where Science and Maths courses are delivered through the medium of English (Baker, 2017, p. 287). Nationally, reading levels in Arabic as assessed by PISA in 2018 are considerably below the OECD average. 57% of young Emiratis can identify main ideas, find specific information and infer the purpose of texts of moderate length and only 5% show reading skills consistent with the highest PISA reading levels (Avvisati et al., 2019). In terms of English proficiency, reports by the IELTS partners on national mean scores from 2015 place UAE IELTS test-takers at the bottom of the global league table, with scores in reading proficiency particularly weak (IELTS Partners 2009–2017, n.d.). These results are mitigated

somewhat by the fact that UAE high-school graduates were allowed to take IELTS tests multiple times at the expense of the federal government. Of the student cohort sampled for the current study, approximately half did not meet the required IELTS band 5 equivalent level on entry and were obliged to take an additional year of remedial English language instruction before starting their freshman year.

The three Composition courses at ZU Abu Dhabi are delivered by both MA/MEd and PhD holding faculty, drawn from a range of nationalities. MA/MEd faculty hold qualifications in EFL/ESOL or Applied Linguistics. PhD holders are drawn from a broader range of disciplines and sub-disciplines, including Literature, Applied Linguistics, Education and History. Until 2013, MA/MEd faculty were given a 4/4 teaching load (i.e. they served as FYC instructors for 4 sections (class groups) each semester) and PhD faculty were allocated a 3/3 teaching load to reflect their additional research requirement. However, in 2013, ZU unilaterally increased the teaching load for masters-qualified Composition faculty to 5/5 and for PhD-qualified faculty to 4/4. Each class section typically contains 20-25 students.

Until the 2017/18 academic year, MA/MEd and PhD holders at the site worked alongside each other at the Dept. of English and Writing Studies (EWS), but in that academic year, PhD holders were moved to the College of Education and allocated only the third Composition course (delivered in the sophomore years). At the time of the current study, then, both FYC courses were delivered by MA/MEd holding EWS faculty.

2. Literature Review

2.1. Defining Information Need

The concept of information need is one that remains "the subject of much debate and no little confusion" (Wilson, 2006, p. 658). It is a concept rooted in a paradox; unlike other basic needs, "what is required to satisfy an information need is often not known to the individual concerned" (Cole, 2011, p. 1216).

Wilson (2006) points out that the term "information" is problematic largely because writers exploring information literacy, need, retrieval and use frequently fail to provide a clear definition of "information" for the purposes of their research. Where attempts have been made to reach a definition, these have often looked at information within a possible hierarchy of concepts that also includes data and knowledge (Case, 2002; Wilson, 2006; Ormandy, 2011, Bates, 2010). This data-information-knowledge (DIK) progression represents data as the "rawest" form and knowledge the most "processed or integrated" (Bates, 2010, p. 17). Data is frequently seen as an external, objective reality (Case, 2002; Ormandy, 2011). Knowledge, in contrast, is frequently said to be "internal to the individual" (Ormandy, 2011, p. 93). This cognitivist, internal conception of knowledge is implicit in Belkin's Anomalous States of Knowledge (ASK) model where knowledge is "an individual's model of the external world and of his or her position in it" (1980, p. 44). Information, then, is seen as data to be internalized in order to modify knowledge structures (Ormandy, 2011; White, 2014) or, indeed, the very process of internalization (Buckland, 1991; Dervin, 1976). However, a key failing of the DIK model is that it does not provide a platform to explore the "water into wine" (Cornelius, 2002, p. 408) moments when data comes to be considered as information or when information and knowledge meet. For these reasons, the DIK progression is considered of limited utility in clarifying the concept of information (Bates, 2010; Case, 2002).

Bateson's "any difference which makes a difference" (2000, p. 453) is considered by many to be one of the more effective attempts at formulating a general definition for the concept of information (Bates, 2010; Case, 2002; Lloyd, 2010b). Its main limitation is that it is entirely cognitivist in its conception of information; the difference Bateson talks about is a "perceived difference", a "unit of mind" (Case, 2002, p. 40).

In the course of the past 30 years, there has been a greater focus on the social situation in which information is used. Dervin's model sees information users as "sense-makers mov[ing] through time-space" (1998, p. 40) and information (along with knowledge) as one of the raw materials that these sense-makers use to bridge gaps impeding their progress towards desired outcomes (do Nascimento Souto et al., 2012). More recently, a focus on information practices (Lloyd, 2010a, 2010b; Savolainen, 2007; Talja & Nyce, 2015) casts information as "a human artefact, constructed and reconstructed within social situations" (Bates, 2010, p. 5). This is a rejection of information as arbitrary data and also as the product of individual cognition; information is cast as "the product of a negotiated construction between individuals interacting with the artefacts, texts, symbols, actions and in consort with other people in context" (Lloyd, 2010b, p. 73). A neo-pragmatist stance locates the construction of information more specifically in situated dialogue (Savolainen, 2012; Sundin & Johannisson, 2005).

The concept of information need is, unsurprisingly, also a contentious one. As recently as 1981, Wilson expressed doubt in the existence of an "information need" separate from other physiological, cognitive and affective needs and recommended instead that the focus should be on information seeking "towards the satisfaction of [other] needs" (Wilson, 2006, p. 664). However, much has been done to explore information need in the intervening years (and, indeed, previous to Wilson's article; e.g. (Belkin, 1980; Dervin, 1976; R. S. Taylor, 2015).

The remainder of this section will explore four approaches to the definition of information need: Taylor's "visceral" need; information need as a situated "gap" in information; need contingent on task completion and, finally, need contingent on situated practices.

2.1.1 Robert Taylor's "visceral" need

Robert Taylor approached information need from the perspective of a library specialist wanting to act as an interface between users and information collections. As such, he was concerned with developing "representation[s] of the inquirer's need within the constraints of the system and its files" (R. S. Taylor, 2015, p. 255). In the late 1960s, Taylor proposed an initial "visceral" need within the information user; a need that is "probably inexpressible in linguistic terms" (R. S. Taylor, 2015, p. 254). This initial need or query (Taylor's Q1) is developed, often through guidance from and communication with library specialists, through three increasingly

advanced levels of query (Q2, Q3 and Q4) that formalize it into a clear statement of need and frame it as a question that can be used to interact with information systems. The nature and origins of the original need (Q1) was not explored in his work beyond the contention that it represented "a certain incompleteness in his picture of the world […] a "state of readiness" to interact purposefully with the world," (R. S. Taylor, 2015, p. 253). Taylor's model continues to be influential to this day. At its core, however, Taylor's cognitivist model cannot shed light on how information need is triggered and comes into being (Savolainen, 2017).

2.1.2 Information Need in Developing Situations; Gaps

Subsequent to Taylor, through the 1970s and 80s a number of attempts were made to acknowledge the role of the situation in which information is used in shaping information need. Belkin's anomalous state of knowledge (ASK) conception saw information need as an anomaly that emerges when users' current conceptual state of knowledge is not sufficient to resolve a problematic situation (1980). For Dervin, information need is a gap that becomes apparent during situated information use and hampers users' progress (Dervin & Dewdney, 1986). Other models, such as those suggested by Wilson and Kuhlthau, explore both the cognitive and affective facets of situated information need (Kuhlthau, 1991; Wilson, 1994). Research in this vein frequently examines evolving situations where information need is not static (c.f. Ormandy, 2011; Westbrook, 2008; Warner & Procaccino, 2004). In general, conceptions of need in this group could be said to share three key characteristics. Firstly, a feature of the information user's immediate situation is generally identified as a trigger. As the user's immediate situation develops and changes, so new triggers, and consequently new needs, may appear (Savolainen, 2012). Secondly, need is conceptualized as individual and internal to the user. It is seen variously as a gap or anomaly in the information user's current knowledge structure or perhaps something lodged in the user's unconscious (Albright, 2011). Finally, while work to map the affective dimensions of information need (e.g. Kuhlthau, 1991) or access need via users' perceived self-efficacy (e.g. Ormandy, 2011) may provide some limited insights, Savolainen's view that this cognitivist need is "a black-boxed factor that triggers and drives information seeking in an undefined way" (2012, para. 17) generally holds true for studies in this group.

2.1.3 Information Need Contingent on Work or Learning Tasks

Explorations of information need contingent on tasks tend to share three characteristics. First of all, the information user's role within the work or learning environment is significant in shaping information need. Wilson (2006), writing in 1981, points out information need is largely dictated by the role-related tasks and that limitations imposed on users by their roles. Leckie *et al.*, (1996) further point out that an information user in the workplace may play several roles (e.g. technical, managerial, interpersonal), each with embedded tasks and contend that it is "the interlocking of roles and tasks [that determine] information need" (p.166). Tasks themselves, the second and central element of this category, are seen as key to the shaping of need. Byström and Järvelin (1995) develop three distinct categories of task-related information need; problem information (on the requirements of the task and what successful task completion might look like), domain information (established facts, laws, concepts etc relevant to the task) and, finally, problem solving information (how the problem should be formulated; how a solution should be approached). Additionally, they point out that task complexity is "relative to the worker" (p. 195), implying that the same task is likely to impose greater information needs on users who have less familiarity with related work roles. A final characteristic of information need related to work or learning tasks is that the resolution of the task (or its abandonment) marks an end to the cycle of information need and seeking (Savolainen, 2012).

2.1.4 Information Need Contingent on Situated Practices and Dialogue

Practice-based investigations of information use variously focus on doings and sayings within a single site (e.g. Limberg, 2007) or larger, dispersed communities of practice (e.g. Hjørland, 2002). Practice-based and task-based conceptions of information literacy are seen by some as closely related and complementary (e.g. Byström & Lloyd, 2012) while others try to establish clear differences between these two categories (e.g. Talja & Nyce, 2015). The following will highlight clear differences between these two lenses and in particular, how they bring information need into focus.

A first and foundational difference is the move away from a focus on individual internal cognition and towards a conception of cognition as constructed through shared, situated action and interaction (Talja & Nyce, 2015). Knowledge is "relational and therefore constructed and is

brought about by engaging with discourses, other practices, and tools of a particular setting" (Lloyd, 2010a, p. 250). When cognition and knowledge are seen as distributed and situated, needs "for information and information skills are embedded in work practice and domain-dependent tasks" (Tuominen et al., 2005, p. 330). Lloyd, (2011) points to studies where information need has been predefined by the workplace environment or has been imposed, often by others with greater claims to expertise or authority. Indeed, as Talja and Nyce, (2015) point out, problem generation (i.e. the identification of information need) is not an indication of a gap or deficit but an activity requiring considerable domain-specific expertise, implying that familiarity with domain-specific doings and sayings brings with it both the capacity to identify domain-specific information need and also to sanction information needs appropriate to practice within the domain. This same dynamic seems to manifest itself in Hjørland's, (2002) findings; Hjørland (2002) suggests that psychiatric professionals (viewed through the lens of publications in the discipline) form communities around "approaches or 'paradigms'" (p. 257) and are subsequently limited in their information needs by allegiances to these same approaches and paradigms.

Proponents of practice theory would deny that information need is contingent in any predictable and generalizable way on the requirements of a particular task but rather dependent on "the orchestration of human capabilities in situated practices" (Talja & Nyce, 2015, p. 65). Tasks are conceived and executed within practices and the procedural limitations or possible outcomes may dictate the shape of tasks and whether or not they are undertaken (Talja & Nyce, 2015). This is very much in contrast to Byström and Järvelin's (1995) model where the task is seen as the starting point and its characteristics generative of information needs related to possible approaches to its completion as well as the relevant domain knowledge.

Investigations into the ways in which task-related information need is contingent on situated practices or situated dialogue highlight three themes. First of all, language is not seen as a tool for externalizing an internal information need or for itemizing an information need that has been pre-determined by a given task but rather the place where information need emerges through a process of negotiation. According to practice conceptions of information literacy, language does not, as Taylor describes, distort or compromise information need (R. S. Taylor, 2015) but instead actually brings information need into being (Lundh, 2010). Secondly, tasks are "shaped by the wider discursive practice[s]" with which they are situated (Limberg, 2007, para.

22) such that tasks that might appear complex in nature may during their execution be simplified with implications for the associated information needs. Finally, while the situation or domain within which information use takes place plays a role in shaping information need, this does not result in complete uniformity. Limberg, (1999, 2007), points to variation in task-related information seeking practices within an educational context and contends users' conceptions of task and of information use mutually reinforce each other. Differing patterns of information need may also be based on (possibly competing) situated identities, with some identities positioning themselves as arbiters of need by virtue of their authority or accumulated expertise (Johannisson & Sundin, 2007; Lundh, 2010).

In discussing practice conceptions of information need and the role of tasks, the case of task-based information use in educational settings is of particular interest. In such settings, tasks are frequently used as a tool to socialize students into how research is conducted towards a (most frequently) written product such as an essay or research paper (e.g. Alexandersson & Limberg, 2005; Limberg, 2007; Lundh, 2010). As Limberg (2007) points out, tasks of this nature can be seen as complex by task designers and teachers but considered straightforward by students during their completion. Through primary, secondary and early tertiary education, the aim of the task is less related to information content to be researched and more to the practices around research and writing. Consequently, the need to build new knowledge may be downplayed in favour of a focus on familiarization with research procedures or discrete research skills (Alexandersson & Limberg, 2005; C. Bruce et al., 2006; Downs & Wardle, 2007). Alexandersson and Limberg, (2005) describe such educational settings as "non-research environment[s], not based on genuine research" (p. 15) and in such contexts tasks can be simplified such that learners see information need as the requirement to find facts for transfer to a written product; a need for evidence that can be used to support a pre-determined position (Lupton, 2008). This fact-collecting conception of information need and research has been found to be widespread across the primary and secondary sector (e.g. Alexandersson & Limberg, (2005). Purdy and Walker's (2013) review of the research training on first-year Composition courses at US universities (generally delivered as part of a research essay task) points to an emphasis on a prescribed, linear research process at the expense of information need and information use that aims at the generation of knowledge. In sum, one theme running through the literature is that the way in which learners are socialised in educational contexts frequently

initiate learners into “situated cognitions” (Leckie et al., 2010, p. 206) around information need that are simplistic, linear and unlikely to promote information practices that can usefully be carried to later academic disciplinary work or to information use in the wider society (Alexandersson & Limberg, 2005). In addressing these perceived deficiencies, it has been suggested that library and teaching professionals should jointly reflect on and review the information practices enacted within their institutions (Alexandersson & Limberg, 2005) and that teaching professionals who themselves engage in research and scholarship may find a resulting shift in their own practices (Purdy & Walker, 2013) and conceptions of information need; as Limberg (2007) puts it “the discursive practice of school may be reshaped by the activities carried out there” (para. 20). Also, there seems to be a consensus that learning tasks must firstly refocus students on the knowledge building around the content of their research as opposed to the process (Alexandersson & Limberg, 2005; Limberg, 2007; Purdy & Walker, 2013) and secondly, that a discourse around information need is essential both to surface the practices that learners carry to the situation (Purdy & Walker, 2013) and to initiate them into the ways of enacting information need in academic life (Alexandersson & Limberg, 2005; Lundh, 2010; Lupton, 2008).

2.2. Information Seeking

Information seeking is a broad area, covering a range of activities from passive browsing or monitoring of information streams to purposeful, directed searching for information, often as part of a specific task (Bates, 2002). Major IL frameworks generally contain a section that takes purposeful information seeking as its main focus (cf. “Gather”, SCONUL, 2011, p. 8 and “Searching as Strategic Exploration”, *Framework for Information Literacy for Higher Education*, 2015, p. 9). However, competencies, understandings and practices related to information seeking are woven through major IL frameworks. Information seeking as a process must be planned and managed (cf. “Plan”, SCONUL, 2011, p. 7 and "Research as Inquiry" *Framework for Information Literacy for Higher Education*, 2015, p. 7) and the evaluation of information sources as they are found is intrinsic to the process (cf. “Evaluate”, SCONUL, 2011, p. 9 and “Scholarship as Conversation”, *Framework for Information Literacy for Higher Education*, 2015, p. 8). Boundaries attempting to separate information seeking from discussions of information need or the incorporation of information into novel information products are

artificial. In its exploration of information seeking in academic contexts, this section will look at the people and places typically involved, users' information seeking activities and, finally, how these users typically evaluate information as they find it.

2.2.1 The who and where of information seeking

Although information seeking is often presented to undergraduate students as a solitary activity—a view reinforced by the fact that many information retrieval (IR) systems are designed for individuals working alone—for academics themselves "social networks are truly the place where information is sought, interpreted, used, and created" (Talja & Hansen, 2006, p. 118). Undergraduates report consulting with others regularly to find information (Head, 2013). For non-course related information seeking, students show a tendency to consult peers within their social circle (Fisher & Naumer, 2006; Head, 2013; Sin, 2015) and class or programme peers continue to feature as a key information resource for course-related searches (Head, 2013; Latham & Gross, 2013; Seamans, 2002). Unsurprisingly, course instructors become a key information source in the early years of their undergraduate study (Holliday & Li, 2004; Latham & Gross, 2013; Rieh & Hilligoss, 2008). University librarians, however, are very rarely listed by undergraduates as information resources (Head, 2013; Holliday & Li, 2004; Seamans, 2002).

Less attention has been devoted to the exploration of place in the information gathering practices of undergraduates. Students in the early stages of their undergraduate programmes report using the physical library little or not at all (Holliday & Li, 2004; Seamans, 2002), and the library catalogue is seen as frustrating and confusing (Lee, 2008). The internet, more specifically Google, is generally considered a key site for both non-course-related and course-related information searches, particularly in freshman and sophomore years (Holliday & Li, 2004; Latham & Gross, 2013; Lee, 2008; Sin, 2015) possibly showing that students continue to use strategies that have proved successful in research tasks during secondary education (Head, 2013). Where scholarly sources are explicitly required by faculty, students rely increasingly on online academic databases (Davis, 2003; Head, 2013).

Accounting for students' preferences is not straightforward. In terms of preferred research sites, online information seeking has obvious convenience advantages. Physical university library collections and the sites that house them may indeed appear large and overwhelming to early undergraduates (Seamans, 2002) and they also lack many of the characteristics of

information grounds where students successfully source non-course-related information; such sites tend to be places regularly frequented by students in small/medium sized groups for a purpose other than information seeking and where participants have developed a relationship (Fisher et al., 2007). These characteristics, taken together with students' preference for browsing library shelves over targeted catalogue searches (Lee, 2008) suggest that students, particularly early in their undergraduate careers, value sites that emphasize the social and facilitate serendipitous information gathering as well as more targeted searching. The popularity of the online environment (including scholarly databases) may be due in part to the research and writing practices common among students in late secondary and early tertiary education (see below), which make sites that offer full-text digital copies of information sources attractive (Holliday & Li, 2004; Jackson, 2008). Students also continue to return to familiar online resources such as Google and Wikipedia—those that have proved "tried and true" in previous information seeking (Head, 2013, p. 475). Regarding the who of students' information seeking, a complex web of factors may contribute to the marginalization of library IL specialists in favor of instructors or peers. Students frequently meet college librarians in the context of the "one-shot" research skills intervention, generally delivered during the freshman year (Artman et al., 2010; Mery et al., 2012). These interventions are insufficient to develop a relationship on a par with that which instructors and classmates enjoy. The "one-shot" visit also establishes the librarian as an expert in information seeking and evaluation and as someone willing to support students' searches for information related to assigned and assessed tasks. However, undergraduates generally believe that skills acquired before entering university are more than sufficient for university research tasks; indeed many freshmen with poorly developed information seeking skills believe themselves to be proficient (Folk, 2016; Gross & Latham, 2012). Course instructors, on the other hand, are generally responsible for the shaping or imposing of research tasks; mandating both "appropriate" research topics and scope and "acceptable" sources of information as well as evaluating the ultimate success of students' information seeking as evidenced (generally) in a written product (Gross & Latham, 2009). This imposition of a research focus—conceptualized by Gross (1998) as the imposed query—casts the library IL specialist in the role of intermediary; instead of working with the student to clarify and/or construct her own information need and seek relevant sources, IL specialists must attempt to interpret and clarify the task as intended by the (instructor) imposer.

2.2.2 The why and how of information seeking

The introduction of the most recent ACRL IL framework in 2015 saw a move away from the conception of undergraduate information seeking as an inventory of teachable and testable skills. This move was due at least in part to the accumulation of influential phenomenographic investigations into information seeking among late-secondary (Limberg, 1999) and early-undergraduate students (C. S. Bruce, 1998; Edwards & Bruce, 2006; Lupton, 2008). These studies detailed the activities of students during contextualized information seeking but also allowed the implicit meanings that underpin practice to emerge (C. S. Bruce, 1998). An alternative route to uncovering the meanings that shape information-seeking practices is the mapping of these practices to cognitivist models of development or "personal epistemologies". Work in this latter vein draws on the models developed by Perry, Kitchener and King, Magolda, Kuhn and others, applying them to the information-seeking activities of undergraduates (e.g. Hofer, 2000; Holliday & Li, 2004; Jackson, 2008; Orme, 2008; Whitmire, 2004). These two groups approach the why of information seeking and use from different angles. Phenomenographic research explores variations in the way that a group experiences information seeking within a specific context (Limberg, 2000) while frameworks of personal epistemology attempt to map cognitive development in a way that is (at least to some extent) generalizable (Hofer, 2000; Hofer & Pintrich, 2009). This section will explore the meanings which inform undergraduate information seeking—the why—along with some of the information seeking activities linked to these meanings—the how.

More basic conceptions of information seeking uncovered through phenomenography frequently frame it as a search for evidence to support predetermined opinions (Limberg, 1999; Lupton, 2008). Where these underlying meanings are conceptualized as personal epistemologies, similar characteristics emerge at the least developed level; knowledge is objective—"right" or "wrong" - and can be obtained from authoritative sources including the instructor (Jackson, 2008; Whitmire, 2004) and information seeking is undertaken to support an existing position (Whitmire, 2004). Behaviours linked to this conception include a search for facts and figures supporting a pre-determined position or for authors whose positions align (Lupton, 2008); "good quotes" (Holliday & Li, 2004, p. 365). Texts that fail to support the users' chosen position may be seen as "confusing" (Limberg, 1999) and are frequently rejected (Whitmire, 2004). The

search for nuggets of supporting information can seem a daunting one (S. Edwards & Bruce, 2006) and these users may prefer digital sources that can be scanned electronically for key words relating to their search (Maybee, 2006). Indeed Holliday and Li (2004) suggest that the availability of downloadable full-text sources that can be mined for supporting quotes encourages these novice information seekers to commit to sources before they have fully read around the topic. Although these users may feel relatively comfortable with IT, information seeking in digital environments is seen as a challenging task. They impose little structure to information seeking; searches are not planned and users rarely reflect on their use of search terms or tools (Edwards & Bruce, 2006). These users rarely make use of Boolean operators, preferring to use single-word internet searches or strings of search terms (Seamans, 2002), perhaps indicating a preference for tried and trusted strategies. Finally, in order to evaluate sources, information seekers working within these less developed conceptions are likely to rely on surface features such as the perceived status of the author (Limberg, 1999), the presence of references and statistics, the format or the provenance (Lupton, 2008). Information seekers who exhibit less developed personal epistemologies likewise depend on surface features such as domain type (.org, .edu), text length or the presence of a references list (Whitmire, 2004) or the general appearance of a digital source, including the perceived formality of the writing or the presence of advertising on the page (Seamans, 2002).

Slightly more advanced conceptions of information seeking are evident in Limberg's "Balancing information to choose right" category (1999, p. 6) and in Lupton's subcategory "Seeking contrasting perspectives" (2008, p. 405). For these information seekers, knowledge remains objective. There is an awareness that multiple perspectives are possible but an inability to compare their merits in order to reach a considered position and as a result, they may simply pick a side (Limberg, 1999), incorporating an opposing opinion in their product with the ultimate aim of strengthening their own argument (Lupton, 2008). These align closely with a multiplist epistemology (Hofer, 2000; Jackson, 2008). Multiplist thinkers "recognize complexity but have not yet learned how to navigate its waters"; not yet fully capable of evaluating competing ideas on their merits, they may resort to "intuition, feeling, or 'common sense'" (Kurfiss, 1988, p. 54). Users in this broad category tend to show a greater awareness of information seeking as a process that may comprise multiple stages (Edwards & Bruce, 2006; Limberg, 1999; Maybee, 2006). This process may include an initial "quick and dirty" search to gain an overview of the

topic (Edwards & Bruce, 2006, p. 362) and searches to narrow the topic (Maybee, 2006). These users show a greater awareness of and engagement with information-seeking tools (Jackson, 2008; Maybee, 2006), although with mixed success; unsuccessful searches may be blamed on the tools used (Edwards & Bruce, 2006). These information seekers tend to show greater persistence (Edwards & Bruce, 2006) and incorporate more sources in their writing, judging a search to be complete when they have sufficient resources for the requirements of the task (Limberg, 1999). The evaluation of sources continues to depend on superficial characteristics of the text (Limberg, 1999; Whitmire, 2004).

More advanced conceptions of information seeking show a marked contrast to those described above in two respects. For these information users, the task is no longer the primary why of their information seeking. They are driven by an intrinsic interest in the topic (Limberg, 1999), a desire to add to their knowledge base or form an opinion (Edwards & Bruce, 2006) or a drive to use information for social change (Lupton, 2008). Secondly, information is no longer external and objective; it interacts with prior knowledge and is internalized as part of the process of research (Jackson, 2008; Lupton, 2008; Maybee, 2006). These users also begin to recognize the uncertain or subjective nature of information (Whitmire, 2004) and are likely to adapt their thinking on the research topic as a result of information seeking (Lupton, 2008). Information seekers in this category show confidence and considerable competence in tool use and can use search tools to filter their searches (Edwards & Bruce, 2006). They show greater perseverance during the search process (Lupton, 2008) and search strategically, often planning before a search and reflecting on outcomes in order to improve subsequent searches (Edwards & Bruce, 2006). In terms of their strategies for the evaluation of the information they find, these users continue to refer to surface features but also form judgements on the information content of sources (Lupton, 2008; Maybee, 2006; Whitmire, 2004).

Studies that explore the prevalence of these conceptions of information through phenomenography do not generally report how prevalent each conception is within the context under investigation; phenomenography aims to uncover variation but not to quantify it. However, Lupton's (2008) small-scale phenomenographic investigation of 18-to-19-year-old Swedish high school graduates finds that a slim majority identified most closely with the second category described above and approximately a third exhibited characteristics in keeping with the third. Whitmire (2004), on the other hand, finds that the personal epistemologies in evidence among a

small sample of fourth-year Yale undergraduates are, in the majority, in keeping with the first category listed above. Finally, Hofer and Pintrich (2009), in a meta-analysis of studies exploring the personal epistemologies of undergraduates, paint a picture of a gradual journey from conceptions of knowledge aligned with the second "multiplist" category above towards the more relativist epistemological position described in the third group.

2.3. Personal Information Management (PIM)

Stewart and Basic, (2014), define personal information management (PIM) as "the responsibility of an individual in the collection, storage, organization, and retrieval of personal items in digital form […] an individual's ability to manage information in fulfilment of their various life roles such as parent, employee, student, etc." (p. 75). To fully capture the field of PIM, this definition is deficient in three ways. Firstly, PIM also covers that which is encountered incidentally while the user is actively engaged in an unrelated task (H. Bruce et al., 2004; Stewart & Basic, 2014; Williams et al., 2009), information shared with a user by others (Talja & Hansen, 2006) and information that the user herself creates in the form of articles, assignments, documents, correspondence etc. (Kaye et al., 2006; Kwaśnik, 2020; Mizrachi and Bates, 2013; Williams et al., 2009). Secondly, while digital formats have come to predominate, paper continues to play in important role in the PIM practices of users across a range of contexts (Kaye et al., 2006; Mizrachi & Bates, 2013; Williams et al., 2009). Finally, while the majority of investigations focus on tasks and roles, emotion has been identified as a factor in shaping PIM practices (Copeland, 2011; Kaye et al., 2006), as has identity (Kaye *et al.*, 2006; Trace, 2007; Williams *et al.*, 2009). Stewart and Basic (2014) point to the relative neglect of PIM-related skills in information literacy support offered to university students.

2.3.1. PIM contingent on time and space

Malone's (1983) seminal study in the PIM practices of professionals who work mainly at their desks introduced the concepts of *filing* and *piling*. These clarify the ways in which time and space shape PIM practices. Time is a key factor in dictating how and when information is integrated into a user's PIM, termed *filing* by Malone. Processing information in order to decide where it should be saved can be hugely time-consuming (H. Bruce, 2005; Malone, 1983), a problem compounded by the fact that PIM is at least in part dependent on projected future

information need; where users have a less-developed conception of their future information need, filing will inevitably take more time and effort (H. Bruce, 2005; Lush, 2014). Comparing users who practiced early filing to those who tended to rely on piles, Whittaker and Hirschberg, (2001) found the former group tends to create more complex archives that take longer to navigate and to save more information generally, some of which is later discarded, indicating a time investment wasted.

Piling (stacking documents in visible piles on or near the user's desk) postpones the cognitively taxing task of categorizing information, and also uses space and location as aids to retrieval. Malone (1983) holds that this can be effective for a limited number of frequently used items. A second function of piling is to provide a visible reminder of tasks pending. In their ethnographic research into undergraduates' study spaces, Mizrachi and Bates, (2013) found extensive use of piling to manage information resources for ongoing coursework tasks with piles frequently organized by urgency.

Writing in 1983, Malone suggested that computer-based information management that allowed people to defer categorization and, instead, store and access digital files based on location might be practical. Decades later, studies into student PIM practices show evidence of digital piling, where students use one folder as a dropbox for uncategorized digital sources (Hardof-Jaffe et al., 2009) or keep "piles" on their computer desktop in visible folders (Mizrachi & Bates, 2013).

2.3.2. PIM contingent on task

The short-term management of information resources "from gestation or acquisition to long-term (personal) retention or archival storage" (Williams et al., 2009, pp. 343-344) as part of a task cycle has also received considerable attention. Information artefacts used as part of work or research tasks have been categorized as 'hot' (in active use), 'warm' (information artefacts in regular use or needed for an upcoming task) or 'cold' (inactive, archived) (Mizrachi & Bates, 2013). Barreau's (2008) alternative framework includes working information (in regular use over weeks, months or years) and archived information (of possible long-term value but unrelated to active tasks).

In office contexts, Barreau (2008) holds that this information is seldom consulted once it has been archived. Williams (2009) paints a slightly different pattern, one where information artefacts are hot for relatively short periods before being archived but may subsequently transition between 'hot' and 'cold' for brief periods as they are consulted for new tasks. In research and academic contexts, the personal archives of career academics (both physical and digital) vary enormously in their structure and organizing principles but appear to allow their owners to access archived resources equally efficiently, regardless of their configurations (Kaye *et al.*, 2006). Information artefacts may stay 'warm' for longer where they are used in research tasks (Williams et al., 2009) and Barreau (2008) claims that archived information is considered more important by academics and researchers. These differences have not, however, been further explored.

The task-related information management of undergraduates has received relatively little attention. Elsweiler and Ruthven, (2007) suggest tasks (real or manufactured) as a tool to evaluate undergraduates' PIM practices, implying that the ability to retrieve information necessary to the completion of a task should be considered the overriding criteria for successful personal information management. Mizrachi and Bates', (2013) ethnographic study indicates evidence of 'hot' artefacts such as lecture notes, 'warm' information, which is active for a longer period and tends to be kept to hand while 'cold' information related to tasks and courses that have finished may be kept at another location (e.g. the family home). These results are largely supported by Robinson and Johnson, (2012), whose respondents tend to keep the majority of their task-related information resources (both paper-based and digital), use relatively simple archival structures with little evidence of the time-consuming processing and categorization of information, and consult these 'cold' resources rarely. Mizrachi and Bates, (2013) also imply that undergraduates' archives related to their time of study have a temporary quality and may not be maintained post-graduation.

2.3.3. PIM, affect and identity

Affect has been found to play a role in influencing users information search behaviours (e.g. Savolainen, 2014; Nahl, 2005). These investigations have tended to explore affect at the level of the individual and as an internal factor, possibly a reaction to a real-world stimulus

(Savolainen, 2014) or, using Bandura's self-efficacy construct, to measure users' evaluations of their own ability to cope with information-related tasks (Nahl, 2005).

Emotion and identity as factors in PIM have received relatively little attention. Copeland (2011), emphasizes that emotion is the most significant factor in determining whether personal information (as opposed to work-related items) is retained for long-term storage. Whittaker and Massey's (2020) quantitative study into the links between affect and the organizational structure of undergraduates' information archives found that negative mood was associated with more complex folder structures. Robinson and Johnson's, (2012) exploration of undergraduate PIM through narrative inquiry allows a more nuanced picture to emerge; emotions connected to PIM activities, including guilt, anxiety and self-doubt, are found to be associated with a divergence between respondents' own PIM practices and those which they attribute to the "ideal" undergraduate.

Where information users have a more established professional or academic identity, emotion and identity formation or reinforcement have also been linked to PIM practices. Users admit to keeping information that might be of little practical utility because "they cannot part with it [as it is] part of their intellectual history and professional identity" (Whittaker, 2011, p. 13). Academics express fear and anxiety at the possibility of losing their archives, and grief where this loss has actually come to pass; these archives may serve as tools for identity construction and impression management as much as information management (Kaye *et al.*, 2006). Indeed in their study of 48 academics ranging from graduate students to full professors, Kaye *et al.*, (2006, p. 9) note that "every one of our subjects used their archives, their tokens or their visible personal information, to tell visitors and colleagues something about their past, their work, or their family".

2.4. Incorporating Information into Written Products

A broad range of methods have been pressed into service to investigate the how undergraduates incorporate sources. These have frequently involved the analysis of student written output often to isolate possible mitigating factors such as first language (Doolan, 2021; Shi, 2004). Others have opted for large *n* studies to uncover patterns across multiple sites (Howard et al., 2010; Jamieson, 2016) or longitudinal research to shed light on changes in source

use (Davis, 2003). Finally, some studies have attempted to elicit from students their thinking processes related to source use in specific pieces of their writing (Kennedy, 1985; Shi, 2010).

This section will draw on these and other studies to look at how or whether national culture is a predictor of source incorporation practices, whether undergraduate writing from sources should be seen as a developmental process, the role of first language and language proficiency, and, finally, what sources students favour and how they typically exploit them.

2.4.1. Culture and Source Incorporation

Considerable attention has been devoted to the ways in which the integration of source material into their own writing by undergraduates may be partly contingent on their cultural backgrounds. Studies in this area focus on undergraduates whose first language is not English (L2) but who are studying in an English-as-a-medium-of-instruction (EMI) institution either in their home country or in the US, UK or Australian. There is a strong focus in this literature on Chinese (e.g. Shi, 2004; Ehrich *et al.*, 2016) and middle-eastern nationals (D. E. Martin et al., 2011; J. Martin, 2006; McCabe et al., 2008). Hofstede's model is frequently pressed into service, in particular the individualist-collectivist dimension, to explain more accepting attitudes towards academic dishonesty (McCabe *et al.*, 2008; Ehrich *et al.*, 2016) or to account for increased levels of plagiarism in written assignments (D. E. Martin et al., 2011). Hall (2005) identifies (but does not condone) a more understanding approach among US faculty when "students from Muslim or some of the Asian cultures quote extensively or even reproduce large chunks of text verbatim" (p.12). McCabe *et al* (2008) appear to suggest that greater leniency towards academic dishonesty among middle-eastern students coupled with a culture-sensitive IL pedagogy is justified. D. E. Martin et al (2011) find that acculturation (into US culture) will eventually reduce the tendency to plagiarize and suggest that explicit examples of the acceptable integration of sources will help more recent arrivals to "follow the norms of their host culture" (p. 95).

There are several reasons to question the validity of national or regional culture as a mitigating factor in source incorporation. First of all, such models are deterministic in nature and insufficiently flexible to map the constantly-changing characteristics of national and regional cultures (Nowrin et al., 2019). Secondly, Hofstede's model has been called into question on the basis of its original research design and its uniform attribution of sets of cultural characteristics to entire nation states (McSweeney, 2002). Finally, a focus on national cultures may cloak other

factors at play among early undergraduates. The first year of university has been framed as a "liminal space" for all undergraduates, regardless of cultural background; a period when they embark on the transition from "non-academic beings" to "future knowledge producers" (Purdy & Walker, 2013, p. 32). Large *n* comparisons between first-year students from anglophone and non-anglophone backgrounds show some differences in the strategies students use to adapt to unfamiliar practices of information use in this new context but also underline the fact that these cohorts are broadly similar in their unfamiliarity with concepts such as plagiarism (Ehrich et al., 2016). Globally, differences in the treatment of information literacy in national primary and secondary curricula have been identified (Nowrin et al., 2019) and these may go some way towards explaining perceived national differences in information use among first-year international students. However, all undergraduates face a stressful transition towards a new identity as a writer capable of integrating information in their own texts in ways in keeping with the conventions of their new academic community (Hall, 2005; Purdy & Walker, 2013). To frame this transition as an adaptation to the information norms inherent in anglophone culture is an unhelpful misrepresentation of a complex process of "accommodating themselves to the social practices of the university [and its] disciplinary discourse communities" (Hall, 2005, p. 12,13) and a failure to recognize that this transition is one that all first-year undergraduates must make, regardless of their cultural background.

2.4.2. Learning to Incorporate Sources as a Developmental Process

Undergraduate writers' imperfect use of sources in their written products should usefully be considered developmental stages on the road to full socialization into the situated writing practices of their departments and disciplines (Cumming et al., 2016). Although, there is little agreement on the stages of such a developmental process (Chandrasoma et al., 2004), partial pictures are emerging of some waystages in development, both from the perspective of how meaning is managed (Cumming et al., 2016; Doolan, 2021; Shi, 2010) and in terms of the mechanics of writing from sources (Chandrasoma et al., 2004; Howard, 1995).

In terms of how undergraduates cite to add meaning to their writing, a key early developmental stage is the grasping of what constitutes common knowledge and what must be cited, a distinction that is "blurry and subjective" and that will only become clearer with exposure to situated examples as well as trial and error (Doolan, 2021, p. 130). As Shi (2010)

points out, this distinction is closely linked to the development of an authorial voice. As undergraduates develop, they are also likely to put cited information to a broader range of uses in their own texts. Initially, student writers' cited incorporation may be "knowledge telling" - the listing of information from sources for display with little real attempt to incorporate it (Cumming et al., 2016; Hirvela & Du, 2013). As they develop, undergraduates begin to integrate cited information towards a number of rhetorical ends, including to explain a point made, to give weight to the refutation of an idea or author or to justify a viewpoint (Cumming et al., 2016). Howard (1995) seems to suggest that the incorporation of summarized information, as opposed to paraphrased or quoted snippets of the original, appears only at a later stage of development.

At the same time, undergraduate writers are developing in terms of the mechanics of source incorporation. Howard's (1995) patchwriting is, perhaps, one of the most frequently discussed stages in this process, although there is still some resistance to considering (or excusing) it as a stage of development (Chandrasoma et al., 2004). Patchwriting is "reproducing source language with some words deleted or added, some grammatical structures altered, or some synonyms used" (Howard, 1995, p. 181). Gao et al (2021) suggest that the use of integral (i.e. narrative citation where the author is an element of the sentence) and non-integral citations may also be an issue of development, with the exclusive use of non-integral citations representing an earlier stage.

2.4.3. Language Proficiency and Source Incorporation

While some relatively predictable patterns have emerged from research into L2 undergraduates' use of sources in their writing, the picture is far from clear.

L2 undergraduate writers have been found to rely more heavily on source texts for language as they compose (Cumming et al., 2016; Keck, 2006; Shi, 2004). This difference seems more pronounced where written samples are taken under exam conditions (Shi, 2004). In Keck's (2006) study of first-year Composition students, L2 writers relied significantly more on verbatim copying and minimal reformulation of elements of the source text than their L1 peers, while these L1 peers showed significantly more examples of moderate or substantial revision of source language when they incorporated ideas. Regarding how well these two cohorts *acknowledge* their use of both language and ideas from source texts, the pattern is less clear. Shi (2004) finds that L2 (Chinese L1) undergraduates fail to cite considerably more often. Cumming et al's

(2016) meta-analysis points to conflicting results on this point and Doolan, (2021) finds that L2 (Chinese L1) undergraduates cite sources significantly *more* often than their L1 peers.

Reading skills may, of course, be a mitigating factor in differences between L1 and L2 undergraduate writers. Where L2 undergraduates are obliged incorporate information from texts under exam conditions, they have been found to cite considerably less frequently than L1 peers; Gebril and Plakans (2013) speculate that there may be a language proficiency threshold below which L2 learners are overwhelmed by the demands of information incorporation and resort to strategies such as avoidance perhaps, as Hirvela and Du (2013) put it, simply "fold[ing] in the face of texts that intimidate them"(p. 97). Cumming et al (2016) points out that low reading proficiency may make L2 writers reluctant to try reformulating into their own language ideas that have not been fully understood. Investigations into the reading, pre-writing and writing processes of more and less linguistically proficient undergraduates also shed light on how incorporation of source information is managed. Less linguistically proficient L2 learners' note-taking largely involves capturing useful quotes from source texts and these may then be incorporated into writing with little change (Neumann et al., 2019). Kennedy (1985), working with L1 subjects, finds that less fluent readers may continue to focus on the original text as they compose, ignoring any notes they might have made, while more proficient readers set aside the original text while writing.

Finally, Grabe and Zhang (2013) add that L2 writers may also be disadvantaged by a lack of familiarity with organizational features and cultural references of English texts. This does not, however, appear as a factor across the literature. Unsurprisingly, the length, density, organisation and readability of the source text have all been explored as factors that impact the way in which undergraduates incorporate ideas into their writing (Cumming et al., 2016). Familiarity with and interest in the topic have also been shown to be significant factors (Cumming et al., 2016). These have, however, been identified as mitigating factors for both L1 and L2 writers alike; text characteristics influence all academic writers' incorporation behaviours, as Roig's 2001 study clearly illustrates. Roig (2001) asked university faculty, all members of the American Psychological Society (first languages not reported), to paraphrase two texts; one a linguistically simplified text on a topic of interest to psychologists and the other the original linguistically and conceptually dense version. Faculty paraphrase of the more complex version included in 26% of cases appropriation of five-word strings from the original and in 14% distortions of the intended

meaning; appropriated 6 and 7-word strings were also present. However, faculty paraphrasing the simplified version showed appropriation of 5 and 6-word strings in just 3% of cases and less distortion (11% of texts) (Roig, 2001, p. 318).

2.4.4. What Sources do Undergraduates Prefer and How do they Use Them?

The types of sources used by students may depend largely on those that are sanctioned by the instructor, the department or the task itself. Students may also favour sources that are more easily read and that offer controversial views on the research topic, possibly making them more citable (Cumming et al., 2016).

The past 25 years has seen a marked move among undergraduates away from paper and towards digital sources. For example, Davis' (2003) study of undergraduates over a 5-year period to shows a drop of 50% in the number of books cited in assignments and a corresponding increase in the use of digital databases. Convenience and the fact that some digital sources are sanctioned by faculty must play a role in this change. However, the fact that digital texts can be easily manipulated, searched and copied may also be a key factor (Chandrasoma et al., 2004).

To gain a better understanding of how undergraduates use their (overwhelmingly digital) source texts, the Citation Project examined writing from sophomore students on Composition courses in 74 different US tertiary institutions (see Jamieson, 2016). Among the findings of this project was the fact that only 6% of all incorporations involved summary; the vast majority of source use involved paraphrase at sentence level, direct quotation or uncited incorporation (Jamieson, 2016). Also of interest is the fact that almost half of all citations were drawn from the first page of the original and three quarters were taken from the first three pages (Jamieson, 2016). While the methodology of this large *n* study does not explore student motivations, Howard's (2010) suggestion that, in reaction to complex, dense text and possible time constraints, undergraduates resort to sentence-mining (the selection of citable sentence-level information) but may engage little with the remainder of the text, appears entirely reasonable.

3. Research Focus and Design

The current research is qualitative in nature; it focuses on "the meaning[s] […] ascribe[d] to a social or human problem" (Creswell, 2009, p. 4). More specifically, practice theory shapes the underlying assumptions that have been brought to this investigation, the formulation of its research questions, the research design, the analysis of results and the formulation of conclusions. The research questions are as follows;

RQ1; What practices shape information use around the assessed research paper task on first-year composition (FYC) courses at an all-female university in the UAE?

RQ2; What "teleo-affective structure[s]" (Schatzki, 2012, p. 16) give shape to the IL practices around the FYC research paper?

RQ3; In what ways are these practices coloured or shaped by elements "carried" from external practices?

This study, to use the notation system developed by Morse (1991) and adopted elsewhere (e.g. Creswell, 2014), has followed a QUAL+*qual* design (see *Figure 3.1*). For the QUAL element, the "core project" (Morse & Niehaus, 2016, p. 111), a sample of female undergraduate respondents (*n*=20) was recruited from students enrolled on the COL240 course at ZU, Abu Dhabi during the fall semester of AY2019-20. COL240 is the third compulsory Composition course, taken by all ZU students, regardless of their programme of study. To take COL240, students must have successfully completed COL140 and COL145, ZU's two freshmen Composition courses. From this group, data was collected using semi-structured one-to-one interviews. Sampling was purposive (Cousin, 2009); respondents were selected to include those who had attended ADEC Private and Public Partnership institutions, private UK curriculum institutions and public "partial immersion" high schools (the majority of respondents). A second dataset—providing a "simultaneous supplemental component" (Morse & Niehaus, 2016, p. 111)—comprised semi-structured interview data (*n*=7) collected from six English and Writing Studies (EWS) faculty who frequently deliver COL140 and COL145 courses and one IL specialist who habitually support ZU's Composition students.

While the collection of data for these two datasets was simultaneous, analysis was sequential. Transcription, descriptive coding (Saldaña, 2009, pp. 70–73) and analytical coding

was first carried out on the QUAL dataset, yielding a set of descriptive codes and an initial interpretation of the QUAL findings. Subsequently, the descriptive code set derived from the QUAL data was applied to the *qual* dataset where possible. Additional descriptive codes suggested by the *qual* dataset were then identified before analytical coding to uncover initial findings. At the final stage of analysis, *qual* findings were integrated into initial QUAL findings.

This QUAL+*qual* design allows for the exploration of the research object from distinct perspectives; those of FYC students (the core QUAL component) and faculty (the supplementary *qual*) component. The addition of the qual component allows the integration of data from a group who not only experience the research object differently but also introduce a power differential. These *qual* data hold the potential to corroborate or falsify QUAL findings, but also to elaborate and enhance these (Schoonenboom & Johnson, 2017). The separation of these two elements for the purpose of analysis and transparency as to how they are integrated into a single narrative (see *Figure 3.1*) makes the contribution of the *qual* element to the overall project clear.

The remainder of this section will further detail and discuss the research design described above under the following headings: The Single-Case Design; Interviews; Respondents and Sampling; and Data Analysis.

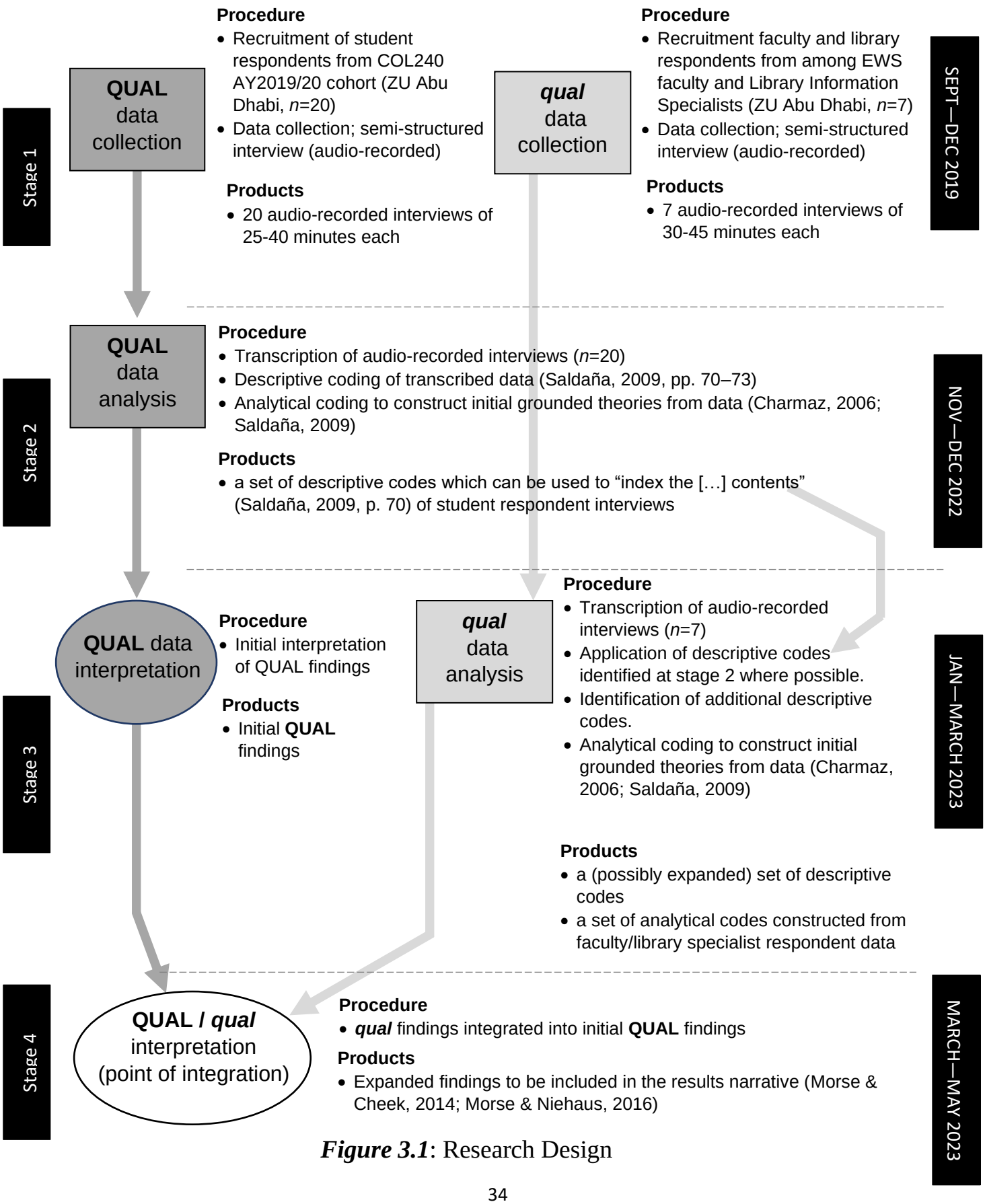

Figure 3.1: Research Design

3.1. The Single-Case Design

The focus of the current study is a single case of an assessed research paper written by students as part of a First-Year Composition course. This case is a "bounded system" (Stake, 2005, p. 444) temporally limited to the 2018/2019 timeframe, incorporating three main groups of actors (Composition faculty, IL specialists and students who have just completed their freshman year at ZU, Abu Dhabi), communications between them as well as the physical and digital information sources available through the ZU Library. Case boundaries, however, are often porous and unclear (Stake, 2005) and it is impossible to discount the involvement of other actors (e.g. peers, family members who might provide support to student writers), other locations (digitised library resources allow for off-campus research and writing) and a virtually infinite range of potential information sources available online. This study is both descriptive and explanatory (Grix, 2010); descriptive in that it attempts to map IL practices within the boundaries of the case (see RQ1) and explanatory in that it attempts to map how these practices may be shaped by factors both internal (RQ2) and external (RQ3) to the case.

Single-case research projects have become increasingly popular at PhD level (Grix, 2010, p. 51). As Stake (2005) points out, research may often stem from an intrinsic interest in a particular case; however, a detailed investigation of a phenomenon within a single case frequently aims to advance understanding beyond the case itself (p. 445). While single-case studies provide limited scope for generalisation, they can be of value in furthering understanding beyond the particular (Grix, 2010, pp. 51, 52). Patterns observed in single cases can be theorised to form "petite generalisations" or to contradict a "pre-existing 'grand' generalization" (Cousin, 2009, p. 134); features uncovered within a single case can usefully be "conceptualis[ed] for further study" (Grix, 2010, p. 52). The case under investigation as part of the current study could be seen as a reasonably "typical instance" (Cousin, 2009, p. 139) of a research essay task as part of an FYC course at an international English-medium campus (see section 1.4) and may also allow for some generalisation to Anglophone contexts such as the US, although the uneven levels of English language proficiency among freshmen at ZU makes such generalisations somewhat tentative. Elements of the current case, such as the fact that all students are female, also limit its generalisability. However, the results of this investigation into a case of an assessed research paper completed as part of an FYC course allows at the very least for the construction of "fuzzy

generalisations" or "assertions" (Cousin, 2009, p. 134) related to the nature of IL practices around research papers at other FYC contexts.

3.2. Interviews

Schatzki (2012) acknowledges the value of interviews in studies that aim to interrogate situated practices, but also points out that there is "no alternative to hanging out with, joining in with, talking to and watching, and getting together the people concerned" (p. 25). The limited resources at the disposal of the researcher has been a factor in the choice of interviews as the data collection tool. However, the fact that the objects of this research are practices dispersed between various sites (classroom, library, café, home) and partly online along with the difficulties imposed by cultural norms in accessing student actors outside of class for the purpose of observation have contributed to the decision not to use observation for the purposes of data collection. Regarding data from documents, while it might have been possible to harvest useful data from task sheets, prompts, grading rubrics and other documents related to the research essay task that "tops off" (p.15) the practices under investigation, these could only give a partial and possibly misleading picture as the ends towards which situated practices are oriented are "partly given and partly emergent, continuously changing, and always subject to negotiation and contestation" (Nicolini, 2017, p. 22).

Interviews were semi-structured in nature. At the outset, for student (QUAL) respondents, the interview was framed as an attempt to "find out what students think" about the FYC research paper at ZU as it "may help us to improve the course". For both student (QUAL) respondents and faculty/library respondents (*qual*), a "grand tour" (Cousin, 2009, p. 71; S. J. Taylor et al., 2015, p. 119) question was used to start the interview; student (QUAL) respondents were asked to describe the entire process of researching and writing for a research paper on a First-Year Composition course and faculty/library respondents (*qual*) were asked to describe how they guide students through this process. This was followed by questions that probed topics raised by respondents to elicit greater detail. Typically the following formats were used;

You mentioned X. (That's interesting). Can you tell me more about that?
You mentioned Y. Could you give me an example?

You mentioned Z. Could you give me an example of what you / a student / your teacher / the library person would say?

Subsequently, where areas of potential relevance were completely omitted by the interviewee in their initial "grand tour", these were explored using specific questions. Commonly among the student (QUAL) respondents, the "grand tour" response ended at the point where the research paper was submitted and details relevant, for example, to personal information management (PIM) practices such as how, how long, where and whether information sources and the research product itself were stored. These details, for example, were elicited with the following question;

What about after you submit your essay—what happens to the sources you used? …and the essay?

Towards the end of their interviews, student (QUAL) respondents were asked if there was anything they would "like us to change" in the way the research essay in First-Year Composition was administered at ZU. This question was in keeping with the initial framing of the interview as an exploration of the student experience and it was speculated that it might elicit any strong affective reactions to elements of the research and writing process where these existed (of possible relevance to RQs 1 and 2). Finally, to close the interview, all respondents were asked a "final sweep" question (Cousin, 2009, p. 90);

Can you think of anything else that we haven't talked about yet that might help me better understand how students research and write their essays?

Regarding the nature and value of the data yielded by the interview process, three points should be made. Firstly, the 'double hermeneutic' (Grix, 2010, p. 81,after Giddens) nature of interview data should be highlighted; these data represent the researchers interpretation of an interpretation of the research object. Secondly, interviews are "meaning making events" (Cousin, 2009, pp. 73-74) in that the interviewee constructs meaning with the active collaboration and support of the interviewer, whose role is to "access and expand upon the interviewee's understandings" (p. 74) without leading or shaping these understandings. Finally, the mere presence of the interviewer has potential to shape the data; interview data may be "deceptive and

provide the interviewer with the perspective the interviewee wants the researcher to hear" (Creswell, 2014, p. 240). This final factor is linked to any perceived power imbalances that might exist between interviewer and interviewee and may be exacerbated where, as is the case in the current study, the interviewer/researcher has an "emic" role in the research setting beyond the scope of the research itself (Cousin, 2009, p. 76).

In order to reduce potential threats the "authenticity and trustworthiness" (Creswell, 2014, p. 283) of data collected through semi-structured interviews and the results based upon such data, the inclusion of some form of member checking in the research design is generally recommended (Creswell, 2014; Flick, 2014). However, there are surprisingly few detailed guidelines on the form that member checking might take; whether, for example, it might involve presenting a summary/interpretation of their own interview data back to respondents for checking or whether draft results should be checked by all respondents (potentially a checking of both respondents' data and the investigator's initial analysis) (Schwartz-Shea, 2020). In the case of the current study, it is questionable whether student (QUAL) respondents would have been capable of member checking initial analyses constructed from their pooled interview data; a basic understanding of social practice theory would likely have been required to complete such a task. Member checking involving the review by individual respondents of a summary or transcript of their own interview data would have been possible in the current case. However, the nature and value of respondent feedback yielded by this process is questionable; data constructed between interviewer and interviewee (as discussed above) cannot be considered as "ontologically stable" (Schwartz-Shea, 2020, p. 43) as, for example, factual data and when confronted with their interview data, respondents' understandings may change. In essence, member checking might be considered "a new round of data generation" (Schwartz-Shea, 2020, p. 43). Where disparities arose between the initial data and those generated by member checking, it would be difficult to argue that respondents' revisions yielded more trustworthy data, since these responses would potentially continue to be coloured by respondents' desire to manage the impression they make on their audience. Because of these factors, it was decided that member checking, in particular for student (QUAL) members, would be of limited value in ensuring greater trustworthiness in the current study and it was not carried out.

Concerns for the trustworthiness of data were a factor in the way interviews were conducted, particularly in relation to the QUAL element of this study. Firstly, to limit the possible effects of the researcher/interviewer's "emic" status as a Composition faculty member

in the research setting, student volunteers who had been taught by the instructor were not accepted as respondents. Secondly, as described above, student interviews were framed from the outset as attempts to better understand students' experiences in relation to the ZU FYC research essay, the better to review how this was administered. This framing, it was hoped, would help both to build rapport and, more importantly, "guard [to some extent] against inviting an interviewer-pleasing or embellishing posture" (Cousin, 2009, p. 76). Finally, careful scripting and preparation of "grand tour", follow-up probing questions (see above for examples) allowed the interviewer to more effectively and actively direct interviewees to the object of the research without leading respondents. While these measures are helpful in assuring the trustworthiness of the interview data and, consequently, the final results, considerations of trustworthiness also influence the process of respondent selection, data analysis and the way in which the results are ultimately represented in the final research product.

3.3. Respondents and Sampling

Guidelines on the number of respondents in qualitative interview-based studies vary widely; Bryman (2012) cites guidelines of 20-30 interviewees but points out that published interview-based studies vary between 5 and 350 in the number of respondents they draw on. Creswell (2014) suggests a range from 1 to "30 or 40" (p. 231). Qualitative samples sizes are contingent on the theoretical underpinnings of the study, the breadth of the research question(s), the heterogeneity of the target population and the number and complexity of possible theoretical directions that emerge as interviewing proceeds (Bryman, 2012). Regardless of sample size, there is universal agreement that in order to achieve trustworthiness, the factors that inform sampling decisions must be fully accounted for (Bryman, 2012; Cousin, 2009).

Transparent purposive sampling and theoretical saturation during data collection contribute to the transferability of the findings and consequently to the overall trustworthiness of the project (Forero et al., 2018). Respondents contributing to the QUAL element of the current study represent a relatively homogenous group in that they are all female, Emirati and fall within a narrow age range. Purposive sampling (Cousin, 2009; Creswell, 2014) was used to ensure that the full range of high-school backgrounds was represented among QUAL respondents (see section 1.4); this ensured that a small number of QUAL respondents had attended either UK-curriculum, English-medium international high-schools or English-Medium ADEC high-schools.

The majority of QUAL respondents had attended "partial immersion" public institutions, reflecting this group's majority status in the target population. Care was also taken to ensure that students who had taken ZU's pre-undergraduate remedial English course (see section 1.4) made up roughly half of QUAL respondents, again reflecting the general population. As data was collected, an initial analysis was carried out on data to identify emerging patterns, allowing the researcher to identify patterns that were repeated as well as novel data. The following were key patterns identified in this initial analysis; the (re)appearance of these patterns among later respondents was taken as an indication of theoretical saturation (Cousin, 2009; Creswell, 2014; Morse et al., 2002);

- **information need**; the identification by the respondent of a research focus linked to personal preference or the desire for guidance / imposition of a research focus
- **information search**; variation in strategies for finding research sources, including general Google search, ZU Library search, sources passed on from classmates/friends, sources accessed with the help of library specialist, attempted use of Boolean operators
- **source use**; printing or not of sources, notetaking strategies (including paper-based, digital, highlighting of relevant elements on originals, paraphrased/summarised notes)
- **reliability**; association of surface features (author listed, appearance of references list etc.) with reliability, association of source type or origin (journal article, sourced in ZU library, found via Google Scholar/ Google) with reliability, association between information content (e.g. checking of information against other sources) and reliability
- **personal information management (PIM)**; practices related to the storage of information sources used, whether or not information sources were retained after completion of the research paper, whether or not the respondents research product (essay) was retained after submission.

Regarding the *qual* section of this study, the role of these data in the overall project is to provide an alternative perspective on the research object. Unlike the QUAL element, whose

design and sampling protocols should allow it to stand alone as an independent study, interview data collected as part of the *qual* is not under the obligation to reach theoretical saturation before data collection stops (Morse & Niehaus, 2016, p. 111). These data included one library IL specialist, representing a total of three IL specialists at the site. The decision to interview a single IL specialist was taken largely in reaction to early analysis of patterns emerging from QUAL interviews; the vast majority of student respondents report not visiting the library or interacting with IL specialists. The remaining six *qual* respondents were drawn from Composition faculty members at ZU Abu Dhabi. Purposive sampling was carried out to ensure that both M.A. and PhD holders were represented in this latter group (4 PhD holders and 2 MA holders) for two reasons. Firstly, it seems likely that the IL practices of PhD holders and the conceptions that underlie these may have been influenced by the process of completing their PhD (e.g. see Kaye et al., 2006; Pilerot, 2016). Secondly, faculty delivering FYC courses at the site incorporates both MA and PhD holders. It may be the case that PhD holders claim or are afforded higher status in discourses around IL at the site, particularly in light of recent changes that introduce differentiation between of MA and PhD holders when it comes to course allocation (see section 1.4).

3.4. Data Analysis, Findings and Conclusions

As detailed above and in *Figure 3.1*, data from QUAL respondents was transcribed and submitted to a "first cycle" descriptive analysis (Cousin, 2009, p. 38; Saldaña, 2009, p. 45). Subsequently, these data were subjected to "pattern coding" (Saldaña, 2009, p. 52) in order to identify the building blocks that would later be used in theory generation. As a final stage of analysis, codes emerging from this second stage were grouped and consolidated in order to generate initial QUAL findings. The descriptive categories that emerged from the first cycle QUAL analysis were applied to the transcribed *qual* data. As part of the initial *qual* data analysis, new descriptive categories were also identified. Subsequently, *qual* data was pattern coded; where codes appearing in the QUAL data were deemed applicable, these were used. However, the emergence of new codes among these data led to new insights into the research object. These novel insights were integrated into the findings emerging from the QUAL data to form the final findings of this study. Coding was carried out using MSExcel and MSWord software in accordance with the system developed by Ose (2016); this was deemed preferable to packages

such as NVivo because of the possible tendency for qualitative data analysis software to encourage over-coding, particularly where, as is the case with the current study, the researcher is less experienced.

Regarding trustworthiness in the analysis and presentation of data, rich description of the research methods themselves is deemed to contribute to the dependability of the final product, which in turn strengthens trustworthiness (Forero et al., 2018, p. 3). Transparency in detailing the process of analysis is also key to establishing trustworthiness in qualitative studies (Kaefer et al., 2015, p. 14). Researcher reflexivity, key to qualitative data analysis, will be made visible in the current investigation in the form of notes incorporated into written findings and conclusions in order to increase transparency and, consequently, trustworthiness (Cousin, 2009, p. 49; Forero et al., 2018, p. 3). The structured presentation of findings, detailing fully findings emerging from QUAL data before integrating *qual* data to produce final findings and conclusions as per Morse & Niehaus (2016) also aims to improve transparency and trustworthiness. Finally, in order to increase the transparency of the process of analysis and, consequently, the trustworthiness of its outcomes, it is necessary to explore the nature of the data, its potential to shed light on the research object and its limitations. As mentioned above (see section 3.2), the investigator/interviewer's emic positioning in the research context may potentially exacerbate a natural tendency among respondents to present themselves in a positive light. As a result, interview data does not afford a direct window onto the "doings and sayings" at the research site. However, these data can be mined for "normative versions" of IL practices at the research site, as perceived by the various respondents (Nicolini & Roe, 2014, p. 10); respondents may provide "a publicly receivable description that is acceptable according to the local rules of the game" (Nicolini, 2009, p. 10). This possibly "normative" quality of the data will colour all analysis and will also be highlighted in subsequent findings and conclusions.

4. Research Findings; Student Informants

The following section examines QUAL findings emerging from analysis of interview data from student respondents (*n*=20). Each student respondent has been allocated a pseudonym to allow for the inclusion here of their original words while protecting their identity. Findings in this section will be presented sequentially for RQs 1, 2 and 3.

4.1. Research Question 1: What practices shape information use around the assessed research paper task on first-year composition (FYC) courses at an all-female university in the UAE?

In the following section, the practices and related sayings, doings and understandings connected to the completion of the assessed research paper on FYC courses at the current site will be explored. These will be grouped under the following five headings; choosing a research focus, evaluating information, searching for information, incorporating information and, finally, personal information management.

4.1.1. Choosing a research focus: "You have to choose something that it's already there in Google."

This section will examine results related to the construction of students' initial FYC research focus. Understandings related to this construction will be examined and some of the related "doings" will be explored.

Informants report various levels of imposed need in their initial interactions with FYC instructors on the focus of their research paper on freshmen courses at the site. *Shaikha* describes a prescribed list of research topics and her reaction;

> Most of the time I suffer with that, the beginning, because always they give us topics to choose one of them and to write. *Shaikha*

FYC courses are commonly themed to provide a broad focus for reading, classroom discussion and student research and writing (Blackwell-Starnes, 2016; Downs & Wardle, 2007); a

prescribed list of suggested research topics within this themed area can then be provided. Others report having more freedom and a common feature of the initial identification of information need is the process of negotiating with the instructor:

> They recommend you a list of topics that you can look into, or if you find something else that's interesting you can also talk about it. *Fatima*

In her construction of information need, *Reem's* practice is guided by the understanding that she must find "a specific topic to write about, so it's not very general", a research focus that is also "debatable". However, as normative criteria to identify need, these appear seldom in the data. More frequently reflected was the understanding that students should choose a research topic that interested them:

> Before I choose a topic, I search about topics to write an essay about, interesting topics. I found this one, I clicked and I saw a picture, I'm like, "This is really huge, it could destroy our world," and I don't know, just not really sure, it just caught my eyes. *Aisha*

Commercially published Composition course texts are not used at the site. However, such texts very much reflect these same normative criteria in their advice on how to identify and refine FYC research topics (e.g. Green & Lawlor, 2016, pp. 175–178; Kirszner & Mandell, 2016, p. 255).

Finally, an explicit rule in evidence among the data but not legitimized in published Composition course texts is that students should choose a topic for which there are large amounts of readily available information; as *Yasmin* puts it "You have to choose something that it's already there in Google, not hard to find", contrasting with her earlier insistence that students should be led by their interests. This last "enough information" guideline appears to be the most influential on the practical choices that students make early in the research process, including

whether or not they opt for a prescribed research topic from "the list" and strategies that they use to identify a "good" topic if given freedom to choose:

> I put in my mind many topics, and then I do a quick research about these topics, which one have many information. *Nada*

The shaping of information need through discourse with a figure of authority has been highlighted by Johannisson & Sundin, (2007) and is seen as a deliberate strategy by educators to socialise novice student information users into the situated practices of constructing information need (Limberg et al., 2008; Lundh, 2010; Sundin, 2008). Analysis of these discourses help to uncover the situated rules, the general understandings that "infuse and are expressed in people's doings and saying" (Schatzki, 2012, p. 16), guiding the construction of information need at a given site. Regarding the situated "sayings" around the choice of research focus evident in this data, no respondent reports consulting with a library specialist for support on identifying or refining information need for their FYC research essays. Conversations around topic choice *as reported by respondents* show little attempt on behalf of FYC instructors to engage students in the shaping or refining of their initial information need to better reflect the situated normative understandings that guide the early stages of research towards assessed FYC research writing. *Zainab*, for example, report being dissuaded from pursuing topics rather than supported to review and refine their information need: "Sometimes they say, "This topic is too small", or, "This topic is too complicated. You can't use it"."

The rule appearing most frequently in reported dialogues around information need between FYC instructors and subjects is the need to identify a research focus with a large amount of readily available information:

> I think once, I give my teacher a thought that I would like to write about it and she said, "If you find many more resources that are very good quality, and like that, maybe you can do it." *Khadija*

Practical understandings, defined by Schatzki as "knowing how to carry out desired actions through basic doings and sayings" (2012, p. 16), evident in responses include carrying out an initial search to see if the topic is "good"; in all reported cases of such searches, "good" topics are those that appear to have many readily available sources. *Fatima* reports using the portal of the university library for this initial search. However, the more common practice is to "Google it". Finally, for some respondents, identifying such "good" topics simply involves accepting a search focus that has been suggested or prescribed by the instructor:

> I think they don't give us the topic unless it is a topic that I will find an information a lot of, so I like that. *Amira*

4.1.2. Evaluating information: "Never trust fast sites like Wikipedia because anyone can change the information on it."

Data relating to information evaluation practices highlights the overwhelming dependence on online sources among respondents at the site. In terms of the guidelines intrinsic to evaluation practices, a small number of respondents report the understanding that any information located on ".org" or ".edu" websites is intrinsically more trustworthy. This echoes to some extent Gocsik et al.'s, (2016), findings that first year undergraduates at a US university consider certain domains (particularly ".edu") to be more authoritative but also aligns with findings by Blackwell-Starnes and Walker (2017) that freshman Composition students are encouraged erroneously to believe that ".org" domains should always be considered trustworthy. Like Blackwell-Starnes and Walker's (survey) data, responses at the current site do not give direct access to situated discourses around domains and reliability, opening the possibility that student ideas related to domains and their relevance to source evaluation may represent an oversimplification or misunderstanding. The need for currency in sources emerges occasionally in the data; *Layla*, for example, says "I leave the ones that are very old". However, the evaluation of sources by these student respondents is informed for the most part by guidelines related to the writer's authority and this consideration appears to outweigh all others:

> One time, I take the organization website, the author there was not very known here, there was no information about him, no picture, no anything. I think, maybe it's a student, maybe it's anyone and only uploaded here. *Marwa*

> Never trust fast sites like Wikipedia because anyone can change the information on it. *Aisha*

Understandings of what constitutes authority in the context of FYC revolve around the credentials of the writer, specifically whether they are a PhD holder. *Nada* believes that "If the author was a doctor or professor, it is more reliable". Writers from outside academia, however, are perceived by some respondents to be less trustworthy:

> For example, if it was in a newspaper or something it depends on the writers themselves. Sometimes they write their own opinion and it's very biased, it's just a mess, so it really does depend on the writer or the website itself.
>
> *Fatima*

There are no reports from respondents of any attempt to establish authors' levels of expertise or authority in relation to their research focus. This complete faith in the reliability of Ph.D.-holding authors appears to extend to academic journals. *Amira* recognises that FYC students at the site do not have access to the understandings necessary to evaluate academic information sources:

> I open, if they give me a study and they link it to a journal, I will open the journal, but then I don't know how to check out the journal as trusted or not. I would trust all journals. *Amira*

These results reflect an unquestioning trust in sources authored by Ph.D. holders or accessed through database search mechanisms regardless of information content. Purdy's (2012) undergraduate respondents show a similar faith in the "quality" of all sources accessed through Google Scholar. Gocsik et al. (2016) identify "rules" used by freshmen to evaluate online information in the public domain; including those trusted (*.gov) and considered inappropriate (Wikipedia). These findings appear to align closely with the situated rules that guide respondents' evaluations of less academic internet-based information sources in the context of their FYC research assignments at the current research site.

In these data, the absence of any reference to relevance by respondents is significant, but not unprecedented. Purdy, (2012) in his survey study of several hundred US undergraduates, found ease of access and perceived quality of sources to be most influential criteria in the evaluation and selection of sources while the relevance of information content to their research topic was reported as the *least* influential criterion. Commenting on these results, he surmises that in the context of an imposed research task, early undergraduates may "hold fulfilling a task's requirements as more important than engaging deeply with a topic" (p. 11).

Finally, it is noticeable that the ideas that appear to guide source evaluation at the site (as reported by student respondents) are expressed as "directive[s], remonstration[s], instruction[s], or edict[s]" (Schatzki, 2012, p. 16). They are, in effect, the situated rules that shape evaluation practices; "explicit formulation which direct how a thing is done or what counts" (Lloyd, 2010a, p. 246). As pointed out by Gocsik et al (2016) student researchers may have little grasp of any understandings that might underpin these rules; this is evident above, for example, in *Amira*'s admission that she does not know *why* she trusts journals but also in relation to responses on top-level internet domains and the absolute trustworthiness of writing produced by PhD holders.

4.1.3. Searching for Information: "What supports [your] main idea. You choose, depending on your ideas."

Responses related to searching for information in the context of their FYC assessed writing reflected the understanding that the object is to find citable nuggets of information that can be used in students' written products to support a thesis they have already formulated:

> When you read, you should [choose], what supports [your] main idea. You choose, depending on your ideas. *Zainab*
>
> I think you should go for the ones that has the same viewpoint as you. For example, in my English, if I'm saying school uniforms are beneficial. From the articles, I should go for those who say they are beneficial. *Shireen*

Some respondents express frustration when their search of academic sources fails to return results that will support the thesis they have formulated and an inability to adapt the working thesis, their search strategy or both:

> [My argument is that] teachers should be trained in all schools, they should know that there are students with learning disabilities that need help, […] When I was looking that up in Google Scholar it doesn't really give me the reason, it just gives me something related, but not exactly to the idea, it wouldn't give me what I want. It wouldn't support my idea.
>
> *Samira*

However, some responses reflect a more dynamic relationship between students' pre-existing opinions and the information that emerges as part of their search of academic sources. For example, *Layla* below appears to recognise that the ways in which she justifies her position—and perhaps those positions themselves—may have to adapt as she reads:

> Sometimes, the thesis doesn't always come out as planned. Maybe I have a thesis statement in mind, but when I go through the articles and read more, it comes out as something else. That maybe this problem that I wrote doesn't even exist, so it has to change. Having a thesis helps a lot. After reading in the articles and after knowing what to do, having this thesis could help more.
>
> *Layla*

The understanding that research towards the production of an academic research paper is a process of finding citable chunks of information in acceptable "academic" sources to support one's thesis is one that appears frequently in IL literature. In a seminal article from the pre-internet age, Leckie (1996) describes consultations between college librarians and undergraduates who are "desperately seeking citations" (p.201) to include in an assessed research paper. Writing almost twenty years later, Rose-Wiles and Hofmann (2013) report similar consultations with undergraduates looking for peer-reviewed sources (as mandated by their instructors) "to support [their] arguments" (p.148). However, phenomenographic studies by Limberg (1999) and particularly by Lupton (2008) more closely parallel the subtle variation in understandings evident at the current research site. Of the three conceptions of academic research uncovered by Lupton (2008) the most basic reflects a process of research that starts once students have compiled "an essay outline using their existing knowledge base" (p. 405) and focuses on compiling evidence to back up this existing argument, as in the examples of *Shireen* and *Samira* above. More developed conceptions continue to focus on the research product but see information gleaned from research as the basis for developing an opinion or for refining or changing existing thinking on the focus of research (Lupton, 2008), reflecting, for example, more closely the understandings evidenced in the quotes from *Layla* above.

As mentioned above, the understanding that some research activity towards the FYC research essay involves "finding support" (as opposed to deepening knowledge about the object of research). Independent of this understanding, but at times overlapping with it, there appears to exist an understanding that some stages of research are for "finding out about" the object of research. "Finding out about" the research topic is seen as more "normal" research. Where this practice is manifested in responses, it precedes "finding support" and allows student researchers to develop ideas or map an outline:

> The first thing […] I have to first get my ideas. To get my ideas […] I will research about the topic normally - in Google, then […] when I have my ideas, I then will go to the- inside university library database…. if I research from a database there will be concentrated the ideas about the one idea, so I will be

> limited, but in Google they give you everything, every idea. I pick up different ideas and when I'm sure of my ideas, I then start to concentrate on one idea on the database. *Amira*

"Finding out about" the object of research is generally done using "native" search tools (Corbett, 2010, p. 266), such as Google and sites such as Wikipedia. The understanding that familiar non-academic internet sources can be used to gain general background knowledge of the research focus before engaging with more academic sources has been highlighted previously (Blackwell-Starnes & Walker, 2017; K.-S. Kim et al., 2014; Kocatepe, 2021). Head and Eisenberg's (2010a) subjects also report such a "pre-research" stage—one respondent labels it his "presearch" stage; "Wikipedia is my presearch tool" (p. 12). At the current research site, "finding out about" and "finding support" appear to work in tandem; "finding out about" is necessary to target areas where one is likely to find support.

In terms of practical understandings related to information search, there seems to be some awareness among respondents of more advanced search strategies, possibly involving the management of several keywords in a single search, certain Boolean operators or the filtering of results. The awareness that these more advanced online search strategies exist and are "appropriate" to the task of academic research appears in some responses, although these responses tend not to reflect a detailed knowledge of or confidence in their ability to deploy them. *Aisha*, below, for example describes vaguely what one is "supposed" to do:

> I'm not supposed to write that whole sentence, that whole question, I have to write, for example, depression and then there will be research and …search boxes. Into every box I have to write a word or something like that.
> *Aisha*

Others describe more basic search strategies:

> If I want to search about plastic bags, I write, "plastic bags", then I go into the sources. Usually, I use journal articles. *Nada*

> It's about assisted suicide and whether it should be legalized or not. For example, I just write “assisted suicide” or “legal” and see what comes up. *Fatima*

These responses appear to show either limited and flawed understanding of more advanced search strategies (e.g. *Aisha* above) or a preference for basic search strategies involving the use of a single keyword. This is are broadly in alignment with findings on US undergraduates; Gross and Latham (2009) have found that undergraduates generally do not engage with search skills, such as Boolean operators, mention these skills when recounting their university research or express a need to acquire more advanced search skills.

Practical understandings related to the selection during the search phase of sources for later use in the research product show a reasonably widespread use of text scanning techniques, many of them specific to research articles and designed to quickly select articles likely to be of use in the final research product:

> Then you will find some sources, but you must go through them, read the abstracts in order to know if this is helpful or not. *Reem*

> If it's a book, you can read the chapter names, or you just choose the chapter. Or if it's an academic article, you can choose read the results and the introduction. The things you need. *Zainab*

For many respondents, this phase of research appears represent a process of selecting and “banking” sources they believe will later yield citations that can be used in their research essay.

These findings echo the findings on research practices of US freshmen undergraduates (Blackwell-Starnes, 2016) in two ways. Firstly, both cohorts show a tendency towards basic

searches with little attempt to refine or target search strategies or to filter results; indeed both cohorts seem generally oblivious to the possible benefits of targeted or refined searches. Secondly, as at the current research site, Blackwell-Starnes' subjects engaged with sources at a superficial level, skimming and speed reading (p. 141). Engagement at this level does not reflect an attempt to deepen understanding of the topic and will not contribute to a more targeted or refined search. Blackwell-Starnes links simplistic search strategies and shallow engagement with sources returned by searches to a strong focus on the (assessed) research product (p. 142).

4.1.4. Incorporating Information: "Basically I copy-paste what I found, for example, the thing that I want and then I paraphrase it."

Activities around the incorporation of information into the FYC assessed writing continue to be shaped by the general understanding that the role of information is to lend support to the writer's opinion (often formulated prior to the collection of sources).

In terms of the practical understandings that shape information incorporation, it is noticeable that, of the three possible ways to use sources in a research product (summary, paraphrase and direct quote), the normative expectation at the site appears to be for paraphrased information incorporation. None of the respondents report summarising from information sources or using summary to incorporate information in an assessed research product as part of their FYC courses. Among the data, the term "quote" is generally used by respondents to refer to the pieces of information selected from sources for incorporation into their written work, regardless of whether these will be paraphrased during incorporation:

> When I find them I start out highlighting the ideas I want to cite in my research, I highlight them and then we're using now outlines. So outlines … I put the citation—the quotes I want to paraphrase—and this make it easier for me then.
>
> *Amira*

By far the most frequently described method to incorporate information from sources was paraphrase. This aligns with findings on source incorporation among FYC students in the US,

who use summary seldom (Jamieson & Howard, 2013) or not at all (Howard et al., 2010) while paraphrase of smaller nuggets of information is among the most common incorporation strategy (Howard et al., 2010; Jamieson & Howard, 2013). However, analysis of FYC writing in the US also indicates a very high incidence of direct copying from sources (both cited as quotes and uncited) (Howard et al., 2010; Jamieson & Howard, 2013) while the use of quotation is almost completely absent from reports at the current site. This discrepancy may simply be due to the nature of the data; data from the current study may reflect normative expectations at the site more often than what these student writers actually do when they use sources in their research essays. However, the fact that respondents at the current site are English-as-a-second-language (L2) writers may also have some bearing. Recent results from Doolan (2021) which compare source incorporation patterns of English-as-a-first-language (L1) and L2 FYC writers (from a range of Asian and Middle-Eastern backgrounds) at a US university show that L2 FYC writers are considerably less likely to use quotation than their L1 counterparts. L2 writers, on the other hand, show a markedly higher use of paraphrase (p. 134). Taken together, reports from the current research site and Doolan's findings open up the possibility that L2 FYC writers may feel more keenly a normative expectation that they must "write it in their own words" when incorporating information into their research products.

Regarding the practical understandings that guide respondents' use of paraphrase, respondents generally describe their engagement with the sources as a process of finding citable information to fulfil specific functions within the final research essay; a relatively superficial engagement which does not involve a thorough reading of sources or a full comprehension of their content. Highlighting snippets of text so that it can later be incorporated in the research product (see *Amira* above) is a common approach. Others describe a process of collecting citations from multiple sources into a single document or adding them to the outline:

> When I am also reading them, I just don't read and close them, it just wastes your time. […] but just highlight them, and then copy them to my Word document. When I'm writing my report, I just concentrate or go for the highlighted ones. I don't need to read all of them. *Shireen*

These results are significant for two reasons. First of all, the citation mining in evidence at the current cite aligns with other studies into source incorporation among FYC writers. The Citation Project, the most significant such investigation in recent years, found that FYC writers at US institutions overwhelmingly wrote from single sentences within theirs sources, frequently cited from the first or second page (and rarely from the latter sections) and used most of their sources only once in their writing (Jamieson, 2013, 2016; Jamieson & Howard, 2013). These findings were taken as evidence of poor engagement among FYC student researchers with the sources they used. It has been suggested that the patterns of source use uncovered as part of the Citation Project also evidences a tendency among FYC writers to plan at sentence level and engage with their sources *while* they write in order to cherry pick citations for immediate use, as opposed to in advance of the writing process (Jamieson, 2013). These text incorporation practices appear to bear a close resemblance to incorporation practices at the current research site. In relation to the current site, it is noteworthy that a number of respondents volunteer these sentence-mining incorporation practices openly at interview, suggesting that this superficial use of sources is condoned.

Equally significant among this data is the complete absence of any reference by student-writers to note-taking as an aid to critical reading. Responses describe reading in similar terms; "go through" or "read through" text (*Aisha*); "go through four or five articles" (*Layla*); "go through the whole article" (*Reem*), where "going through" facilitates highlighting or extracting useful quotes. These descriptions of student interaction with source texts contrast with those identified by Marsh (2015) as metaphors for critical reading and note-taking; "wrestling with […] struggling, […] pushing on, […[and floundering" (p. 65). The absence of any reference in the current data to note-taking or to close or critical reading of sources would seem to indicate that there is no normative expectation at the site that student writers should interact with texts in this way.

Regarding paraphrase, some relatively specific practical understandings related to how this should be carried out emerge from responses. As mentioned above, the practice of finding citable sentence-level information and paraphrasing this into the research product, all as part of the composing process appears to be accepted at the current site:

> While I'm writing, I see the quote that it's fitting this area when I write. At that time, I paraphrase it inside the text. *Shaikha*

Normative expectations emerge in relation to the paraphrase itself. Among the practical understandings related to paraphrase, it appears that a reliance on the deletion of some words and/or the use of synonyms is seen as poor paraphrase practice; instead there is an expectation that students somehow "make it their own":

> Basically I copy-paste what I found, for example, the thing that I want and then I paraphrase it. Like, I don't delete, change the words and put a synonym. No, I try to start it all over again from scratch. *Fatima*

> I could go back to these articles, read more, try to make sentences on my own, paraphrase more. I could start doing my body paragraphs.
>
> *Layla*

> You should paraphrase them - change the organization of the facts.
>
> *Noura*

This somewhat vague practical understanding—that acceptable paraphrase must go beyond simply replacing some words with synonyms and deleting others—may be linked to the use of plagiarism detection software (Safeassign) at the site. This concern with the quality of paraphrase highlights a tension at this site that has been previously identified elsewhere. Howard et al. (2010) point out that a reliance on the sentence-level information incorporation frequently leads to an over-reliance on the language used in the source in the form of patchwriting, particularly where the concepts and language being cited are complex and novel. The normative expectation that FYC writers at the current site should completely reformulate sentence-level source material may well be a reaction to the inevitable patchwriting that emerges when citation mining becomes normalized. However, it is questionable whether this expectation is realistic. Roig (2001) shows that among *faculty* writers; where the source text is

linguistically and conceptually complex, up to a quarter of faculty subjects showed some text appropriation. When the language in the source text is simplified, however, text appropriation virtually disappears. At the current research site, *Samira* appears to highlight the challenge of incorporating conceptually and linguistically challenging material as a paraphrase:

> The reason why I don't like using sources because sometimes I want to write, but I feel like I'm going to copy what's written on the article. Usually, I'm good at paraphrasing, but sometimes when it's, like, a new idea or I'm getting an idea from a source, I have a hard time trying to paraphrase it. Why? It's because it's a new idea and it's not something I had in mind.
>
> *Samira*

In short, FYC writers at the current site show a tendency to mine source material for citations that can fulfil particular roles in their own writing—generally as support for their arguments. This relatively superficial engagement with source texts frequently appears to take place close to the act of composition. Responses seem to indicate that this practice is widespread at the research site and possibly sanctioned by instructors who deliver FYC courses. These FYC writers report an expectation that cited material should be integrated as paraphrase and some awareness that they must avoid text appropriation and write it "in their own words".

4.1.5. Personal Information Management (PIM): "The final text, the final essay I wrote, I keep this one only."

Respondents at the current site show a range of practical understandings when it comes to managing their information sources during the search and incorporation processes. Among the 20 respondents, *Aisha* is exceptional in that she favours printing her sources;

> I have them printed, I will just put them on the side and then go through them whenever I want to write, but I also have them on like, my computer. *Aisha*

However, *Aisha* also saves them to her laptop. Other respondents show a range of approaches to saving and organizing their sources towards the completion of their FYC assessed writing. Some opt to manage their sources by leaving them "in situ" (H. Bruce, 2005). *Nada* "puts it in [her] favourites". Others report taking this same approach, although not all respondents are familiar with the term "favourites";

> There is a place in Google or in my laptop, that when you press the plus, it will save it. *Mona*

Samira reports simply opening a separate browser tab for each new source and maintaining these until they no longer need the document. However, the majority of respondents report downloading their sources. Once downloaded, some respondents simply save them to their desktop; "I always keep them on my desktop, so that I can find them easily" (*Shireen*). Also common among respondents is the tendency to create a folder for each project where sources are saved as they are found;

> You will need to download as a PDF in your laptop, this is the best way to save an article on your device. […] To make it easier for you, do a folder, name it as the topic you are searching, and put all the articles in this folder.
>
> *Shamma*

At first glance, these data appear to reflect a relatively wide variety of personal information management approaches running concurrently with the information search and incorporation stages of the FYC research paper. However, in terms of Malone's (1983) seminal categories, *filing* and *piling*, respondents appear to show considerable homogeneity. *Filing* involves some processing, often time-consuming, and categorization of information (H. Bruce, 2005; Lush, 2014; Malone, 1983). *Piling*, on the other hand, puts off the work of source analysis and categorization and simply stacks sources within easy reach for immediate use on the task at

hand (Malone, 1983). In an updating of Malone's original conception, more recent PIM research has identified digital *piling* behaviours (e.g. Hardof-Jaffe et al., 2009; Mizrachi & Bates, 2013) similar to those evidenced in the responses above; respondents at the current site, using a variety of strategies, *pile* information likely to be useful in the composition of the FYC research product in one easily accessible digital location and do not make any attempt to categorize or create sub-groups of sources.

Once the FYC research essay task has been completed, the choice of what to do with information sources, the research product (i.e. the essay) and other incidental documents presents itself. The vast majority of responses at the current site indicated that, regardless of how they had chosen to *pile* their information sources, no further *filing* of these sources was carried out. Indeed, they were generally dispensed with;

> ***What about the sources that you found? Do you ever go back to those sources?***
> No.
> ***They're in your favorites, are they?***
> Yes.
> ***Do you leave them there or …….?***
> [chuckles] I don't care. Maybe it's there or maybe […] not.
>
> *Nada*

> I save my articles, the research, the final research I save it. I told myself that I would save all the researches I wrote in the university, but the sources I put them in the trash. *Amira*

Regarding motivations for keeping (or not) the information sources, the research product itself and other incidental documents they collected for their FYC research essay, the general theme that emerges is that respondents cannot imagine a future need for certain information. At first,

this result seems to align with H. Bruce's (2005) personal anticipated information need (PAIN), the concept that information management is contingent on anticipated future information use. H. Bruce elaborates on PAIN using existing theories of need from Kuhlthau, Belkin and Robert Taylor and constructs a form of information need contingent on, among other things, the sensitivity of the individual information user to their own future need. PAIN appears, on the surface, an appropriate umbrella concept to explain the choices of, for example *Rana* and *Samira* below.

> The sources? Actually I don't save them, because after I finished it, then I don't need them. *Rana*

> To be honest I don't think I need it. Usually, I will just close the tabs because I know that in the midterm or final it's going to be different topics so I don't keep it. *Samira*

However, PAIN is unhelpful in analysing the PIM in the current context, firstly because, as a cognitivist conception, it is not aligned with the social constructivist underpinning of the current study and secondly because it does not offer an explanation for the relatively homogenous approach to PIM of these FYC respondents; the vast majority describe deleting their information sources and keeping their written research product. A more fruitful lens to examine FYC PIM at the current site is identity construction (Kaye et al., 2006; Williams et al., 2009). *Maitha,* below, identifies strongly with her chosen major. She brings up her affiliation to the discipline of psychology on several occasions during her interview. She reports deleting her sources "after a few months" but keeping her essays. When asked if she rereads them, she says:

> Sometimes. If it was special topic for me, sometimes I would like to read what I write again and show my sisters about it. One times I write about psychology, something about psychology. I think I write it very well, so I would like to go back to read it. *Maitha*

Maitha appears to see at least one of her FYC essays as a token of her identity as a psychology major; one that she can present to others (her sister) to bolster the identity she is creating, but also one that she can use to reinforce her own perception of her developing identity. In this respect, she exemplifies both outward and inward identity construction through her PIM (Kaye et al., 2006) and, in particular, through her FYC essay. In other cases, respondents say they keep their FYC research essays because of the effort they represent; e.g. "I worked hard to do it, why not keep it?" (*Fatima*). These responses echo those of Kaye et al.'s (2006) academics whose PIM artefacts at times reflected the results of extended, challenging or interesting work, the fruits of which add to their identity. A final group of respondents at the current site expressed more specific identity creation in connection to their PIM practices. Like others, they save only their research papers. In their cases, however, revisiting their finished FYC papers seems to bolster their identity as writers at the site and, in some cases, renew their confidence in this identity:

> I […] may go back see what I wrote, I'll get a boost of writing. I get boosted, like I see, "Whoa, I write this." So I write better than this. *Huda*

> If I need motivation when-- Like right now I need motivation to start writing for this course, so I would look back at the one I wrote last semester and the other, see my improvement also. *Amira*

> Because we had the four months of the vacation. […it's…] hard to go back to English. […] even though in the previous two semesters, in my first year, I was so good. When someone tell me "research", it's easy for me, I can do it. In the beginning of this year, I was little afraid, because I forgot. Then when I met my previous instructor, and I saw my previous papers, I got, "ah, I did that, I did that". *Rana*

Among these respondents, then, their finished FYC research essays appear to be markers of new and emerging identities as members of a particular discipline or as writers in a university context. Their review of the final research product appears to facilitate internal "dialogues over difference between self and internalized version(s) of "the other"" (Holland & Lave, 2019, p. 9). However, the information sources that these respondents have used in their writing are dispensed with, either immediately on submission of the written essay or some time later. The difference does not appear to be explained by assessments of future usefulness—H. Bruce's (2005) PAIN; were this the deciding factor, it would be reasonable to expect some variation among respondents in their approach to keeping these information sources. A more likely explanation here is that because students engage only superficially with these sources, they do not consider these documents to be a reflection on their university identities; they have not "worked" these documents by reading them in depth, summarizing them etc; their use of these documents does not appear to be central to their sense of identity as a writer in the university context. For this reason, these documents do not contribute to identity construction and are unlikely to be retained in their PIM (Kaye et al., 2006; Williams et al., 2009).

Finally, some notable absences in these data on FYC students PIM practices at the current site should be mentioned. First of all, paper-based information management seldom appears in these data; a small minority of respondents (e.g. *Aisha*) report printing their information sources. However, there is no evidence that paper-based information resources are retained. Secondly, the outline document(s), which appear to be key artefacts in the incorporation of information into the final essay, are mentioned rarely among documents saved for the longer term. Finally, as with Mizrachi & Bates' (2013) undergraduate subjects, the students at the current site exhibit a range of approaches to the *piling* and longer-term storage of information artefacts. While the use of folders for short and longer-term storage of information appears to be popular and may represent a weak normative expectation at the site, there is no indication from student responses of a strong normative expectation to manage information in any particular way.

4.2. Research Question 2: What "teleo-affective structure[s]" (Schatzki, 2012, p. 16) give shape to the information literacy practices around the FYC research paper?

Schatzki et al, (2001) see teleology as "orientations towards ends" and affectivity as "how things matter" (p.60); the teleo-affective structure of a practice, then, is the range of "acceptable and correct" ends towards which the practice progresses, "acceptable and correct" tasks that may be "carried out for the sake of these ends" and finally, a range of beliefs and emotions that shape how tasks are managed towards practice ends (p. 61). Subsequent writings on teleology and affectivity have pointed to their role in shaping the general understandings that, in turn, form the basis of individual practices.

This section will examine two teleological "threads" that run through activities related to the FYC research essay at the current site. The first examines the extent to which the task represents an opportunity to explore an area of personal interest or relevance. The second examines the highly structured nature of the final research product and how this shapes the practices that contribute to its production.

4.2.1. Orientation towards the task: "personal interest" or "assessed research paper"?

In terms of the teleo-affective orientations towards the final research product in evidence in the data at the current site, two distinct ways of viewing the FYC research essay emerge. These two orientations, "personal interest" and "assessed research paper", are explored below.

The task presents an opportunity to explore a topic of **personal interest**: *I'd like to write something **I** want to write about it, not any other ideas that they give it to me.*

Section 4.1.1 uncovered reports from student respondents that in discourse with instructors around the initial information need, they are frequently not supported to refine their initial focus but are rather encouraged to move to a completely different and more "appropriate" one. This section will return to practices related to the information need and searching for information and will examine the role played by teleo-affectivity in shaping these doings and sayings.

Several respondents appear to manifest a teleological orientation that conceptualizes the FYC paper as an opportunity to "write about" or "talk about" something which is of particular interest to them. These subjects report either an interest in a topic they have brought with them from other areas of their lives (e.g. *Sara* below) or a more general belief that the FYC research paper could *potentially* embrace self-expression and the affirmation of an existing identity as outcomes (e.g. *Shaikha* and *Huda* below). Particularly for respondents who exhibit this latter

orientation towards the task and its ends, there appears to be an affective component common to the process of the identification/negotiation of information need; for example, there is a strong undercurrent of frustration in the responses of *Shaikha* and *Huda* below, one which might be seen as an acceptable emotional reaction (Schatzki, 2012, p. 16) when FYC students are thwarted in following the line of inquiry with which they strongly identify towards an ultimate goal of self-expression:

> Our teacher wanted a research or an essay about an opinion that we strictly believe in, […] At first, I wanted to talk about conspiracy theories, but the teacher didn't really like it, she told me it would be better if I change it. I wanted to talk about how there's a cure for cancer, but we don't really know it, but it's there. The teacher had told me that it would be better if I change it.
>
> *Sara*

> If I want to write, I'd like to write something **I** [emphasized] want to write about it, not any other ideas that they give it to me. This is the most difficult part for me in the beginning, to choose a topic and to write about it.
>
> *Shaikha*

> They should give us topics that we really like […] If you give me about something **I** [emphasized] like, **I** [emphasized] would like to write about it. I'd like to express my feeling towards this thing because I really like the thing.
>
> *Huda*

This teleo-affective link between the identification of information need and the ultimate written outcome of the task appears relatively seldom in empirical explorations of tertiary assessed research essay tasks. Lundh's (2010) examination of question negotiation in a *primary* education context does, however, surface resistance among student researchers in reaction to attempts by their teacher to help them shape and refine their information need.

Discoursal practices around the identification of information need at the site (as reported by respondents) appear to show a tendency among instructors to discourage students' preferred research topics in favour of those topics on a sanctioned list. This tendency is again exemplified in *Sara*'s response above; her report suggests that there was little attempt on the part of her instructor to engage with her in refining her chosen research focus or to help her recognise its unexamined assumptions. If, indeed, it is accepted practice at the site for instructors to discourage students with personally significant but possibly poorly formulated research foci, this may be a factor in prompting the affective reactions in evidence in the quotes from *Shaikha* and *Huda* above.

The task demands that student writers complete an **assessed research paper**: *It's quite difficult, especially if you have an opinion of something that's not really supported by anything else, it's really difficult.*

The frustration expressed by some respondents in relation to the process of developing a focus for the FYC research paper contrasts with respondents who appear to show an entirely different orientation towards the final FYC research paper. *Samira*'s orientation towards the task prioritises the successful completion of the research task over self-expression. She appears more daunted by the challenge of finding appropriate sources and, consequently, more willing to accept an imposed research topic on the grounds that it will be easier to research:

> Because when they give you topics it means for sure you're going to find many articles related to that topic, but when you're looking for topics on your own you're not sure if you're going to find sources for it, or if you're going to find sources that would support your ideas, so that's what kind of scares me sometimes. *Samira*

In contrast to those respondents who exhibit a "personal interest" orientation to the task, students who exhibit this "assessed research paper" orientation highlight concerns that might hamper the successful writing of the final assessed paper. This "assessed research paper" orientation is

associated with concern and frustration when respondents' searches do not yield the citations they feel they need for their paper:

> I don't like [looking for sources] […] Because sometimes my ideas are strong and it would make my essay strong as well, but I can't find the sources that relate to the topic I want. *Samira*

> ***Is anything in particular in that that I would like more training about?***
>
> How to find sources that are not so hard to be understood. Also, how to choose the main ideas, supporting ideas. Because sometimes you are afraid that you start writing and searching, and then you find a problem you can't solve. Then, how can you finish your writing? *Zainab*

This contrast between these two conceptions of the task—"personal interest" and "assessed research paper" - highlights the fact that, within the current site this task does not represent the same teleological "destination" for all respondents in the current study. Consequently, when constructing information need and during the subsequent search process, students will be drawn to different points along the cline of "emotions and moods that people carrying on a practice should or may acceptably express" (Schatzki, 2012, p. 16).

These two teleo-affective orientations towards the research task, "personal interest" and "assessed research paper", have few parallels in the relevant literature. However, a comparison with results from a 2014 study by Trine Schrieber shows some commonality. Schrieber's (2014) respondents showing a "personal interest" orientation in the current study also look outside their course—and any list of suggested topics—for their research foci. Both Schrieber's "making a good idea" and the "personal interest" task orientation frame the research paper as an opportunity to build or affirm identity. Schreiber's (2014) respondents chose a research focus that reflected their current personal interests or post-study work ambitions (p. 354)—in effect an affirmation of

their current identities or an exercise in the construction of future work identities. Similarly, responses from the current study (e.g. see *Shaikha, Huda* and *Layla* above) reflect a conception of the research task as an opportunity to explore and talk about something that affirms respondents' identities. Schreiber's study shows no strong negative emotional orientation towards the task associated with "making a good idea", perhaps because respondents were generally allowed to carry their "good idea" through to its fruition in the research product. In the current study, on the other hand, respondents tend to exhibit dissatisfaction and frustration in relation to topic choice, largely as a result of being unable to carry their "personal interest" through to the final research product.

Both Schreiber's (2014) "making the well-founded assumption" and the "assessed research paper" task orientation show a focus on the successful completion of an *assessed* task. However, while Schreiber's "making the well-founded assumption" practice appears to involve the joint formulation of a research focus through discussion as part of the course, response data from the current site exhibiting an "assessed research paper" task orientation shows no evidence of discursive support in the identification or shaping of information need. Similarly to "making the well-founded assumption", the "assessed research paper" teleological orientation revolves around doing well on course assessment; however, responses showing an "assessed research paper" orientation towards the task also frequently express concern or worry in relation to the completion of the research essay task, specifically finding sufficient sources to support an argument.

4.2.2. The structure of the final written text is closely prescribed: "We usually have an outline before writing an essay. This outline would usually helps a lot."

Responses from student informants report the existence of a detailed normative structure to which FYC research essays at the site should conform. This structure includes guidelines on where information from sources should be incorporated into the essay (explored above in 4.1.4). In the following section, the teleo-affective influence of this perception that the FYC research paper should reflect a specific structure will be explored. In addition, the contribution of the essay outline as an artifact incorporated into planning and writing practices will be examined.

Respondents at the current site exhibit a normative understanding of the organizational structure of the final FYC research paper. This understanding encompasses the number of

"body" paragraphs—and hence the number of areas they will explore to support their thesis—and also the number of ideas that the essay needs to explore in each of these body paragraphs. Elsewhere in the research essay, there is a normative understanding that certain elements, such as the thesis and "hook", should appear in the introductory paragraph:

> In English, you will use maybe three body paragraphs […] body paragraph one, body paragraph two, and body paragraph three. […] I have three reasons and in each three, I will have to support it with two other topics. […] In my introduction …in my hook, I like starting by saying something really surprising. *Shireen*

This understanding of the shape of the final research paper includes expectations relating to the number of times information will be incorporated from sources and the role of each incorporation. These expectations dictate that appropriate information must be incorporated, cited and referenced in relation to each supporting point:

> From one idea I would have supporting points. For each supporting point I have I try to have more than three studies to support it to have different things to support my argument. *Amira*

> The outline, you should choose a thesis. Then, choose the main paragraph about your support. Each paragraph should contain one supporting idea. It has small supporting ideas. Then you take quotes with the citation. *Zainab*

While it has not been possible from the data to establish a strong teleological link between the normative understandings of the final paper's structure and early stages of students'

FYC research journey, it is highly likely that the demands of the final paper contribute to the understanding that an appropriate research topic is one for which numerous sources can be easily found. The requirements of the final paper also appear to shape "finding support" practices, both in terms of the search focus (i.e. a search for citations to support an existing position) and also in terms of the number of sources that respondents report should ideally be collected; *Sara* believes that "the more sources you have, the better your research paper will be" while *Reem* advises that "[you need to have] many backups in case one of them didn't work for your research".

However, it is perhaps in the area of information incorporation where the teleological impact of this highly structured final research paper is most keenly felt at the current site. Several respondents indicate a relatively superficial engagement with sources—a reading designed to quickly and efficiently identify relatively small, citable snippets of information that can be incorporated into the research product. Such practices are unlikely to deepen student writers' understanding of the object of their research; however, given the teleological requirements of the final research paper, a shallow engagement with information sources characterized by citation mining is in keeping with the processing of information "for the sake of" (Schatzki, 2012, p. 15) the assessed research product. Gocsik et al. (2016) have already theorized this link between the imperatives of the final research paper and engagement with a source; they hold that an overarching focus on the final research product leads to both a shorter research phase in which student researchers fail to read around the topic to refine their thesis and a considerably more shallow engagement with sources. At the current site *Sara*, for example, in her description of how she incorporates information from sources during the writing process, clearly reflects both of these teleological effects; she implies that her thesis has been formulated with little or no reference to reading and also that her reading of sources is, in effect, an exercise in citation mining:

> At first, you'd write your thesis, your opinion and everything, and once you state your opinion, you find sources that support that for the reader to be convinced. *Sara*

Responses related to practices around the incorporation of information into the research essay frequently reference the "outline". The outline is one of the ways in which normative expectations for the structure of the final research paper are disseminated at the site. However, it is also a tool that students can use to plan the structure of their essay and plan how they will incorporate information from sources:

> In the outline I write each quote with its source to not confuse them, then first I write my topic sentence, then my supporting points and then I explain the quote I got in my own way and cited. *Amira*

As a tool intrinsic to student writer's planning and source incorporation practices, the outline could be said to "anchor" and "shape" these practices in the way that they "prefigure what can be done" (Cox, 2012, p. 179). The outline is, in effect, a framework that student writers are expected to fill with their own ideas and related information from sources. As such, it should be seen as key in infusing practices of information incorporation with the teleological expectation that the final research paper has a clear, prescribed structure. However, the affordances of the outline tool may also shape other elements of practice. *Shaikha* below, among others, indicates the identification and "highlighting" of citable quotes and the copying of these quotes into the outline document:

> Yes, I highlight the […] source or quotation, I will check it out from the sources to put it in the outline later. That's it, just write the author and the citation at the end. *Shaikha*

These reports from student writers at the site cannot fully establish the impact of the outline as an artefact used during the incorporation of information into the research product, nor can these interview data fully explain the possible role of the outline in promoting a superficial engagement with sources; to gain greater insight into these questions, observation data and/or direct access to the sayings and doings around incorporation practices (were it possible to collect

such data at the current site) would be helpful. However, as a tool for incorporating information from sources during the planning process, the outline appears to actively facilitate and possibly promote a shallow engagement with the sources themselves and a "citation mining" approach to source incorporation into the final research paper.

Data from respondents relating to the outline also reflects *affective* reactions to the final essay structure and the influence that these affective reactions have on incorporation practices. Among respondents, there is some evidence of a negative affective reaction to the strictures (imposed through the outline) that limit how student writers can organise their ideas:

> You have to have three reasons and two supporting, there's the outline, you have to write the steps. I don't like it. (*Shireen*)

However, more common among the data is the implication that meeting the normative requirements for the essay structure is difficult and challenging, and that the outline is a useful tool to mitigate this challenge and support student writers:

> Since we started in the last course using the outline, […] it made writing much easier for me, does not take a lot of my time when I do the outline. Writing is much easier for me. *Amira*

> We usually have an outline before writing an essay. This outline would usually helps at lot. At first you'd write your thesis, your opinion and everything, and once you state your opinion, you find sources. *Sara*

Responses in relation to the use of the outline tool frequently mention how this tool makes the writing of the final research essay "easier" (e.g. see *Amira* above). This is a relatively clear indication that the outline tool is perceived to make the task of structuring the research paper, including the incorporation of information, less daunting.

As mentioned above, these results align with findings that the final research essay task is linked to a failure to read around the task and in order to reach an *informed* position (Gocsik et al. 2016). Links have also been drawn between the research essay task and a "citation mining" approach to engaging with sources (e.g. Jamieson & Howard, 2013; Leckie, 1996; Rose-Wiles & Hofmann, 2013). The role of task design, conceptualization of the task and teleo-affectivity is one that needs careful consideration in the context of freshman Composition and the socialization of undergraduates into IL practices more in keeping with tertiary education; it should not come as a surprise when student writers transfer, adopt or adapt information literacy practices in ways that "make sense" in light of the task they are given.

4.3. Research Question 3: In what ways are these practices coloured or shaped by elements "carried" from external practices?

Practices related to the identification and refinement of information need and to searching for, evaluating, using and storing information permeate all areas of life. This section will examine an instance where a practice appears to have been imported from other areas of student writers' information use and how this influences their information practices as they complete their FYC research essays.

4.3.1. Silence: "I'm interested in a lot of topics and a lot of things, but some of the things we can't reach."

FYC has been described as a subject that has "no proprietary topics other than writing itself" (Combs, 2016, p. 2) and as such offers the freedom for freshmen to research and write on topics that resonate with their own experiences and identities. This section will examine how these freedoms are circumscribed at the current site with reference to the possible censorship of certain avenues of inquiry. The concept of silence as censorship will first be briefly explored. Attitudes to social issues deemed culturally sensitive, such as sexual orientation and gender equality, will be examined with reference to the discipline of Composition and the UAE. Finally, possible instances indicating a practice of silencing certain avenues of research at the current site will be explored.

Censorship is commonly seen as "external, coercive, and repressive. Censors are authoritative social actors, extrinsic to the communicative process, who deploy coercive force to intervene in the free exchange of ideas to repressive effect." (Bunn, 2015, p. 29). However, an

alternative and more subtle conception developed in recent decades moves beyond this to include the silencing of certain voices within “a broad category of social institutions, practices, and actors, often with the consent and participation of the actors, if only subconsciously.” (Bunn, 2015, p. 39). Silences of this nature represent common understandings and collaborations among groups; once such understandings exist, the silences can become stable and self-replicating (Sheriff, 2000). The most thoroughly explored examples of the silencing of particular groups within situated discourse have been produced by feminist writers who highlight:

> women's limited access to the arenas of public discourse, their internalization of beliefs about the inadequacy of girls' and women's speech, the historically entrenched "unofficial" censorship of women's political criticism, and the silencing of women in face-to-face interactions (Sheriff, 2000, p. 118).

However, other examples include silences on race-based inequality in Brazil (Sheriff, 2000), journalistic silences on activities that reflect negatively on US and UK forces stationed in Iraq (Anthonissen, 2008) and the self-imposed silences of gay, bisexual and transexual voices in some workplaces (Ward & Winstanley, 2003). Noll (1994) describes in detail the silences around ideas and texts deemed offensive to the Christian right in US high-schools and how these silences are normalized and perpetuated by formal and informal discourse between literature teachers.

In discourse around the teaching of FYC in the US, voices that have traditionally been silenced are very much in evidence. At the annual Conference on College Composition and Communication, the Queer Caucus is an active presence and other advocacy groups are also very much in evidence (see *2022 Conference on College Composition & Communication: Convention Program*, 2022) and, while LGBT issues and authors are not strongly represented in Composition textbooks, they could not be said to be “silenced” (Marinara et al., 2009).

The UAE bans homosexuality and the expression of trans identities are illegal and punishable by death (*United Arab Emirates*, 2019). The UAE administration imposes a media silence on gay and trans issues and populations (e.g. *Buzz Lightyear Film Banned from Cinemas*

by UAE, 2022). The approach to gender equality is more nuanced; much-publicized legislative support for some limited women's rights has been enacted. Subsequent to this enactment, coverage in state-managed media has been managed to ensure that the Emirati approach to gender equality is shown almost exclusively in a positive light (Müller & Camia, 2023). Emirati nationals are more tolerant of censorship and limits on self-expression, perhaps because these media controls are associated among the population with maintenance of local cultural values (J.D. Martin et al., 2020).

The above establishes the media and censorship environment within which Zayed University is situated. The uncovering of censorship or silencing practices in relation to what can be researched and written about as part of the FYC research essay at the current site can be approached in two ways. First of all, the current data can be analysed for evidence of negative space. Negative spaces are in effect silences, gaps or blanks within the discourse; an examination of these absences can produce a map of what is not being discussed, in the same way that the negative space—the space behind and around—helps to define an object in visual art (Ward & Winstanley, 2003). As discussed in 4.1.1, mechanisms exist at the site to impose or guide student writers in their choices of research focus. One such mechanism is "the list":

> They recommend you a list of topics that you can look into, or if you find something else that's interesting you can also talk about it. *Fatima*

A commonly-used concept to theme Composition courses at the site is that of "commodities". This concept informs the choice of texts and discussion topics in Composition classes and also the "list" of suggested or prescribed research topics that instructors provide. Commodities mentioned in the current data as student research foci include leather, milk and dairy, chocolate, plastics, fur and cotton. Respondents mention the following "off list" research topics; media, medicine, the environment, racism, desert pollution, homework policies at primary and secondary level, learning disabilities, grading policies for university assignments and single-sex education at secondary level. This latter group represents some topics that were chosen because they are personally significant to respondents (desert pollution, learning difficulties), others that (respondents believe) are related to their major (media, racism) and a final group that represent

talking points very typically used to practice argumentation in the context of Composition courses. While some of these research topics could lead student writers to examine the lived experiences of disadvantaged groups, there is no evidence here of a curiosity in relation to the groups and topics that have been "silenced" or carefully managed in the broader public discourse of the UAE.

A second approach to analysing the current data for "negative spaces"—topics of discussion and inquiry that have been silenced—is to search for "knowledge of [taboo subjects] in the discourse" (Ward & Winstanley, 2003, p. 1258); while situated norms related to "silenced" groups and topics may be largely tacit in nature, these taboo areas must occasionally be alluded to, if only for the purpose of establishing and communicating the taboo itself. In the current data, mention of these taboo areas is rare, but two such mentions emerge. Both of these appear in respondents accounts of interactions with Composition faculty around the choice of their research topics for the FYC research essay:

> Last semester I was trying to write about sexism in the UAE, but they told us that we're not allowed to do that for I don't know what reason. So I was so interested in that but I, couldn't do it so I had to scratch that […]
>
> Zayed University in Zayed University, we're not allowed to, so it's hard to find one because I'm interested in a lot of topics and a lot of things, but some of the things we can't reach—so…. *Aisha*

> They give us the ability to choose everything we want. Sometimes, if the idea is not good, maybe the society, they can tell us that. "No, search for other things". *Marwa*

Aisha's experience, of being discouraged or forbidden from research and writing on the topic of sexism in the UAE, would seem to suggest that this topic falls within the "negative spaces" of

research and discussion at ZU. It should, perhaps be noted that *Aisha*'s framing of this topic does not align with officially sanctioned discourses on gender equality in the UAE; discourses that attach positive valance to the UAE's moves to give some freedoms to women (Müller & Camia, 2023). *Marwa*'s data does not detail the area of inquiry where she felt "silenced" but she clearly reports a tacit understanding that there are some social issues deemed inappropriate as topics for FYC research and writing at the site. *Aisha* and *Marwa*'s mention of "the things we can't reach" are the only explicit references to "negative spaces" within the data.

It is not surprising that these two references appear in accounts of negotiations with FYC instructors in relation to their research topics; for most respondents, the main consideration in choosing a research topic was to find an area for which there were numerous readily-available sources (see section 4.1.1). Discourse around lines of inquiry that are "not good" (as *Marwa* puts it) would only emerge in cases where students identify in their FYC research essay an additional teleology—the opportunity that the FYC research paper might provide to research and/or express one's opinions on social issues of personal relevance.

Finally, in considering these results, the nature of these data must be remembered. The "silencing" of particular lines of enquiry emerges only as a *report*; other actors might report this same discourse episode differently. Secondly, other possible instances of self-censorship such as the active avoidance of certain texts and topics of discussion by instructors or indeed attempts by instructors to involve students in a discussion and investigation of these contentious social issues (both of which were uncovered in Noll's (1994) investigation) may not necessarily be surfaced in student interview data.

5. Research Findings: Faculty Informants

The following section integrates *qual* findings emerging from analysis of interview data from faculty respondents (*n*=7) with the QUAL findings presented in the previous section. *qual* informants include one library specialist (*Linda*). Of the six informants drawn from Composition faculty, four are PhD holders (pseudonyms beginning with "P") and two hold MA-level qualification (pseudonyms beginning with "M").

In this section, RQs 1, 2 and 3 will be examined in order.

5.1. Research Question 1: What practices shape information use around the assessed research paper task on first-year composition (FYC) courses at an all-female university in the UAE?

5.1.1. Choosing a research focus: "better quality control"

Faculty respondents confirm the existence of imposed need at the site, generally linked either to themed courses or to a specific list of topics:

> I even have a list of topics, suggestions. So they can choose a topic among the list of topics that I provide for them. *Pasha*

Imposed topics are seen as a way to support students and to ensure "better quality control" (*Prishaa*) both in terms of the topic and the sources student writers consult.

Both "specifity" and "enough sources" are confirmed as understandings that guide the construction of information need. *Linda* provides the example of intercultural marriage among Emiratis as an over-specific research topic because "you're not going to find a magazine article about it". *Miriam* dissuades students from topics where "there simply aren't enough sources". *Prishaa* discourages students who ask to research technology and its effects on children on the grounds that "that's very general".

Regarding “interest”, seen by student respondents as a key factor in constructing information need, faculty data confirms that freshmen are strongly encouraged to pick a topic that interests them on the grounds that “if you have the passion for it, then you'll dig deep into it and you'll love it” (*Pelin*). Research foci of personal interest are explicitly linked to motivation (*Prishaa* and *Mike*), a connection highlighted in the literature (e.g. Gross, 1998; Hongisto & Sormunen, 2010).

Finally, QUAL data reflects no attempt by instructors to socialise students into how their areas of interest can be shaped into appropriate research foci. *qual* data generally confirms this finding; faculty report encouraging students to refer to “the list” or they “provide some of the claims” for those students who are “struggling” (*Pelin*). The absence of concerted attempts to socialise students into the formulation of research foci appropriate to the context and task is, then, confirmed.

5.1.2. Evaluating information: “the Guardian or from the BBC. Again, in my opinion, these were perfectly acceptable.”

Faculty respondent data confirms an overwhelming focus on online sources of information. In discussions related to information evaluation paper-based sources were not mentioned, nor did any faculty member (including *Linda*) refer to the library catalogue. A blanket assessment of all academic journals as reliable with no reference to the peer review processes that lend them reliability was evidenced in student respondent data and is confirmed here. The rule that journals and Google Scholar should always be considered reliable is also evident in faculty reports of the related “sayings”:

> To avoid wavering between, “is this right or wrong”, go to ZU Library (and access the academic journals). *Pelin*

> Then they say, but Google Scholar is the safe, isn't it? So I say yes, most of the time. *Pasha*

Novel in faculty respondent data is the guideline that information coming from certain established online news sources should generally be considered reliable. Faculty do not report providing any elaboration of the understandings that might underpin this rule, (e.g. any discussion of the editorial process); there is no discussion of "capabilities and constraints of information developed through various creation processes" (*Framework for Information Literacy for Higher Education*, 2015, p. 14). Instead, discourse around news sources seems simply to list (western) news sources that might be considered acceptable:

> So we might look at [ways] of locating articles that might not, again, be purely academic, for example, from the Guardian or from the BBC. Again, in my opinion, these were perfectly acceptable. *Mike*

> Or if it is not published in, you know, Huffington Post or a New Yorker, or in one of these big publications then I point that out. *Portia*

Regarding the perceived reliability of specific internet domains (.org, .edu and .com), faculty show an awareness that this idea exists at the site but do not themselves promote it in their work with student-writers. These data do not indicate the origin of this rule. One possibility is that this association between domain and reliability judgement may have been established in a previous context (e.g. high-school). However, it is also possible that this (mis)understanding is partly or entirely the result of discourse at the site around online sources and their perceived reliability. Some faculty encourage students to categorise internet sites into "commercial" and "educational" categories:

> Let's look at the website this comes from. [Are there] any commercial interests at all, or is this an independent or educational organization? *Miriam*

Findings from QUAL data include high levels of trust among student writers at the site in information from authors with academic credentials were identified; this is confirmed by faculty responses:

> So we might do an author search, […] Oh, happens to be a Harvard professor who's actually written this blog […] So, of course, it's okay. *Mike*

Finally, some faculty report sanctioning information sources on a case-by-case basis:

> one of the most frequent questions is, if this is a good source. […] in the sense that it is an authoritative source, […] they double check with me if that is a good source. *Portia*
>
> .

Where faculty are asked to "check" whether sources are reliable, some (see *Portia* below) report taking advantage of these one-to-one interactions with students to reinforce key understandings around source evaluation with reference to the sources students have found. Others, however, simply approve or reject the source, occasionally without reference to the situated normative "rule" which underpins their evaluation and frequently without highlighting a connection to an understanding which underpins the evaluation:

> For instance, we look together at the source, they are not sure and there are a lot of ads on that page. […] we try to look a little bit into content for bias and all that. *Portia*

.

5.1.3. Searching for Information: "Then they say, 'Miss, I can't find anything on the library databases or on Google Scholar, can I use Google?'"

Student respondent data reflects an understanding that the aim of research in the context of the FYC research paper is to collect citable "nuggets" of information which can be used to support a preconceived position or point of view. Faculty respondents confirm that this approach is common among freshmen at the site. Faculty report the completion of the outline is generally seen by students as the end of information seeking and that this understanding is common at the site:

> But I think when we have, when we submit the research outline, we kind of give students the impression that is, you know, the research work is already being done, right? *Prishaa*

However, for a small minority of student researchers, information seeking is seen as a genuine attempt to reach an informed position. These students may continue with information seeking after completing a draft of their outline and may, on the basis of reading, change their position:

> But I can also see some of students, like a couple of them, after they finish the research outline, they ask me, okay, so "Professor, can I add more sources," or there are a couple of them actually, "I decided to change my perspective," that change to the other side. *Prishaa*

.

The student practice of conducting a "presearch"; "finding out about" their chosen topic using "native" research tools and techniques at the start of the process without necessarily citing these initial sources seems to appear in *Prishaa*'s response (below) but is not commonly confirmed in faculty responses. Its absence may simply be due to a relative lack of involvement among faculty in this early stage of research:

> You also can […] even go to Google, even just to get a sense of what some information out there. *Prishaa*

Instructor data confirms feelings of frustration among students associated with the "finding support" practice when they cannot find sources and also highlight student impatience and unreasonable expectations. During this phase, some instructors report attempts by students to negotiate the use of their more familiar "native" search tools and strategies (Corbett, 2010, p. 266) (e.g. *Pasha* below). Others report requests for help in finding sources (e.g. *Linda* below):

> The frustrated ones […] ask me if they could use Google Scholar, and then they say, "Miss, I can't find anything on the library databases or on Google Scholar, can I use Google?" *Pasha*

> They say they want an article. […] especially when they're coming to the service desk on the second floor, and they kind of have that, I need this right away kind of attitude. They don't really want to hear anything after you, you help them find the article. *Linda*

The pressure to condone a return to familiar "native" research tools and understandings, evident in the quote from *Pasha* above, appears throughout faculty responses and is linked to three factors. Firstly, where the research focuses on local issues and is deemed "too specific" to be referenced in academic research, practice at the site appears to accept that Google can be used to

"get newspaper articles about those very specific topics" (*Linda).* Secondly, where FYC students lack the practical understandings needed to use novel information search tools or to more effectively use their "native" Google, faculty report a tendency for them to show "impatience" (*Mike*). However, the final and perhaps most influential factor at play is students' perceived or reported reading levels. The perception among faculty that students are incapable of reading at a level necessary to engage with scholarly sources appears to exert a considerable influence on search practices at the site. *Prishaa* (below) seems to suggest that if student information seeking yields a single usable academic article for later incorporation, this might be deemed sufficient. *Mike* (below) suggests that, *for the purposes of the task*, it "makes sense" to encourage students to avoid more academic texts. *Mike* is quoted at length below because his response highlights teleology at work in shaping the information-seeking practices at the site:

> Maybe it's hard to really read through all the articles, but as I think I encourage them to at least try with, at least one article […] just have some kind of feel in a real academic article. *Prishaa*

> It was not my main aim to have the student struggle through past a dozen extremely complex articles that they really wouldn't have understood. I would be much, much happier for them to look at semi-academic writing in, say, for example, National Geographic, that type of article that they could readily understand and develop the skills of, say for example, paraphrasing, summary writing, and of course include citations and all of these things.
>
> *Mike*

In relation to training in information search tooluse and techniques, two new points emerge from faculty responses. Firstly, instruction in using the library databases, Google Scholar or the more advanced features of Google takes place on a whole-class basis, either as a "one-shot" library specialist visit to class so commonly referenced in the literature (Artman et al., 2010; Mery et al., 2012) or as classroom instruction by FYC faculty; e.g. *Mike* reports that in

class “we might look at Google Advanced [search]”. Faculty occasionally express a preference for dealing with such training themselves in class:

> I used to get a librarian come in to do an introduction to search terms and using library databases, but I tended to find that that didn't go terribly well simply because the librarian wasn't used to teaching large groups of students.
>
> *Miriam*

Training in search strategies and search tool use is delivered in a whole-class setting, not to single students or small groups. Data regarding their preferences for training in information seeking techniques was not collected from student respondents at the site. However, in other contexts, students show a marked preference for hands-on training, delivered one-to-one or in small groups (Gross & Latham, 2011) and allowing interaction, “trying out” and questioning (Gross & Latham, 2009).

Secondly, Gross and Latham (2011) identify two possible roles that faculty can adopt when interacting with students who are experiencing difficulty in their information seeking one-to-one or in small groups. In these situations, faculty might act as “agents who could find and retrieve information for them; or as trainers who could teach them something about finding information” (p. 176). Faculty data appear to show a tendency for faculty to act as agents in these situations (e.g. see *Pelin* below) and in her interactions with freshmen students searching for sources, *Linda* (see below) reports pressure to act as an agent, as opposed to a trainer:

> Let us see, together see, and sometimes I send the files, I find the files, and I send them by email to the student. *Pelin*

> So, yeah, they're not really that interested […] when it's just find five articles, I want three from a magazine and two from an academic journal. That's all they're interested in. *Linda*

A review of QUAL data shows little explicit reference to training and support. *Mona*'s response (below) is unclear as to whether her instructor acts as an information agent or a trainer. However, she does make it clear that she values individual interaction with her instructor on her information seeking. In contrast, *Nada* (below) appears to reject any training in information-seeking which is offered as part of her FYC course; her response is highly reminiscent of Gross and Latham's (2009, 2011) findings that freshman undergraduates believe that their information search skills need no improvement and that what matters ultimately is finding adequate sources, not learning new ways of searching:

> I don't do the whole research in home. I, sometimes, do it in class. It's a chance for me to ask the sir if it's correct or not. Sometimes, they help me to find the right site, if I couldn't find one. *Mona*

> ***Does anyone help you find sources or give advice on how to find sources?***
>
> Our instructor gives us advice […] I do it in my own way. *Nada*

5.1.4. Incorporating Information: "How much they read - because the most done outside the class time […] To me it's like, you know, the black box."

Data from student respondents indicated a normative expectation at the site that information should be incorporated into the final research product using paraphrase (as opposed to summary or direct quotation). Faculty responses confirm this:

> So quotes, I personally disliked, […] it simply meant that the students were lazy and didn't try to paraphrase, which […] is one of, if not the most difficult skill for students to master […]. So if the students have attempted to paraphrase and even if their synonym use or perhaps the grammatized

> formations were slightly off, I was still ecstatically happy because they've made an effort. *Mike*

> I […] ask them to paraphrase the quotations, to provide paraphrase quotations to support the ideas. *Pasha*

Faculty responses recognise that students "find it very difficult to paraphrase", tend to rely on the use of synonyms and that student writing frequently contains "patch working bits and pieces from sources" (*Miriam*). Faculty also report some frustration among students when faced with the expectation that they incorporate sources through paraphrase:

> A student will say, "Well, I just don't have, I don't have the vocabulary, I don't have the grammar to do this." *Miriam*

Faculty confirm that the outline is a key tool in organizing quotes gleaned during reading to prepare for incorporation into writing. *Prishaa* confirms that students consider research to be "done" when they have completed their outlines; only exceptional students continue to research for the sake of learning more about their chosen topic.

Faculty responses also confirm that a shallow engagement with sources appears to be the norm among students as they read towards their freshman FYC research product. In relation to this area, two additional findings emerge from faculty data. Firstly, in their interactions with students faculty frequently model and reinforce the understanding that a relatively shallow engagement focusing on the harvesting of useful citations is acceptable:

> I do share with them my research experience […] I show them, I highlight certain part of the text and I can paste into a Word document […] whenever I

> read something I add to it. And I always have […] the citation over the article where I get [it] from. *Prishaa*

> Underline or highlight important things, and then later, based on this, come up with your arguments. Otherwise, the outlining process would be difficult. This is what I advise them. *Pasha*

A second finding which emerges from these faculty data is that there appears to be little attention to reading and source engagement practices as part of FYC courses at the site. *Portia* reports that in class "we have a conversation" about how to approach lengthy research articles. Other faculty respondents indicate that they are unsure how students engage with texts (as this happens outside of class). Work on note taking strategies which student-writers might use as part of their research is not mentioned by any of the faculty respondents:

> So that part as instructor I couldn't really track so well, how much they read because the most [is] done outside the class time […] To me it's like, you know, the black box. I don't know what they're doing there. *Prishaa*

These data indicate, then, that FYC instructors at the site recognise that there may be considerable scope for improvement in the way in which their FYC students engage with sources but seem to believe that it is not the role of FYC courses to contribute in any meaningful way towards such an improvement. Elsewhere, and particularly in light of the findings emerging from the Citation Project, the case is made for greater involvement in shaping students' reading practices as part of FYC courses (e.g. Field-Rothchild, 2018; Hermida, 2009).

A final finding emerging from faculty data relates to tutorial one-to-one contact between faculty and students, often termed "conferencing" in the context of FYC. The importance of conferencing and "sustained feedback" throughout the research and writing process on FYC courses has been highlighted (Phillips & Ahrenhoerster, 2018, p. 22). While both faculty and

student respondents report some one-to-one interactions with students around the identification of information need, source evaluation and information search strategies, it is only at the stage where students complete the outline of their research product or draft the product itself that faculty report tutorial, one-to-one or similar interaction with all students; *Pasha, Prishaa* and *Portia* ask students to submit their research outline and provide feedback on these submissions, *Pelin* meets with students and provides feedback on a partial or complete draft of their research product and *Miriam* meets with each student and reviews a partial draft of their final research essay:

> [They finish the] first paragraph and that's where they have a tutorial with me. So I aim to see one body paragraph from every single student. *Miriam*

> [I provide detailed feedback on the outline] with the expectation that there will be fewer and fewer errors down the line, […] So feedback related to citations. Feedback related to content, the thesis. *Prishaa*

5.1.5. Personal Information Management (PIM): "If you find some, pile - save and pile and download […] so that when you go home, you'll have a list of articles."

Student responses show a "piling" of sources; both saved "in situ" as well as downloaded and saved in dedicated digital folders. There is some evidence of a weak normative expectation that sources should be downloaded and folders used to save them. Student responses show no evidence of subsequent "filing" of information (i.e. processing and archiving according to some criteria inherent in the sources themselves or their relationship to the research task) at the site. Subsequent to the submission of the research essay, sources are generally not saved. The research essay itself, however, is generally kept and there appears to be some indication that this act of personal information management relates to identity construction. Student PIM practices show almost no use of paper-based sources.

Faculty respondents had little to say in relation to students' PIM practices or perceived norms of information management on FYC courses at the site. Two exceptions to this are *Miriam*, who teaches students how to create digital folders at the start of her courses and *Pelin*, who actively encourages students to download and "pile" articles for later reading during their information seeking:

> Let's search for your topics within ZU Library, if you find some, pile - save and pile and download […] so that when you go home, you'll have a list of articles.
>
> *Pelin*

Both *Mike* and *Miriam* believe from interactions with students that only a relatively small minority use folders to organize downloaded resources. Interestingly, *Miriam* suggests a correlation between the use of an organised digital folder storage system and reduced plagiarism in the final research product; a correlation which has also been suggested elsewhere between (self-reported) organised storage and record keeping and an attitude of reduced tolerance of plagiarism (Onuoha, 2016).

Faculty report no direct knowledge of what students do with their collected information sources, their research product and related documents (e.g. research outline) after submission.

Faculty responses, then, do not fully confirm or falsify any of the above findings; indeed, faculty at the site show little awareness of students' PIM practices and make little attempt to impose norms in relation to the management of information as part of the FYC research paper.

5.2. Research Question 2: What "teleo-affective structure[s]" (Schatzki, 2012, p. 16) give shape to the information literacy practices around the FYC research paper?

5.2.1. Orientation towards the task: "Especially for weaker students, I always provide them with a list that they can choose from."

Student respondent data highlighted two distinct teleological orientations towards the research essay among FYC student writers at the site; a "personal interest" orientation and an

"assessed research paper" orientation. Faculty responses do not fully confirm the existence at the site of these two distinct orientations.

Regarding the "personal interest" orientation, faculty responses show no clear recognition that FYC research topic selection can be an exercise in self-expression or identity affirmation. *Prishaa* reports that a small number of students opt for a research focus which is "meaningful", "not trivial" and "more relevant to the UAE" and *Miriam* that a small minority of her students who are "genuinely interested" actively "learn something new about the topic" and make changes in their life outside the course as a result of what they have learned. These two responses indicate, perhaps, the complex nature of "interest" in that it can be a pre-existing research motivation which students bring to the course but it can also be developed during FYC research and carried back into "real" life. However, faculty responses fail to show any reference to instances where students approach the task as a chance for self-expression. It would seem that faculty may not always recognise (and consequently fail to harness) instances where students initially approach the task as an opportunity to "write about" or "talk about" something central to their lives or identity.

These data also confirm the interplay, identified by student respondents, between "interest" and "enough sources" as normative criteria for the selection of an appropriate research focus. However, *qual* data surfaces two further elements in the relationship between "interest" and information need. Firstly, students who choose not to explore a topic of personal interest or do not have a sufficient grasp of the necessary practical understandings to shape their area of interest into a viable research focus are encouraged to choose a topic from "the list":

> Especially for weaker students, I always provide them with a list that they can choose from. But mostly high achieving ones may come up with a topic of their own. *Pasha*

Students who have the practical understandings needed to shape their interest into an appropriate research topic are seen as both more able (e.g. *Pasha* above) and more engaged and motivated. This group is, however, thought by faculty to be a minority:

> The 2% students, they are very good […] they really take up the challenge, try to genuinely looking for information, look for some topics that are interesting or maybe meaningful topics. *Prishaa*

This small minority of students differentiate themselves from the main cohort in that their orientation towards the topic appears to be one of genuine curiosity; they appear to see the research task as an opportunity to inform themselves and shape their opinion. Given this orientation, it "makes sense" for them to carry on with their research after they have satisfied the requirements of the research outline and possibly after submitting a first draft and to actively search for information which may not support their position:

> There are a couple students they really engage in the research process. They don't think that's the end point. They're still read more sources and add to more sources, and also some that even change their perspective. *Prishaa*

A review of the QUAL data shows traces of this association between "interest" as a driver for information need and higher levels of engagement or ability; *Layla,* for example, suggests that "students who don't like writing or don't have an idea more about writing, they could go choose from the list".

Secondly, instructor respondents report that "interest" is frequently invoked by students as a justification for choosing a research focus which they may see as less challenging; *Miriam* reports that students use "interest" to justify their choice of a research focus where "they know it's been done before and they're planning to plagiarize"; *Pasha* describes a conversation with a student who cites personal interest as a reason to research the same topic as her cousin but may be trying to find "an easy way out by maybe sharing sources together". This possible use of a normative criterion accepted at the site to "cloak" less acceptable teleological orientations towards the task was unsurprisingly, perhaps, not reported in student responses.

Finally, in terms of affect and students' orientation towards the task, faculty respondents seem to have little awareness of any frustrations students might experience at being discouraged from investigating an area of any interest or any worries they might have that they will be incapable of finding enough sources to support their (often preconceived) opinion, both of which findings emerge from student data. The only parallel data among faculty responses emerges from *Miriam*'s interview; she describes an understandably negative reaction when students are dissuaded from developing a topic of interest because there may not be "enough sources":

> You will get a student who will pick a topic in which they have a really strong interest but there simply aren't the sources available. And you can see trouble down the line when they can't find the sources to support their ideas and so there's quite a bit of frustration there too. *Miriam*

5.2.2. The structure of the final written text is closely prescribed: "They found that research outlines really […]a very facilitative tool for them to find research papers."

Student respondent data reflected a final FYC research product highly prescribed organizational structure, both in terms of the number of paragraphs and the way in which paragraphs are arranged. Both of these findings are confirmed by faculty responses. The body of the research essay is paragraphed to show "three reasons why they agree or disagree with the topic" (*Pasha*). This "three reasons" conception of the essay structure appears to be shared among all faculty at the site, with some instructors adding additional prescriptions. *Mike,* for example, seems to demand that these "three reasons" focus on specific areas; "there has to be an effect on the environment, effect on people".

Regarding the internal structure of each paragraph, again, there appears to be broad agreement among faculty respondents that students are expected to conform to a highly prescribed structure with information incorporated from sources playing a very specific role. *Pelin* describes this structure as "[the] idea of opinion, the reason, the evidence, and then the interpretation"; *Miriam* describes the steps within a paragraph as "PIE, so point, information explanation". The PIE acronym and structure is commonly used in FYC (*Paragraph*

Development with PIE, 2020). It is designed to help freshman students realise the importance of integrating information from sources by "explaining", using one's own voice to show how incorporated information relates to the argument being put forward.

It is clear from faculty responses that the replication of these prescribed structures, in particular, the paragraph structure, is considered a key goal for FYC students at the site; these elements of the final research product "matter". As such, these structures cast a considerable teleological "shadow" over the sayings and doings of both students and instructors on these courses.

Findings from student respondent data suggest that this highly prescriptive essay and paragraph structure exerts a teleological influence on students' reading practices, promoting shallow engagement and citation mining in order to find the numerous nuggets of information which will be inserted into the final product. These findings further suggest that the outline as a research and planning tool is conducive to citation mining. Finally, student respondents indicate an affective connection between the demands of the task and the outline tool; the outline is seen to make writing "easier"—to "help" student writers meet the organizational demands of the task. Data emerging from faculty respondents cannot fully confirm these findings. Faculty generally agree that the outline "helps" students to write the final paper—making it "easier" (*Prishaa*). Regarding its effect on student engagement with sources, faculty interview data must be considered of limited value, given that, as established above, faculty do not engage with or make any real attempt to influence students' source engagement practices. *Prishaa* describes the outline as "a very facilitative tool for them to find research papers" suggesting, perhaps, that students complete some or all of the outline before embarking on information seeking.

At the site, then, faculty responses confirm the importance of the outline tool in helping students meet normative expectations regarding paragraph and essay structure. Faculty also confirm that the outline "helps" incorporation of information; whether the outline tool actively promotes shallow engagement and citation mining to support preexisting ideas cannot be fully confirmed from faculty data since FYC faculty at the site do not seriously engage with or attempt to shape students' reading practices.

5.2.3. Task, student-teacher ratios and teleo-affectivity: "And of course that's not possible when you have a hundred students per semester."

Faculty responses highlight the absence of any systematic attempt to engage with students one-to-one in discourse designed to support their construction of information need, deepen their understandings of evaluation practices with reference to their research focus and engage with students around the "ever-shifting cases" arising from their information seeking the better to help them "learn […] from their specifities" (Nicolini & Monteiro, 2016, p. 15). These absences are teleological in nature but also contingent on student:instructor ratios.

Among the Composition community in the US, considerable attention has been devoted to the connection between class sizes and quality of outcomes, particularly in writing and critical thinking. Direct and robust links have been identified between class sizes on FYC courses and student perceptions that they have attained the skills listed in course learning outcomes (Chapman & Ludlow, 2010). Lowering FYC classes to below 20 students has been shown to improve student retention and pass rates as well as students ratings of faculty (Horning, 2007). In response to increased class sizes, FYC instructors tend to reduce the amount of one-to-one conferencing and students may be expected to write less over the course of the semester (Phillips & Ahrenhoerster, 2018).

At the current site, student:instructor ratios on FYC courses and/or the number of classes taught by each single instructor are alluded to by all Composition faculty respondents. In some cases, instructor descriptions of face-to-face conferencing or other forms of systematic individualized feedback on students' progress towards their final research product show clearly the understanding among instructors that such one-to-one attention is of value. However, these descriptions generally also highlight the cost to the individual instructor in terms of time and effort. *Prishaa* (below) describes her practice around giving feedback on her students' outline document before the final writing up of their research product and *Miriam* (below) describes conferencing with her students once they have started writing their research essays. *Miriam* describes conferencing with five "sections" or class groups; at the site, this represents 100-120 individual students:

> It takes me so long to, I mean, so much time to grade them because I give them feedback on, I don't give selective feedback, I give them feedback on all the issues that I see that if there is a citation issue. *Prishaa*

> [I teach] five sections. [Each student will] have about 15 to 20 minutes with me. I'll look through the paragraph. I'll ask them questions, I'll suggest edits. *Miriam*

Instructor responses also highlight a close connection between increasing numbers of students and pedagogical practices. *Mike* (see below) points out that the use of a list of imposed research topics helps to reduce the number and variety of sources referenced in the final research product, which makes checking and grading of student submissions more manageable. *Portia* explains that she does not allow students to resubmit improved revisions of their final essay after feedback because "of course that's not possible when you have a hundred students per semester". *Pelin* (see below) emphasizes the importance of time in shaping her practices relating to feedback on student drafts:

> You know, each student have at least eight sources, that means 300 different sources. So an instructor is very hard to, in terms of the workload it's very hard to check for every student, the quality of the sources. So that's in a way […] make it my work more manageable in terms of checking the quality of the sources. *Mike*

> According to time, if there is time, […]If they give me a draft one, I'll skim through it. I'll fix the format and one of the body paragraphs as well.[…] If I don't have time in the writing […] I'll fix one paragraph in front of her, and then she'll carry on with the others. So it depends on the time. *Pelin*

All of these examples represent pedagogical decisions which are contingent on both the FYC research essay task and class sizes at the site; given the requirements of the task and large class sizes; they are teleological in that they "make sense" to FYC faculty in light of increasing student numbers and those elements of the final FYC research essay which they believe "matter" the most (Schatzki, 2001, p. 60). The pressure brought to bear on faculty by high and increasing student:instructor ratios could be said, then, to shape the teleological impact of the final research essay task on teaching and learning practices highlight what "matters" to faculty. The fact that faculty choose to allocate their scarce time resources to provide one-to-one support at the stage where students incorporate sources and write the final research essay confirms that essay and paragraph structure and the way in which source material is incorporated into the final research product are viewed as a top priority. This is further borne out by responses related to the structure of the research essay; *Mike* suggests that teachers "teachers carefully control […] the organization for paragraphs and insist […]" on a particular structure; *Miriam* (see below) feels that helping students understand and reproduce a basic paragraph structure is a key achievement of the FYC course; *Prishaa* (below) clarifies a prescribed structure which appears in several faculty responses. On the other hand, the absence of conferencing or tutorials which support and develop students' construction of information need, information evaluation, information seeking or text-engagement practices would seem to indicate that these areas "matter" less to FYC faculty. Indeed, some of the practices at the site, including the imposing of research foci with little discussion, the condensing of the complex understandings around source evaluation into a set of (sometimes conflicting) rules and the tendency to support students by acting as information agents could be seen, in teleological terms, as "shortcuts" allowing students to move to the important writing stage of the FYC research essay without the need for extensive one-to-one support from faculty:

> A student who has always felt, always been told that they're no good at writing will suddenly find that they're able to structure a basic paragraph, and then it makes some kind of sense. *Miriam*

> Students see how to construct an argumentative paragraph […] they need to have their point of view and then supported with evidences and then they have to do an interpretation in the end. *Prishaa*

A review of student responses in light of the above results in very little data relating to the ways in which FYC teaching and learning practices at the site are shaped by student:teacher ratios. This is perhaps not surprising; FYC students' perspectives do not allow them to fully appreciate their instructors' workloads or the ways in which these shape practices. However, there are some isolated instances where student respondents show an awareness that the journey towards their research products could, with greater involvement from instructors, take a different route. *Shaikha* (below), for example, seems to express frustration that students are not supported to reformulate their chosen research focus into a more viable research direction:

> No, but the one thing that the instructor should lead the student inside what they want to write […] I feel strong about that. *Shaikha*

5.3. Research Question 3: In what ways are these practices coloured or shaped by elements "carried" from external practices?

5.3.1. Silence: "There are topics were kind of forbidden or kind of taboo topic."

In data from student respondents, evidence emerged of a silencing (Bunn, 2015) of certain groups and/or discussion topics imported from the broader UAE context. Findings showed a willingness at the site to allow a focus on potentially controversial topics as part of their FYC research paper if students' framing of this research direction aligned with the UAE administration's expressed policies and concerns. Findings emerging from QUAL data that "silences" have been incorporated from broader UAE media discourses into the IL practices at the current site rest on two key planks; "negative spaces" or absences of certain groups and discussion topics and; explicit mention of taboo topics in the discourse, often in order to socialise others into practices of silence (Ward & Winstanley, 2003).

Faculty respondent data confirms findings from QUAL data in two ways. First of all, one example emerges of student interest in a potentially sensitive research topic framed to align with prevailing social and governmental perspectives. *Linda* (below) describes a request for help from an FYC student researching inter-cultural marriage. This example is significant in two respects; firstly, the students' framing of this research focus (to include effects on Emirati society) aligns with concerns expressed in broader Emirati society and media (MacLean, 2021). Secondly, *Linda*'s discussion of this students' request is significant in that there is no suggestion that her topic or framing are considered "sensitive" or taboo at the site, simply that relevant information sources may be difficult to find:

> Like last semester there was a student that wanted to research why Emirati men choose to marry Western women and how that's affecting the culture of Emirati society. […] You're not going to find a magazine article about it. *Linda*

Two further references to make it clear that an understanding as to what research foci are taboo exists among faculty at the site. *Prishaa* (below) describes being socialised on arrival into the "negative spaces" which exist at the site. *Miriam* (below) explicitly lists those topics which (to her understanding) are taboo at the site and should be discouraged as foci for FYC student research:

> I think in the beginning when I first came here, I feel like, you know, I get to know a new context especially in this kind of context. And I was told, you know, there are topics were kind of forbidden or kind of taboo topic. It's a very sensitive topic. So I feel from an instructor perspective, […] I want to go with in a more safe approach. *Prishaa*

> I mean the typical ones. So anything related to gay rights, for example, abortion, anything that was religiously related that was likely to involve some

> kind of criticism, direct or indirective of their own religion. So any of those things. *Miriam*

These explicit mentions of "taboo" topics at the site (Ward & Winstanley, 2003) confirms findings emerging from QUAL data that a degree of censorship through silence exists at the site, that "the list" of approved research foci from which students are encouraged to choose acts as a mechanism in preserving this silence, that faculty are aware of those topics, imported from broader Emirati social and media discourse, should be seen as "taboo" and that, where students express an interest in researching a "taboo" topic, they are strongly discouraged.

6. Discussion

The following will first of all summarize findings for each of the three research questions. It will then discuss the following issues emerging from the current research: the research essay task and its teleo-affective nature; the research task as simulation of future information use; the "siloization" of first-year composition; contextual factors which act as motivations (Schatzki, 2019) to shape practice; evidence of "silences" and self-censorship and, finally, implications for information use on (first-year Composition) FYC at the current site and more broadly.

6.1. Summary of key findings

6.1.1. Research Question 1: What practices shape information use around the assessed research paper task on first-year composition (FYC) courses at an all-female university in the UAE?

While the digital collection at the site emerges as a central resource, FYC students report that they neither visit the library nor consult library specialists. Library specialists' contributions include "one-shot" classroom visits and occasionally acting as agents (who find sources for students) during students' information seeking. Some FYC faculty appear to forgo visits by library specialists to their FYC classes, preferring to present search and evaluation techniques themselves.

Rules which "enjoin or school in particular actions" (Schatzki, 2001, p. 59) appear regularly through the data, at times in relation to the evaluation of information (e.g. Google Scholar, academic databases and sources authored by PhD holders are deemed trustworthy); these are generally accepted and routinised without consideration of understandings which underpin them (Schreiber, 2014). These rules align with descriptions of novice information use in the ACRL's *Framework for Information Literacy for Higher Education* (2015); "Novice learners may need to rely on basic indicators of authority, such as type of publication or author credentials" (p. 12). Additionally, findings show the emergence of less generalized rules formulated to take into consideration specific conditions at the site; e.g. in reaction to the challenges faced by students with perceived weaker reading abilities, established news sources are sanctioned as trustworthy by some FYC faculty. Finally, data points to rules of practice at the

site which are contested (e.g. the rule that information associated with certain top-level internet domains should be considered more trustworthy than others).

Findings show some familiarity among students with certain novel practical understandings, including simple keyword information searches (as opposed to the use of natural language) and source incorporation through paraphrase. Respondents show an awareness of more complex practical understandings, such as the use of Boolean operators, but responses show varying levels of familiarity—generally limited—and a lack of engagement with these novel understandings. This use of a limited range of search strategies is in keeping with novice information seeking (*Framework for Information Literacy for Higher Education*, 2015). The normative expectation at the site that information incorporation should be done through paraphrase is a significant finding; this aligns with Doolan, (2021) and points to a tendency in second-language undergraduate writing instruction to prioritize paraphrase over other incorporation strategies.

Faculty responses at the site show a clear pattern of prioritization in the development of some practical understandings among student writers and the relative neglect of others. Faculty report imposing a research focus, as opposed to co-constructing a viable focus from initial student suggestions. Neither the development of understandings related to engagement with sources (e.g. reading, note-taking etc) nor training in personal information management (PIM) strategies are seen as central to the FYC course. The teleologocial nature of this selective prioritization is discussed below.

Finally, all student respondents retain their completed research papers for some time after the end of the FYC course and some report reviewing their work in order to affirm their identities as competent writers in a university setting. However, information sources used in these research products have frequently been saved “in situ” and are immediately forgotten or, if digitally “piled”, are deleted shortly after completion of the course.

6.1.2. Research Question 2: What “teleo-affective structure[s]” (Schatzki, 2012, p. 16) give shape to the IL practices around the FYC research paper?

Among students there is evidence of a “personal interest” orientation towards the task, aligned with elements of students’ identity and not fully acknowledge by faculty. Students

showing this orientation express frustration when they are discouraged from following their desired research focus and asked to choose instead a topic from "the list". At the site there is an understanding that those capable of formulating a viable research focus around an area of personal interest are a small majority of highly able students; findings show no practice of support or co-construction which would allow students to create a viable FYC research focus from their personal interest. Those students who manage to investigate a topic of personal interest sometimes show a willingness to continue information seeking after the information requirements of the research outline and/or written essay have been satisfied and occasionally change their position in reaction to information during the research process.

The FYC essay structure—including both the overall structure of its constituent parts, the internal structure of individual "body" paragraphs and the way in which source information is integrated within it— is of teleological significance. Findings suggest a clear teleological link between this prescribed essay structure and the shallow engagement with sources and the tendency towards "mining" (Jamieson & Howard, 2013, p. 127) of sentences to support one's position for incorporation in the research product; student respondent data indicates that this "citation mining" often happens relatively close to the act of composition itself. Findings strongly suggest that the outline may amplify the teleological effect of the essay structure: when identifying a research topic and during information seeking, finding a large number of sources from which to harvest citations is seen as a priority; while completing the outline, it "makes sense" (Schatzki et al., 2001, p. 55) to scan texts for short, citable nuggets. It should be noted that this shallow engagement with sources and sentence mining is generally accepted at the site as an appropriate way to engage with sources when working towards the FYP assessed research paper.

High student:instructor ratios on FYC courses at the site in conjunction with the prioritisation of the highly prescribed essay structure are found to influence the ways in which faculty engage students in situated information practices. The allocation of support at the site is also contingent on resource availability; this contingency leads to greater individualized support from instructors around the understanding and reproduction of the prescribed essay and paragraph structures as well as source incorporation, while other facets of IL, including the construction of information need, the evaluation of sources, information seeking and personal information management, are neglected in relative terms. Instructor-student interaction around these lower priority areas at times seems designed less to transmit practical understandings or

show how situated rules can be applied and more to provide convenient "shortcuts" designed to save time, as, for example, when faculty act as agents (Gross & Latham, 2011) during student information seeking as opposed to attempting to socialize student-researchers into the situated understandings of information seeking.

6.1.3. Research Question 3: In what ways are these practices coloured or shaped by elements "carried" from external practices?

Findings clearly indicate the existence at the site of both a "negative space" (Ward & Winstanley, 2003, p. 1255)—a silence around certain issues related to gender and sexual identity (in particular, homosexual and trans identities)—along with a tendency to frame those issues related to gender identity which can be discussed in terms which align with the UAE government's stance on these issues (as reflected in national media). There is evidence of a general awareness among both FYC students and faculty of those issues considered taboo.

6.2 The task and teleo-affectivity

The current research adds to an already large and growing body of literature highlighting the connection between the assessed research product and the information literacy (IL) practices of student researchers. Suggestions for the inclusion of additional or alternative assessed tasks to better shape FYC students' IL practices (Blackwell-Starnes, 2016; Gocsik et al., 2016; Jamieson, 2013) clearly imply this teleological link but cannot, for example, account for the variation in orientations towards the task evident in student construction of information need and information seeking at the current site.

The concept of teleo-affectivity (Schatzki, 2001) and in particular the idea that tasks and teleological orientations form hierarchies (Schatzki, 2003, 2012) may be more helpful in accounting for variation in orientations towards task (including affective orientations) and the associated variation in how related practices are enacted at the current site. This connection between teleological hierarchies and orientations towards an assigned research task appears in the literature, if only tangentially. Head and Eisenberg (2010b) find that where students see research assignments as a stepping stone towards deepening their topic understanding, they are also much more likely to find the initial construction of the research focus to be the most challenging stage of the task. Phenomenographic investigations of undergraduate task-based

information use and conceptions of IL include examples where student researchers look beyond the research product towards ways in which their research will help them grow as a person (Diehm & Lupton, 2012), develop an awareness of a pressing social problem (Lupton, 2008), choose the right company to work with (Stonebraker et al., 2019) or apply knowledge in various professional situations (Maybee, 2006). Among these studies, where students feel the research product is an end in itself, there is a tendency to see research as a set of skills to be acquired and displayed (Diehm & Lupton, 2012; Maybee, 2006) and the display of a broad range of information in the research product as a mark of success (Lupton, 2008; Stonebraker et al., 2019). At the current site, the "assessed task" orientation closely aligns with this last group; this orientation sees task completion as an end in itself or as a means to achieving successful course completion and, consequently, the objective of information seeking is to find sufficient and varied supporting evidence to incorporate in the outline and essay and information not supporting a preconceived position is often ignored. The main concern of students exhibiting this orientation is to find "enough sources" to complete the outline. A second orientation at the current site views the research task and associated sub tasks (such as the outline) as stepping stones towards the formation of an informed opinion on the topic under investigation. This aligns with elements of Lupton's (2008) *Category 2* in that the primary objective is to reach an informed position and information seeking towards this goal actively seeks "contrasting perspectives to learn about the topic" (p. 407). At the current site, this teleological orientation is associated with a continued search for sources after the completion of the essay outline.

At the current site, an additional issue related to task orientation but not reflected in existing literature emerges; that of the student-researchers who attempted to construct an FYC research focus linked to a personal interest or identity external to the course but who ultimately felt forced instead to accept an imposed query. The formulation of a research focus based around a topic of personal interest is strongly encouraged in some of the *sayings* of the site. However, the normative understanding that an appropriate topic should have "enough sources" —a direct teleo-affective link to the requirements of the research product—frequently serves as a "gatekeeper" in discourse around the construction of a research focus at the site. Students showing an interest in an "off list" research focus are asked by instructors if they will be able to find "enough sources" and strongly encouraged to accept an imposed topic if there is any doubt. Like the US undergraduates surveyed by Head and Eisenberg's (2010b) survey study, freshmen

at the current site believe the initial choice of the research topic to be a high stakes decision which directly affects their ultimate success and, for this reason, are frequently willing to accept an imposed query as a "safer" option. The imposition of a research topic at the current site also appears to be linked to the perceived capabilities of student researchers, with faculty reporting that only a small minority can manage to construct a viable research topic related to an area of personal interest. It is certainly the case that the construction of a query or research focus in accordance with the conventions of situated information use demands both familiarity with those conventions and some expertise. Schreiber's (2014) undergraduate and postgraduate subjects, who also attempt to link their research to a role, identity or end outside of the course, reported challenges in framing their initial information need to meet the requirements of their assignment. This echos Talja and Nyce's (2015) contention that the construction of a research focus goes beyond simply wanting to know something; it is "a form of expert activity [and means] being attuned to the specific features of a practice" (p. 65). The need to support students as they undertake the novel task of constructing a research focus in a tertiary education setting is recognised in FYC literature (e.g. Blackwell-Starnes, 2016; Fister, 1992). At the current site, normative understandings as to the characteristics of a "good" research focus, namely, "interest", "specificity", "debatability" and, above all, "enough information", are clear. However, the absence of a process which might facilitate the co-construction of a viable research focus means firstly, that opportunities to link the FYC research essay to a significant goal external to the course are not open to many students and consequently, benefits to information use which may result from a teleological link to goals beyond the research paper are lost.

6.3. The task as simulation

The example above provides a clear instance of how the teleo-affective demands of the final research paper task impacts practices related to information use and the way in which these practices are incorporated into FYC courses at the site interact. The pressure to find "enough sources" is closely connected to the expectations around how and how often information is integrated into the final research product. At the same time, the need for "enough sources" is frequently used by faculty in discourse around the selection of a research focus to justify the imposition of a focus from "the list".

In order to fully understand how this and other practices around the FYC task at the current site have evolved, it is necessary to examine the task as an activity specifically designed for teaching and learning. On the question of how practice-based learning takes place, Schatzki (2017) contributes, firstly, that learning and "going on" in a practice are inseparable and interdependent; in other words, "learning is not merely a condition for membership, but is itself an evolving form of membership" (Lave & Wenger, 1991, p. 53). Likewise, Nicolini (2012) holds that learning undertaken as participation in a practice (with a clear goal) will inevitably include the acquisition of "the normative, telic, and affective dimensions of [the] practice" (p.85). Secondly, Schatzki (2017) points out that learning is the acquisition of improved operability within a situated practice, leading, ultimately, to the capacity to shape practice and, possibly, to contest its elements. Finally, there is general agreement that learning within a social practice involves the acquisition of a novel identity (Kemmis, 2021; Nicolini, 2012; Schatzki, 2017; Talja, 2010).

Brent (2005) holds that themed FYC courses, where they are designed around the research interest of the writing teacher who delivers them, can allow students to "become […] "legitimate peripheral participants" in the research community to which the researcher belongs" (p. 255). However, Consalvo et al., (2015) point out that on these courses, students are neither observing nor participating in "real" research but instead complete "regular class projects to do and get done with" (p. 9.). Likewise, at the current site, *Pelin*'s description of sharing her research experience to illustrate how students might record relevant quotes (see 5.1.4) stands out as a rare mention of "real" (i.e. unrelated to the FYC research essay) research.

In terms of how the FYC research task at the current site relates to the information practices of the university, it may be fruitful to conceptualise this task as a simulation used to initiate students into understandings they will later call upon when they participate in "real" practices. Simulation activities are commonly used in the area of healthcare (e.g. Bland et al., 2011; Hopwood et al., 2016; Weeks et al., 2019). In the field of IL, however, relatively little has been done to explore their usefulness beyond studies which examine online task-based simulations, used either to test IL skills (e.g. Katz, 2007) or to provide training (e.g. Perdana et al., 2020; Wu et al., 2012). Byström and Hansen, (2005) describe IL simulations as inauthentic in that they are not "performed within the existing situational conditions and their tangible

consequences" but instead can be "manipulated and controlled [and] may have no or few consequences for their performer" (p. 1052).

A simulation is not, in and of itself, a pedagogy (Erlam et al., 2017). Rather it can be described as a "third place", a liminal space between the disembodied theoretical elements of practice (i.e. the rules and understandings which underpin practice) as presented in the classroom and the situated practice itself (Weeks et al., 2019, p. 34), where instruction can take place. Simulation must approximate as closely as possible to the characteristics of the target situation if it is to be effective in reducing the "reality shock" faced when students assume roles in real, situated practice (Berragan, 2011, p. 660). The use of simulations as learning spaces is very much aligned with the tenets of practice-based learning (Higgs, 2013).

As a simulation of information use at undergraduate level, the FYC research essay at the current site appears to have a certain level of success. A key objective of simulation is identity construction (Berragan, 2011); students "through their sayings and doings […] inhabit their future selves" (Hopwood et al., 2016, p. 6). Several students report a feeling of having "arrived" as a writer at university level on re-reading their FYC essay; as *Huda* says, "I'll get a boost of writing […] 'Whoa, I write this'." (see section 4.1.5). Effective simulation should also elicit some of the teleo-affective reactions appropriate to the task—reactions which may be replicated in future "real" practice (Hopwood et al., 2016). Respondents at the current site show genuine worry that they will not be able to complete the journey from research topic to final research product; as *Zainab* puts it "you are afraid that you start writing and searching, and then you find a problem you can't solve" (see section 4.2.1). Finally, a key element of simulation which may differentiate it from peripheral participation in "real" practices is that novices are actively supported by a more expert practitioner (Hopwood et al., 2016; Weeks et al., 2019) at the point of need to augment and purposefully develop their practical understandings. At the current site, pedagogical tools such as one-to-one scaffolding appear to be used in a piecemeal fashion, often initiated by students in the early stages of research. However, faculty report more systematic one-to-one scaffolding around the research product itself, either in the form of face-to-face tutorials or written feedback comments.

On the other hand, both the FYC research task "simulation" and the classroom-based teaching which supports it at current site could be considered deficient in several respects. First

of all, a key area of information use, the construction of information need itself, is either not simulated at all or simulated only for a small minority of more capable students. This failure is compounded in discussions around information need during the simulation; understandings promoted in the classroom such as "specifity" and "debatability" are frequently supplanted during scaffolding by understandings which serve the simulation itself ("enough sources") rather than the project of increasing students operability in future situated information use where they may need to partially construct a research focus themselves. Student respondents at the site show an awareness of this omission; as *Shaikha* puts it "the instructor should lead the student inside what they want to write" (see 5.2.3). Other facets of information use receive still less attention at the current site. Both *Prishaa* and *Pasha* report addressing reading practices briefly in their classes (see 5.1.4) but admit that, in part because of the multi-site nature of task, students reading practices as they complete their research essays are a "black box". Student respondents at the site report an overwhelming reliance on the sentence-mining practices described by Jamieson and Howard (2013), a highly superficial approach which implies a complete lack of critical engagement and a "tacit acceptance of the information contained in the text" (Hermida, 2009, p. 21). This approach to reading seems to be normalized to some extent at the current site and, indeed, seems to have become widespread throughout tertiary education (Hermida, 2009). Again, to augment students' operability (Schatzki, 2017), there is a clear need to expand their practical understandings in relation to how they engage with texts. This deficiency at the current site has been identified in other contexts: Downs and Wardle (2007) question whether it is, indeed, possible to teach writing to freshmen without a thorough exploration and integration of what and how they read; St Clair-Thompson et al., (2018) find that a lack of engagement with texts is due to a combination of factors, including poor alignment between reading and assessed tasks and low reading confidence among students; Hermida, (2009) suggests assessed tasks which would put reading at the heart of first-year writing courses. A final area neglected in both the classroom and the final research paper at the current site is Personal Information Management (PIM) practices. Faculty respondents report that this area receives almost no attention in class and they are unaware of the practices students adopt while completing their FYC research essay; the two exceptions are *Miriam*, who shows students how to create folders to organise sources during research and *Pelin*, who encourages "piling" of relevant sources as they are found. However, a number of student respondents report the use of extremely basic and ineffective PIM practices, generally linked to "in-situ" storage; *Samira*, for example, reports that once the essay has been

completed and she no longer needs the sources, she "will just close the tabs" (see section 4.1.5). At the current site, then, the lack of a systematic approach to PIM in the classroom or support of efforts to manage information while undertaking research for the FYC essay fails to expose students to practical understandings which might help them to participate more effectively in future academic research tasks.

Two further areas of IL appear to receive classroom attention at the current site but are largely neglected as students undertake research. Both students and faculty report a range of rules, some contested, governing source evaluation, suggesting that considerable attention has been given to these understandings in the classroom. However, the data shows almost no systematic attempt to support learners as they try to implement the various novel "rules" they have received in class to evaluate sources as part of their research project. *Portia* describes how she scaffolds when students seek out her help in this area; "we look together at the source, they are not sure and there are a lot of ads on that page. […] we try to look a little bit into content for bias" (see section 5.1.2) but such instances of scaffolding do not appear in data from other faculty. Likewise, student responses show common understandings in relation to information searching, but respondents can only describe simple single-keyword searches with any confidence. Again, no systematic attempt to scaffold student information seeking is implemented beyond isolated student-initiated instances of support; *Mona*, for example, chooses to do some of her information search at university (as opposed to at home) in order to receive support; "sometimes, [my instructor will] help me to find the right site if I couldn't find one" (see section 5.1.3). In seeking out support from a trusted mentor figure, students at the current site align with freshmen in other contexts (Gross & Latham, 2011; Rieh & Hilligoss, 2008). However, in response to such approaches, faculty at the site are more likely to act as agents (who find sources for students) rather than trainers (who support them in developing the necessary practical understandings at the point of need) (Gross & Latham, 2011) and, indeed, students at the site sometimes seek to exploit mentors as agents, not trainers; *Linda* (the IL specialist) reports that students request relevant articles and "they're not interested" in help to improve their own information seeking (see section 5.1.3). Here again, a key deficiency of the FYC research essay at the current site as a simulation is highlighted; for many students, the teleology of the task is such that it does not make sense to develop a better understanding of how information is found in a university context and, equally, for some FYC faculty it makes sense to save time by providing

sources rather than developing practical understandings. However, while "seek[ing] guidance from experts, such as librarians" (*Framework for Information Literacy for Higher Education*, 2015, p. 23) is a valid strategy, the objective must surely be to expand students' practical understandings in relation to source evaluation and information seeking so as to improve their operability within future research tasks.

Finally, students arrive at the research product. This task, as managed at the current site, incorporates the one-to-one scaffolding and feedback seen as so vital in simulated environments (Bligh & Bleakley, 2006; Weeks et al., 2019). However, at the current site, the written research product must follow a highly specific imposed structure which dictates the number of supporting paragraphs and the way in which sources are managed within paragraphs to support argument. As discussed above, this structure encourages "sentence mining" (Jamieson & Howard, 2013) to support a preconceived position; research becomes the "transport and transformation of text" (Alexandersson & Limberg, 2005, p. 11). When students write to fill this prescribed template, it makes sense for them to ignore "inconvenient" information. The completion of this written task with its highly prescribed structure early in their university study is likely to exert considerable influence on the ways in which students approach subsequent writing through their undergraduate programmes (Head, 2013), and on their emerging identities as writers and researchers in an academic context. Particularly where students see the task primarily as an assessment, the FYC research product could be described more as a "simulation of learning" (Bleakley et al., 2011; Bligh & Bleakley, 2006) than a simulation approximating what they will need to do on subsequent research and writing tasks during their undergraduate study. Instead of having to shape their arguments and the information they have found to support them into an appropriate structure, students at the current site are given a structure and required to find information to fill it; in effect, so that they can simulate an academic essay. The task requirements mean it makes sense to ignore information which does not fit this structure, to "dissimulate what the student does know in order to pass the test" (Bligh & Bleakley, 2006, p. 607). As mentioned above, students at the current site build an emergent identity as an academic writer on this simulated research product. However, the flaws in this simulation mean that this is, to some extent at least, an "inappropriate identity" (p. 608) built on poor foundations.

6.4. Silos and hostages

As sites of *learning*, situated practices and the communities which enact them have been found potentially deficient in two ways. Firstly, it is broadly acknowledged that situated groups engaged together in practices inevitably show internal asymmetries of power. While these asymmetries may appear along various internal fault lines, such as gender and role (e.g. Johannisson & Sundin, 2007), a key variable is whether practitioners are established and experienced, and therefore central to the practice, or novices participating on the periphery (Roberts, 2006; Wenger, 2010). While a power imbalance between novice and seasoned practitioner is to be expected, abuses of such power can mean that novices are not allowed to move into a more central position within the practice and exercise agency (Morley, 2016; Roberts, 2006; Wenger, 2010).

A second and related possible deficiency is the development of practice "silos". Wenger (2010) sees these developing around professional practice. However, Roberts (2006) believes such silos can form around any group of practitioners who share "perspectives on a domain, trust, a communal identity, longstanding relationships [and] an established practice" (p. 626). Once formed, such silos can become hostages to their own history and experience (Roberts, 2006; Wenger, 2010) risking "stagnation and socialisation to only one particular way of thinking" (Morley, 2016, p. 162). The open exchange of knowledge between groups who engage in related practices might serve to inoculate, to some extent, against the formation of silos. However, as Roberts (2006) points out, power imbalances can mitigate against knowledge transfer and such exchanges take place only where there is a degree of trust. One mechanism for facilitating knowledge transfer and mitigating against silos of information use is the multiple group identities, sometimes complementary and sometimes conflicting, which coexist within each individual (Wenger, 2010). In the case of FYC faculty, there is scope for membership (albeit peripheral) of other relevant university groups; such membership would be likely to expose faculty to novel understandings which might shift identities and practices related to information use as part of Composition.

As discussed above, the freshman students FYC research essay does not allow students to participate in "real" situated information use alongside a more expert practitioner but is rather in a simulation designed to prepare students for subsequent situated information use on their

undergraduate programmes. As such, instructor/student interaction as part of the FYC research essay task—at the current site and elsewhere—cannot involve the abuse of power described above where seasoned practitioners actively engaged in situated practice attempt to frustrate the efforts of novices to join in. However, there is no doubt that FYC instructors at the current site have considerable power over the development of freshman students' understandings in relation to information use in their role as the main (or sole) mentor as students attempt to apply newly learned understandings to the messy context of the research essay. The very minor role—that of "one shot" trainers—played by librarians does little to reduce the power of the FYC instructor, and their role as the grader of students' final research product amplifies this power.

The current study shows some risk that practices around information use among FYC professionals at the site and in particular around the final research paper are in danger of developing into a silo mentality. Student respondents report choosing to have no consultation with or support from library IL specialists at the site; while this may be largely due to the familiarity and convenience of online materials (Holliday & Li, 2004; Jackson, 2008), its effect is to deprive students of alternative sources of scaffolding and feedback on their situated information use as they try to apply novel understandings. Faculty respondents report no concerted effort to incorporate IL specialists beyond the "one-shot", and, indeed, some faculty prefer to conduct classroom instruction on search terms and online library sources themselves on the grounds that librarians are less experienced in delivering instruction to large groups (see section 5.1.3). The decision at the current site to separate PhD-holding Composition specialists from their MA-holding colleagues and assign FYC courses solely to MA holders increases the risk of creating future silos; PhD holders are or have been members of research communities and can bring their understandings of academic information use to bear on the FYC research task. MA holders, on the other hand, may have considerably less connection to information practices in the wider university, making it more difficult for "a dialogue to emerge" (Bleakley et al., 2011, p. 162) between simulation and students' subsequent practice-based learning in their university careers and threatening the authenticity of the FYC research essay as a simulation of future situated information use. As an example, *Mike* describes how he is "much happier for them to look at […] National Geographic" as it is easier to read and allows students to develop paraphrase skills (see section 5.1.3) and he also describes how he further restricts the structure of the final product; "there has to be an effect on the environment, effect on people" (see section

5.2.2). In both cases, these unilateral decisions appear designed to serve the simulation itself rather than to expand students' operability in future research contexts.

6.5. Student:instructor ratios and Schatzki's *motivation*

As highlighted above, at the current site systematic one-to-one support is only offered to students at the outline and writing stage. Teleology plays a role in this allocation of faculty resources; faculty see the development of writing practices as a key outcome of the FYC research paper (see section 5.2.3). However, in their responses around feedback, scaffolding and conferencing, faculty at the current site frequently mention time and workload pressures linked to the relatively high student:instructor ratios on FYC courses. Changes introduced in 2013 mean that MA-qualified Composition instructors at the site typically deliver class to around 120 students in five class groups per semester while PhD holders teach 100 freshmen in four class groups. To contextualise the student:instructor ratio at the current site, the Conference on College Composition and Communication (CCCC) recommend class sizes of no more than 20 with instructors teaching no more than three class groups a semester ("Principles for the Postsecondary Teaching of Writing," 2018). Pressure to increase both class sizes and the number of groups taught by each Composition instructor at other sites has been relentless (see Horning, 2007; Phillips & Ahrenhoerster, 2018; Popken, 2004) and the situation at the current site may not be unusual.

The choice to focus scarce resources on the final stages of the research paper is prompted by a combination of teleology and motivation. Schatzki (2019) defines these two forces as follows:

> By "teleology" I mean a person pursuing ends and purposes, and by "motivation" I mean a person reacting to, or acting in the light of past, present, or possible events and states of affairs, (p. 125)

and here appears to give motivation a considerably greater role in the shaping of how people "go on" in practices than in his earlier writings. At the current site, the pressure of high

student:instructor ratios is a state of affairs which shapes the practices of FYC faculty as they administer their courses and support students on the FYC research essay.

The fact that class size and student:instructor ratios do not appear as significant in student respondent data at this site should not be surprising, firstly because students may simply be unaware of the number of classes taught by their Composition instructors but secondly because students' tendency is to focus on quality of instruction without linking this to class size (although students' assessments of teaching quality correlates to class size) (Chapman & Ludlow, 2010). It is worthy of mention here that reduced class sizes early in students undergraduate careers have been linked to improved critical thinking in the latter years of undergraduate study (Horning, 2007), improved *perception* by students of learning, and improvements in both retention and pass rates on freshman writing courses (Chapman & Ludlow, 2010).

At the current site, faculty responses clearly indicate that to manage high student:instructor ratios, time spent on each student during scaffolding activities (e.g. conferencing, individualized written or spoken feedback on work) is reduced or the nature of the scaffolding itself changed to make it more manageable. The current study cannot establish a clear link between student:instructor ratios and specific pedagogical choices, including the decision not to systematically scaffold students early in the research process or the reliance on the research essay as the major assessed task. However, in other contexts, as class sizes increase above 20, Composition faculty have been found to reduce the number of assignments and change their nature, reduce the number of drafts on which written feedback is provided and reduce the frequency of one-to-one conferencing (Phillips & Ahrenhoerster, 2018).

6.6. Silences and negative spaces

Glimpses emerge from both student and faculty respondent data of "negative spaces" (Ward & Winstanley, 2003); silences due to self-censorship around culturally sensitive areas, particularly those related to gender issues and sexual orientation. These data show that new faculty are informally made aware of these "negative spaces" by more experienced colleagues.

Much of the literature around the area of silence and self-censorship at secondary and tertiary level is situated in a western context and constructed around certain assumptions; for example Freedman and Johnson, (2000) in their exploration of self-censorship among highschool

English teachers begin “In a democracy” (p. 356). Where recommendations are offered to counteract self-censorship, these involve frank and open dialogue with stakeholders such as parents, colleagues and managers at the institution as well as students themselves (Evans et al., 2000; Freedman & Johnson, 2000; Noll, 1994) or, indeed, lobbying teaching unions and legislators (Evans et al., 2000). The UAE, like other GCC states, is keen to improve national tertiary education by following a western model as prerequisites for economic development and diversification. At the same time, however, GCC states are suspicious of Western values and freedom of expression which is intrinsic to these institutions on the grounds that these may corrupt Muslim society and threaten Arab cultural values (Romanowski & Nasser, 2010; Taha-Thomure, 2001)

The UAE is an authoritarian regime (Romanowski & Nasser, 2010; Taha-Thomure, 2001) and as such imposes limits on the range of topics which can be discussed and researched in its universities. In addition to purely political restrictions, religious and cultural “traditions and beliefs take a preeminent role in defining what kinds of knowledge are or are not accepted” (Taha-Thomure, 2001, p. 106). The case of a Jordanian resident in the UAE sentenced to 10 years for a Facebook post critical of the Jordanian government is sobering example of politically motivated restrictions on information while the punishment of “any saying or act that offends public morals” with fines and prison exemplifies religiously motivated limitations on freedom of expression (Human Rights Watch, 2022). Foreign academics are by no means exempt from restrictions, and the administrators of prestigious branch campuses are powerless to intervene as has been exemplified by the case of Andrew Ross (Roy, 2015).

Foreign faculty at GCC universities are more sensitive to these limitations than their national counterparts (Romanowski & Nasser, 2010). Faculty appear to use two constructs around the idea of responsibility to help them rationalize self-censorship. The first relates to their perceived responsibility towards students, whose intellectual immaturity may make them unprepared to discuss “offensive” issues. The second closely related construct is the responsibility to respect the host culture more generally (Romanowski & Nasser, 2010). Data from the current investigation is insufficient to explore the possible motivations behind faculty self-censorship and student censorship in relation to the FYC final research essay. Whether these silences are motivated (in Shatzki’s (2019) use of the term) by a concern for students or by the “explicit and implicit consequences” (Romanowski & Nasser, 2010, p. 493) which might accrue

where faculty at the current site allow or encourage discussion of "inappropriate" topics, is unclear.

6.7. Implications

As discussed above, in situations where they are used, simulations create a liminal "third place" (Bleakley et al., 2011, p. 163) between the classroom and the context(s) where learners will apply and deepen their familiarity with the rules and practical understandings they have started to learn. In the current context, deficiencies have been identified both in the way IL is managed in the classroom and in the FYC research essay task which serves as the simulation where students apply what they have learned about IL. Implications for these two areas will be examined separately below. Finally, implications arising from integration (or lack thereof) of FYC faculty into the broader university community and the national context will be discussed.

6.7.1. Implications for the Composition classroom

While the various facets of IL appear to receive very uneven attention at the current context, two areas are virtually absent from the FYC classroom, Personal Information Management (PIM) and reading practices.

University students, particularly those in their freshman year, appear to group into those who have started to actively manage their information (e.g. in the personal sphere) and those who have not (S. Kim et al., 2020; Syn et al., 2020). S. Kim et al. (2020) find, for example, that over half their sample were "inactive" in managing their personal and health information; students in this category show an awareness that they need help, particularly in the area of organising information (Syn et al., 2020). Syn et al. (2020) suggest that university freshmen would benefit both from an awareness the importance of effective PIM in the longer term (i.e. not just for current projects) and from being exposed to some PIM practices. At the current site, a more systematic in-class treatment of basic PIM strategies such as the modelling of commonly-used file naming protocols and the use of nested folders to create a structured archive of information would help those who have not yet started to consciously organise their personal and academic information.

An alternative PIM training strategy which appears to be gaining slowly in acceptance is to introduce freshmen to a new tool as part of a new set of understandings around information

use by training them in a citation management package such as Zotero. Students are often more open to adopting such tools than faculty might predict (Michaud, 2016), quickly gain confidence in the basic functions of this software (Niedbala & Fogleman, 2010) and, in many cases, choose to use it on other courses (Markey et al., 2011; Winslow et al., 2016). Classroom modelling of Zotero can be integrated with evaluation of sources (Winslow et al., 2016) and the package also allows for the creation of reflective, evaluative or summary notes and the sharing of students' records, making possible Zotero-based peer review or assessment (see below). Perhaps most importantly, this package could potentially allow for a move away from "citation-based pedagogy" and the idea that accurate citation makes a good writer and towards a more critical engagement during reading (Winslow et al., 2016, p. 292).

A final implication for the classroom emerging from the current study for the Composition classroom is the need to meaningfully incorporate reading development. PISA scores for the UAE reflect a weakness in this area and the picture in developed countries reflects a decline (Horning, 2010); recognising this problem and the fact that freshmen "are likely to encounter different and challenging reading tasks upon entering college" (CCCC, 2021, para. 2), the Conference on College Composition and Communication (CCCC) recommends renewed attention to this area on FYC courses. Modelling of reading practices should "make the "invisible labour" of reading more visible to students" (Douglas, 2019, p. 138). Reading strategies such as SQ4R (Survey, Question, Read, Respond, Record, Review) (Applegate et al., 1994; Sera & McPherson, 2019) may be useful to train students in establishing a dialogue between what they already know and the content of texts. An alternative which might also benefit freshman is concept or schema mapping, where students create a diagrammatic representation which fuses the key concepts of the texts along with relevant elements of their own schematic knowledge (Applegate et al., 1994; Hermida, 2009). Finally, students also need to be exposed to effective note-taking strategies such as the Cornel method or Hermida's (2009) double-entry reading journal.

6.7.2. Implications for assessed simulations on Composition courses

As discussed above, the FYC research essay task shows some strengths but numerous weaknesses as a simulation activity. In order to effectively consolidate and develop students' ability to deploy the rules and understandings they have met in the classroom, simulations must

reflect a possible future reality, both in the task itself and in the context within which it is carried out (Bland et al., 2011, p. 666). FYC faculty's role is one of "coaching, scaffolding and fading" before ultimately assessing student ability to deploy relevant understandings effectively (Weeks et al., 2019, p. 35).

There seems to be broad agreement that an excessive (or exclusive) focus on the final research essay task in assessment is largely responsible for poor or negligible engagement with sources (Downs & Wardle, 2007; Hermida, 2009; Jamieson & Howard, 2013; Seaboyer & Barnett, 2019) and for largely or completely eliminating an initial stage of reading around the topic as part of the construction of the research focus (Blackwell-Starnes, 2016). While there is less agreement on how best to replace or supplement the research essay task, the need to incorporate additional or alternative assessed tasks—effectively simulations targeting other areas of academic information use—has been widely recognised (e.g. Blackwell-Starnes, 2016; Downs & Wardle, 2007; Gocsik et al., 2016). Hermida's (2009) double-entry reading journal, which demands that students note down both the ideas central to a text and add their related reflections along with links to other texts, and related ideas from class discussions or real-world events has potential as one such simulation. Summary or summary-response tasks are also frequently suggested (Gocsik et al., 2016; Grabe & Zhang, 2013; Jamieson & Howard, 2013). If implemented as a portfolio, allowing for multiple iteration-and-feedback cycles, such simulations have real potential to augment students' operability (Schatzki, 2017) in reading, note taking and source evaluation. Winslow et al.'s (2016) suggestion that students' Zotero-based records of early reading and note-taking might be assessed is an example of a simulation incorporating a number of IL-related rules and understandings, "mirroring the complexity of practice" (Bland et al., 2011). This Zotero-based task also has the benefit of making students' developing grasp of PIM visible within a realistic research task. In order to narrow initial reading towards a specific topic and research question, either a formal research proposal task (Downs & Wardle, 2007) or an annotated bibliography (Blackwell-Starnes, 2016), if scaffolded, have the potential to simulate the messy process of constructing a research focus and conducting an initial information search.

The common thread among all of the above is the suggestion that FYC assessment needs to implement a range of more targeted assessed simulations in order to engage students in a variety of tasks, all with some fidelity to possible future information use practices. The incorporation of such a range of tasks has implications for FYC faculty. Firstly, if such tasks are

to successfully serve to both consolidate students' grasp of the understandings and rules presented in the classroom and to assess their ability to apply these, time-intensive FYC faculty involvement and effort will be required. Secondly, it is questionable whether all FYC faculty are fully familiar with the understandings needed to implement these simulations; those FYC faculty members who are not active researchers, for example, may not be familiar with Zotero or similar packages.

6.7.3. Implications for the opening of Composition to broader situated information practices

As explored above, the risk that FYC faculty, particularly those not actively involved in their own research projects, might become "siloized" into practices which do not reflect those of the wider university is a real one. The very peripheral involvement of library specialists on FYC courses—frequently limited to "one-shot" visits—may do little to mitigate this trend.

Library specialists have generally been more willing to take the initiative in forging closer working relationships with FYC faculty (e.g. Chisholm & Spencer, 2019; Deitering & Jameson, 2008; Jacobs & Jacobs, 2009; Kranich, 2017). The majority of these initiatives tend to focus on an expanded classroom presence for IL specialists (e.g. Brasley, 2008), possibly leading to an IL assessment which contributes to the FYC overall grade but is set and graded by the IL partner (e.g. Deitering & Jameson, 2008; Peary & Ernick, 2004). Where IL and FYC faculty collaborate in assessment design and grading (e.g. Jacobs & Jacobs, 2009), possibly sharing responsibilities for one-to-one tutorial support as students complete assessed FYC research tasks (e.g. Peary & Ernick, 2004) or jointly constructing the grading rubrics which will be used to grade elements of FYC students' information use, there is considerably greater scope for the transfer of understandings between IL specialists and their FYC peers. Such collaborations are not straightforward; Jacobs and Jacobs, (2009) highlight the importance of dialogue between IL and FYC faculty to establish shared goals; Chisholm and Spencer, (2019) emphasise the importance of dialogue "to position librarians as pedagogical partners who have expertise to bring to curricular discussions" (p. 55). In practice, during such collaborations there may need to develop mechanisms which force dialogue between IL and FYC faculty and allow them to build "a common language" (Scheidt et al., 2016, p. 228) both to describe IL situated in an FYC context. Ultimately, while much good work has been done through IL-FYC collaborations at the

level of individual faculty members or at course level, such partnerships are neither sustained nor sustainable and do not "support consistent student achievement" (Zald & Millet, 2012, p. 9); they are frequently dependent on efforts and initiatives of individuals or small groups who act without institutional support and, for this reason, are unlikely to lead to lasting change at the departmental or institutional level (D'Angelo & Maid, 2004). Indeed as the current study shows, voluntary collaborations between IL and FYC faculty may typically be minimal (see section 6.1.1), exacerbating the "siloization" of FYC faculty into IL practices which may serve short-term course assessment goals but not longer-term socialization of learners. In order to "desiloize" FYC by providing IL faculty with a role and a voice, these faculty must be formally involved in the course design and assessment processes, necessitating initiatives at the level of the department and the institution (Zald & Millet, 2012, p. 9). The challenge, as Norgaard & Sinkerson (2016) point out, is to find:

> the institutional "sweet spot": high enough on the institutional food chain to garner real support, visibility, continuity, and investment, but also low enough so that on-the-ground expertise is not neglected and can be leveraged effectively through personal relationships (p. 22).

A more radical departure with the potential to bring teachers of writing into closer contact with disciplinary practices is to align FYC more closely with Writing in the Disciplines (WID) (see DeSanto & Harrington, 2017; Robinson & Hall, 2013). The aim of WID is "to introduce students to the thinking and writing of that discipline" (The WAC Clearinghouse, n.d., para. 4) and to the production of texts in novel genres and for new, specialised audiences (Johnson & Krase, 2012). Equally, understandings related to information use which students acquire during FYC will not allow them to integrate seamlessly into the practices around information use in their departments; indeed discipline-specific writing and information use practices are inextricably linked and can usefully be addressed by a single-course WID offering (DeSanto & Harrington, 2017). FYC faculty involved in designing and delivering WID courses in their institutions would need to immerse themselves in the written discourse of the departments they support and liaise with departmental faculty in order to better understand the discourse and

information use practices of the department—the better to make explicit what may otherwise remain tacit for departmental faculty and students (DeSanto & Harrington, 2017). WID design and delivery would, in effect, allow FYC faculty a measure of legitimate peripheral access to disciplinary discourse and information use; such involvement would inevitably place FYC faculty in the role of junior partner. However, such access would provide insights into the "real" situated writing and information use practices of the disciplines and could, in turn, inform task design on FYC courses.

Obstacles to the establishment of a WID provision provided by Composition specialists exist; it has been suggested that WID should be delivered by disciplinary faculty themselves (Buzzi et al., 2012) or that WID should be administered as a provision separate from Composition (H. Robinson & Hall, 2013) and an expansion of the responsibilities of FYC instructors to include WID might necessitate the hiring of PhD-qualified faculty (Gunter et al., 2023). However, while the path to an expanded role incorporating WID duties may not be an easy one, the potential benefits for Composition faculty in terms of increased familiarity with "real" writing and information practices in the disciplines are considerable; these benefits can potentially translate into FYC assessed tasks which simulate disciplinary practices much more effectively.

6.8 Limitations of the current study

The limitations of a reliance on semi-structured interviews as a method of data collection were explored briefly in section 3.2. Firstly, findings emerging from interview data are the results of two layers of interpretation; respondents' interpretations of the target practices are further interpreted by the researcher (Grix, 2010, p. 81). The inclusion of observation of respondents as they went about the target practices would have been preferable (Nicolini, 2017; Schatzki, 2012) as it would have allowed direct access to the speech acts, bodily movements, manipulation of artifacts etc. which constitute a practice; findings based on these data require only one layer of interpretation by the researcher to (re)construct the implicit knowledge which underpins the practice (Bueger, 2014). Had direct observation been possible in the current study, a greater level of granularity and detail in the doings and sayings related to information seeking, for example, might have been available to the researcher, possibly resulting in additional findings. Direct access to interactions among students, FYC instructors and library faculty might

also have allowed additional insights into the situated *relatings* around information use. However, as explored in section 3.2, information practices related to the FYC research paper at Zayed University site are dispersed over several sites, some of which are inaccessible to the researcher (e.g. students' homes). Additionally, the need for extended contact between observer and respondents in the classroom but also in less formal settings would undoubtedly have made the process of ethical approval and respondent recruitment very challenging because of the culturally conservative nature of Emirati society. Finally, it seems unlikely that observation would have facilitated the data which led to some of the more significant findings of the current study, including the "silence" around topics of discussion, the frustration of some respondents in relation to imposed queries, and many of the findings related to PIM.

As discussed in section 3.1, the single-case nature of the current study limits the extent to which its findings are generalizable. However, despite this limitation, it contributes meaningfully to the study of IL practices on freshman writing courses in three ways. Firstly, it points to a link between the research essay task and the practice of "sentence mining" posited elsewhere (see section 5.2.2) and further finds that this link is contingent on the teleological orientation of the student-writer towards the task. Secondly, it highlights possible links between two contextual factors—the "siloization" of FYC faculty understandings of information use and the strain placed on FYC faculty by increasing student:instructor ratios—and the ways in which students are socialised into situated practices of information use as part of the FYC research essay task (see sections 5.2.3, 6.1.2, 6.3 and 6.4). Finally, the practice theory underpinnings of the current study have served to highlight the ambiguous nature of the relationship between the FYC research task and the practices around information use in the broader university. This ambiguity has, in turn, led to the suggestion that the FYC research task should be conceptualized as a simulation activity (see below). This last outcome should be considered an instance where a single-case study uncovers a facet of the target phenomenon which has been underexplored and "conceptualis[es it] for further study" (Grix, 2010, p. 52).

6.9 Suggestions for further research

Findings in relation to RQ 2 (see section 6.1.2) highlight differences in the ways student respondents conceptualise the FYC research task and point to a possibly related variation in their information use practices as they complete the task. Without explicitly referencing teleo-

affectivity, a number of phenomenographic studies have highlighted this link (see section 6.2). The current research has also highlighted how teleo-affectivity can be contingent on discursive practices around the construction or imposition of a research focus (see sections 4.2.1, 5.2.1 and 6.1.2). Practice-based research into this conceptual triangle would almost certainly yield findings of interest to FYC instructors and course designers; specifically, the ways in which practices (discursive and other) around the construction or imposition of their research focus impact student-writers' teleo-affective orientation towards the task and connections between these teleo-affective orientations and practices around information use during task completion.

The social practice underpinnings of the current study have also served to highlight some ambiguity in the connection between the FYC research task and practices of information use in the broader university. As discussed in section 6.3, this task does not directly involve students (peripherally or otherwise) in the situated research or writing practices of the university; rather it establishes a somewhat artificial context within which freshmen can apply the decontextualised rules and understandings to which they have been exposed in the classroom. Literature on the ways in which FYC and the FYC research task might prepare students for the information use and writing practices of their disciplines is largely based on the concept of transfer, defined as "when learning in one context improves performance in some other context" (Perkins & Salomon, 1992, p. 3). Transfer of learning is acknowledged to take place via two routes; low road transfer involves the application of largely automatized or embodied learning in novel situations (Perkins & Salomon, 1992, p. 8) while high road transfer requires the abstraction of learning from its original setting and mindful reflection on ways in which it can be applied to new situations (Kuglitsch, 2015; Perkins & Salomon, 1992; Schwartz et al., 2005). The relationship between FYC writing and disciplinary writing is considered one of "far transfer" as the relevance and applicability of skills acquired in FYC may not be immediately apparent in disciplinary writing (Skeffington, 2012); this is especially true of hard science disciplines (Driscoll, 2011). Transfer of competencies related to information use between more generic introductory courses and disciplinary contexts is acknowledged to be equally difficult to achieve (Kuglitsch, 2015).

The conceptualization of the FYC research task as a simulation to prepare freshmen for future information use in their disciplines implies change both to the nature of the FYC course and to the research task itself; key among these changes is a much closer alignment between FYC faculty and administrators and faculty in "destination" departments at the same institution.

Both the challenges and opportunities inherent in such changes are discussed above (see section 6.7.3). Such a realignment to FYC and the FYC research task could be expected to bring about enhanced engagement among students—conceptualized by Raymond and Usherwood (2013) as motivation but likely also linked to constructivist factors such as teleo-affectivity and identity formation. Secondly, such a realignment would likely lead to changes in course delivery and assessment administration (Raymond & Usherwood, 2013). Finally, students who have undertaken such simulations as part of their FYC course would be expected to show some improved operability as they integrated into the "target" context, (i.e. their disciplinary studies at undergraduate level). These three research foci can serve, jointly or individually, to evaluate the effectiveness of any initiative which implements a WID-style approach in freshman Composition or which reconceptualizes the FYC research task as a simulation of future situated information use.

7. Conclusion

The current study set out to explore practices around information literacy (IL) as part of an assessed research essay task on a first-year Composition (FYC) course at an all-female university in the United Arab Emirates.

The doings, sayings, rules and understandings which together form practices around information use on the FYC research task (RQ1) have been presented. Data shows an awareness among student respondents of situated rules and understandings which govern the construction of a research focus, information seeking, source evaluation, the incorporation of information into a research product and personal information management (PIM) on the FYC research task. However, the only concerted attempt to scaffold students' application of novel rules and understandings in these areas takes place around the incorporation of information into the final research product. The "sentence mining" practices identified by Jamieson and Howard (2013) are widespread and appear to be accepted or condoned by FYC faculty. In terms of teleo-affectivity (RQ2), two broad orientations emerge from the data. The first is a conception of the task purely as an assessment; this orientation is associated with a greater willingness to accept an imposed research topic and a conception of information seeking as the collection of "enough sources" to satisfy the task and a shallow engagement with sources. The second conception is of the research task as an opportunity to explore an area of personal interest, possibly relevant to a present or future identity; respondents showing this orientation (a small minority) were more likely to view information seeking and reading as a means to deepen their understanding or reach a position on the focus of their research. Also of significance is the finding that students who fail to present their chosen area of interest as a viable, focused research topic are not supported to construct a workable expression of information need but are rather pushed to accept an imposed research focus from "the list". FYC faculty narrowly prioritise the structure of the essay itself, allocating limited teaching and learning resources to the support of students as they plan, write and integrate sources into this research product. Finally, "negatives spaces" (Ward & Winstanley, 2003)—silences around certain topics, in this case generally related to gender and sexual orientation—have been "imported" from the broader cultural and media context within which Zayed University is situated (RQ3) and directly impact information use on the FYC research paper task.

The current study joins a body of research which examines information use through a practice theory lens. Practice theory is now well established as a lens for the interrogation of information use (see 1.1.3) and has been applied to secondary school contexts (e.g. Alexandersson & Limberg, 2005; Francke et al., 2011) and tertiary education (e.g. Schreiber, 2014, 2017). However, the focus of the current study—practices of information use in freshman Composition—has received little attention. In order to more fully understand the doings and sayings around information use on FYC research assignments, it is necessary to move beyond conceptions of information use as a collection of skills or as activities purely governed by a task. For this reason, in its application of practice theory to the use of information on an FYC research assignment, the current research has chosen to situate itself in this relatively underexplored area.

Regarding the significance of the current findings, this study, first of all, confirms the existence of a relationship between teleo-affective conceptions of the task and practices of information use; this relationship has been suggested in several phenomenographic investigations (e.g. Diehm & Lupton, 2012; Lupton, 2008). The current research also highlights a need to better understand how the (co)construction of information need, teleo-affective conceptions of the research task and information practices themselves interact. However, it is in its use of the "simulation" concept to clarify the relationship between information use on the FYP research assignment and research practices in the Zayed University community that the current research is most significant. The "simulation" concept more accurately reflects the way in which the FYC research task at the current site attempts to consolidate novel rules and understandings in preparation for future academic information use (see section 6.3). Simulations are acknowledged to align with practice-based education in that they prepare students for participation in future target practices. Secondly, while a simulation is a learning space not tied to any particular pedagogy, approaches which support and scaffold learners as they apply novel rules and understandings in realistic settings are highlighted. As has also been pointed out above (see section 6.7.2), there is a need to expand the range of simulations which are implemented as part of FYC so that rules and understandings related to the full range of information use can be consolidated. Thirdly, the literature around simulation points towards criteria to evaluate and improve simulation tasks used in FYC. Key among these criteria is *fidelity* to the target context (Hopwood et al., 2016) and the related concept of the *simulation of learning*—where the simulation fails to serve the target context and instead serves itself (Bligh & Bleakley, 2006). Instances of the *simulation of learning* in the current study have been highlighted (see section

6.3). Finally, and following on from this third point, the ways in which FYC situates itself within the broader university have been examined. To mitigate against a disconnect between the understandings promoted during FYC tasks and those informing information practices in the broader university, it has been suggested (see section 6.7.3) that FYC faculty should play an active role in the provision of Writing in the Disciplines (WID) instruction; an involvement in WID can potentially give FYC faculty a role (albeit peripheral) in the sayings, doings and understandings around information use in the disciplines. Such an involvement would help prevent the creation of an FYC "silo" of information use.

The potential for FYC to contribute to the development of a research identity and the inculcation of rules, understandings and practices around information use which will allow novice undergraduates to participate in the information practices of their chosen disciplines has been discussed above (see section 1.3). The current study explores practices on a major FYC assessed research paper and finds that at the current site this potential is not being realised; indeed there is evidence of a neglect of some areas of information use seen as peripheral to the task (see section 6.1.1) and an active acceptance of shallow engagement with information (see section 6.1.2). It is highly likely that some or all of these failures are also present at other institutions where the FYC research paper continues to be used as a key assessment in First-Year Composition—particularly where conditions of course delivery similar to those at the current site exist (see section 6.5). To ensure that First-Year Composition better fulfills its potential as a site for the socialisation of early undergraduates into the practices of information use in which they will later participate, a reconceptualisation of the FYC research essay and FYC assessed tasks in general as *simulations* of future discipline-based information use has been suggested. Closely related to this suggested change is the need to reposition FYC faculty within their institutions such that they gain direct (if peripheral) access to the practices around information use within the disciplines. Finally, a more deliberate and constructive harnessing of teleo-affectivity is needed; this involves the inclusion of a greater variety of assessed tasks targeting a range of IL rules and understandings on FYC courses as well as the careful co-construction between students and faculty of information need in order to open up the possibility that FYC students may see assessed tasks as a stepping stone to a teleological goal of personal significance.

The deficiencies of the FYC research essay task at the current site as an intervention to increase the operability of freshmen in future practices of information use are considerable. Implications discussed above include directions for change and improvement, both at the current

site and at other tertiary institutions, involve considerable upheaval. However, potential gains are also considerable; students can more effectively be supported through the liminal "tunnel" of their freshman year and start to establish a research identity in keeping with the practices of their departments and disciplines—in essence, FYC can play a more substantial role in helping them to exercise agency as researchers at undergraduate level, in effect, to "becom[e] a different person" (Schatzki, 2017, p. 26).

References

2022 Conference on College Composition & Communication: Convention Program. (2022). https://cccc.ncte.org/cccc/2022-cccc-convention-program/

Albright, K. S. (2011). Psychodynamic perspectives in information behaviour. *Information Research*, *16*(1), 16–1.

Alexandersson, M., & Limberg, L. (2003). Constructing meaning through information artefacts. *The New Review of Information Behaviour Research*, *4*(1), 17–30. https://doi.org/10.1080/14716310310001631417

Alexandersson, M., & Limberg, L. (2005). In the shade of the knowledge society and the importance of information literacy. *11th Biennial Earli Conference, University of Cyprus, Nicosia, Cyprus*, 12–1.

Anthonissen, C. (2008). The sounds of silence in the media: Censorship and self-censorship. In R. Wodak & V. Koller (Eds.), *Handbook of communication in the public sphere* (pp. 401–428). De Gruyter Mouton.

Applegate, M. D., Quinn, K. B., & Applegate, A. J. (1994). Using metacognitive strategies to enhance achievement for at-risk liberal arts college students. *Journal of Reading*, *38*(1), 32–40.

Arnold, L. R. (2016). "This is a field that's open, not closed": Multilingual and international writing faculty respond to composition theory. *Composition Studies*, *44*(1), 72.

Artman, M., Frisicaro-Pawlowski, E., & Monge, R. (2010). Not just one shot: Extending the dialogue about information literacy in composition classes. *Composition Studies*, *38*(2), 93–110.

Avvisati, F., Echazarra, A., Givord, P., & Schwabe, M. (2019). *Country Note: Program for International Student Assessment (PISA) Results from PISA 2018, United Arab Emirates*. OECD.Org. https://www.oecd.org/pisa/publications/PISA2018_CN_ARE.pdf

Baker, F. S. (2017). National pride and the new school model: English language education in Abu Dhabi, UAE. In R. Kirkpatrick (Ed.), *English Language Education Policy in the Middle East and North Africa* (Vol. 13, pp. 279–300). Springer International Publishing. https://doi.org/10.1007/978-3-319-46778-8_16

Barreau, D. (2008). The persistence of behavior and form in the organization of personal information. *Journal of the American Society for Information Science and Technology, 59*(2), 307–317. https://doi.org/10.1002/asi.20752

Bates, M. J. (2002). Toward an integrated model of information seeking and searching. *The New Review of Information Behaviour Research, 3*(1), 1–15.

Bates, M. J. (2010). Information. In M. J. Bates, & M. N. Maack (Eds.), *Encyclopedia of library and information sciences.* (3rd ed., Vol. 3, pp. 2347–2360). CRC Press.

Bateson, G. (2000). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. University of Chicago Press.

Belkin, N. J. (1980). Anomalous states of knowledge as a basis for information retrieval. *Canadian Journal of Information Science, 5*(1), 133–143.

Berragan, L. (2011). Simulation: An effective pedagogical approach for nursing? *Nurse Education Today, 31*(7), 660–663. https://doi.org/10.1016/j.nedt.2011.01.019

Blackwell-Starnes, K. (2016). Preliminary paths to information literacy: Introducing research in core courses. In B. J. D'Angelo, S. Jamieson, B. Maid, & J. R. Walker (Eds.), *Information literacy: Research and collaboration across disciplines.* (pp. 139–161). WAC Clearinghouse and University Press of Colorado.

Blackwell-Starnes, K., & Walker, J. R. (2017). Reports from the LILAC Project: Designing a translocal study. In T. Serviss & S. Jamieson (Eds.), *Points of departure: Rethinking student source use and writing studies research methods*. Utah State University Press.

Bland, A. J., Topping, A., & Wood, B. (2011). A concept analysis of simulation as a learning strategy in the education of undergraduate nursing students. *Nurse Education Today, 31*(7), 664–670. https://doi.org/10.1016/j.nedt.2010.10.013

Bleakley, A., Bligh, J., & Browne, J. (2011). Learning by simulation and the simulation of learning. In A. Bleakley, J. Bligh, & J. Browne, *Medical education for the future* (Vol. 1, pp. 153–169). Springer Netherlands. https://doi.org/10.1007/978-90-481-9692-0_11

Bligh, J., & Bleakley, A. (2006). Distributing menus to hungry learners: Can learning by simulation become simulation of learning? *Medical Teacher*, *28*(7), 606–613. https://doi.org/10.1080/01421590601042335

Bluemle, S. R. (2018). Post-facts: Information literacy and authority after the 2016 election. *Portal: Libraries and the Academy*, *18*(2), 265–282.

Boon, S., Johnston, B., & Webber, S. (2007). A phenomenographic study of English faculty's conceptions of information literacy. *Journal of Documentation*, *63*(2), 204–228. https://doi.org/10.1108/00220410710737187

Brasley, S. S. (2008). Effective librarian and discipline faculty collaboration models for integrating information literacy into the fabric of an academic institution. *New Directions for Teaching and Learning*, *2008*(114), 71–88.

Bravender, P., McClure, H., & Schaub, G. (Eds.). (2015). *Teaching information literacy threshold concepts: Lesson plans for librarians*. Association of College and Research Libraries, A division of the American Library Association.

Brent, D. (2005). Reinventing WAC (again): The first-year seminar and academic literacy. *College Composition and Communication*, *57*(2), 253–276.

Bruce, C., Edwards, S., & Lupton, M. (2006). Six frames for information literacy education: A conceptual framework for interpreting the relationships between theory and practice. *Innovation in Teaching and Learning in Information and Computer Sciences*, *5*(1), 1–18. https://doi.org/10.11120/ital.2006.05010002

Bruce, C. S. (1998). The phenomenon of information literacy. *Higher Education Research & Development*, *17*(1), 25–43. https://doi.org/10.1080/0729436980170102

Bruce, H. (2005). Personal, anticipated information need. *Information Research: An International Electronic Journal*, *10*(3), n3.

Bruce, H., Jones, W., & Dumais, S. (2004). Information behaviour that keeps found things found. *Information Research: An International Electronic Journal*, *10*(1), n1.

Brunetti, K., Hofer, A., & Townsend, L. (2014). Interdisciplinarity and information literacy instruction: A threshold concepts approach. *Threshold Concepts: From Personal Practice to Communities of Practice, Proceedings of the National Academy's Sixth Annual Conference and the Fourth Biennial Threshold Concepts Conference*, 89–93.

Bryman, A. (2012). *National centre for research methods review paper: How many qualitative interviews is enough* (S. E. Baker & R. Edwards, Eds.; pp. 18–20). National Centre for Research Methods.

Buckland, M. K. (1991). Information as thing. *Journal of the American Society for Information Science*, *42*(5), 351–360. Business Source Complete.

Bueger, C. (2014). Pathways to practice: Praxiography and international politics. *European Political Science Review*, *6*(03), 383–406. https://doi.org/10.1017/S1755773913000167

Bunn, M. (2015). Reimagining repression: New censorship theory and after. *History and Theory*, *54*(1), 25–44.

Buzz Lightyear film banned from cinemas by UAE. (2022, June 13). BBC News. https://www.bbc.com/news/entertainment-arts-61786355

Buzzi, O., Grimes, S., & Rolls, A. (2012). Writing for the discipline in the discipline? *Teaching in Higher Education*, *17*(4), 479–484. https://doi.org/10.1080/13562517.2012.711932

Byström, K., & Hansen, P. (2005). Conceptual framework for tasks in information studies. *Journal of the American Society for Information Science and Technology*, *56*(10), 1050–1061. https://doi.org/10.1002/asi.20197

Byström, K., & Järvelin, K. (1995). Task complexity affects information seeking and use. *Information Processing & Management*, *31*(2), 191–213.

Byström, K., & Lloyd, A. (2012). Practice theory and work task performance: How are they related and how can they contribute to a study of information practices. *Proceedings of the American Society for Information Science and Technology*, *49*(1), 1–5.

Case, D. O. (2002). *Looking for information: A survey of research on information seeking, needs, and behavior*. Academic Press.

CCCC. (2021, April 1). CCCC position statement on the role of reading in college writing classrooms. *Conference on College Composition and Communication*. https://cccc.ncte.org/cccc/the-role-of-reading/

Chandrasoma, R., Thompson, C., & Pennycook, A. (2004). Beyond plagiarism: transgressive and nontransgressive intertextuality. *Journal of Language, Identity & Education*, *3*(3), 171–193. https://doi.org/10.1207/s15327701jlie0303_1

Chapman, L., & Ludlow, L. (2010). Can downsizing college class sizes augment student outcomes? An investigation of the effects of class size on student learning. *The Journal of General Education, 59*(2), 105–123. https://doi.org/10.5325/jgeneeduc.59.2.0105

Charmaz, K. (2006). *Constructing grounded theory*. Sage Publications.

Chisholm, A., & Spencer, B. (2019). Through the looking glass: Viewing first-year composition through the lens of information literacy. *Communications in Information Literacy*, *13*(1), 43–60.

Automatic citation updates are disabled. To see the bibliography, click Refresh in the Zotero tab.Cole, C. (2011). A theory of information need for information retrieval that connects information to knowledge. *Journal of the American Society for Information Science and Technology, 62*(7), 1216–1231. https://doi.org/10.1002/asi.21541

Combs, S. M. (2016). In search of a proper role for first-year composition in the two-year open-enrollment college. *Academic Leadership Journal in Student Research, 4.*

Consalvo, A. L., Schallert, D. L., & Elias, E. M. (2015). An examination of the construct of legitimate peripheral participation as a theoretical framework in literacy research. *Educational Research Review, 16,* 1–18. https://doi.org/10.1016/j.edurev.2015.07.001

Copeland, A. J. (2011). Analysis of public library users' digital preservation practices. *Journal of the American Society for Information Science and Technology, 62*(7), 1288–1300. https://doi.org/10.1002/asi.21553

Corbett, P. (2010). What about the "Google effect"? Improving the library research habits of first-year composition students. *Teaching English in the Two Year College*, *37*(3), 265–277.

Cornelius, I. (2002). Theorizing information for information science. *Annual Review of Information Science and Technology, 36*(1), 392–425.

Cousin, G. (2009). *Researching learning in higher education: An introduction to contemporary methods and approaches*. Routledge.

Cox, A. M. (2012). An exploration of the practice approach and its place in information science. *Journal of Information Science*, *38*(2), 176–188. https://doi.org/10.1177/0165551511435881

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed). Sage Publications.

Creswell, J. W. (2014). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (Pearson new international edition, 4th edition). Pearson.

Cumming, A., Lai, C., & Cho, H. (2016). Students' writing from sources for academic purposes: A synthesis of recent research. *Journal of English for Academic Purposes*, *23*, 47–58. https://doi.org/10.1016/j.jeap.2016.06.002

Davis, P. M. (2003). Effect of the Web on undergraduate citation behavior: Guiding student scholarship in a networked age. *Portal: Libraries and the Academy*, *3*(1), 41–51.

D'Angelo, B. J., & Maid, B. M. (2004). Moving beyond definitions: Implementing information literacy across the curriculum. *The Journal of Academic Librarianship*, *30*(3), 212–217. https://doi.org/10.1016/j.acalib.2004.02.002

Deitering, A.-M., & Jameson, S. (2008). Step by step through the scholarly conversation: A collaborative library/writing faculty project to embed information literacy and promote critical thinking in first year composition at Oregon state university. *College & Undergraduate Libraries*, *15*(1–2), 57–79. https://doi.org/10.1080/10691310802176830

Dervin, B. (1976). Information: An answer for every question-a solution for every problem. *Journal of Broadcasting*, *20*(3), 323.

Dervin, B. (1998). Sense-making theory and practice: An overview of user interests in knowledge seeking and use. *Journal of Knowledge Management, 2*(2), 36–46. https://doi.org/10.1108/13673279810249369

Dervin, B., & Dewdney, P. (1986). Neutral questioning: A new approach to the reference interview. *Research Quarterly, 25*(4), 506–513.

DeSanto, D., & Harrington, S. (2017). *Harnessing the intersections of writing and information literacy*. ACRL 18th National Conference, "At the Helm." http://hdl.handle.net/11213/17743

Diehm, R.-A., & Lupton, M. (2012). Approaches to learning information literacy: A phenomenographic study. *The Journal of Academic Librarianship, 38*(4), 217–225. https://doi.org/10.1016/j.acalib.2012.05.003

do Nascimento Souto, P. C., Dervin, B., & Savolainen, R. (2012). Designing for knowledge creation work: An exemplar application of sense-making methodology. *RAI Revista de Administração e Inovação, 9*(2), 274–297.

Doolan, S. M. (2021). An exploratory analysis of source integration in post-secondary L1 and L2 source-based writing. *English for Specific Purposes, 62,* 128–141. https://doi.org/10.1016/j.esp.2021.01.003

Douglas, K. (2019). The reading lab: 'failure', Dynamic teaching and reflective practice in growing the skill of reading. *Higher Education Research & Development, 38*(1), 124–141. https://doi.org/10.1080/07294360.2018.1538202

Downs, D., & Wardle, E. (2007). Teaching about writing, righting misconceptions: (Re)envisioning "first-year composition" as "introduction to writing studies." *College Composition and Communication,* 552–584.

Driscoll, D. L. (2011). Connected, disconnected, or uncertain: Student attitudes about future writing contexts and perceptions of transfer from first year writing to the disciplines. *Across the Disciplines*, *8*(2), 1–29. https://doi.org/10.37514/ATD-J.2011.8.2.07

Edwards, S. L., & Bruce, C. (2006). Panning for gold: Understanding students' information searching experiences. In C. Bruce, G. Mohay, G. Smith, I. Stoodley, & R. Tweedale (Eds.), *Transforming IT education: Promoting a culture of excellence* (pp. 351–370). Informing Science Press. https://eprints.qut.edu.au/990/

Edwards, S. L. (2005). *Panning for gold: Influencing the experience of web-based information searching* [PhD Thesis]. Queensland University of Technology.

Ehrich, J., Howard, S. J., Mu, C., & Bokosmaty, S. (2016). A comparison of Chinese and Australian university students' attitudes towards plagiarism. *Studies in Higher Education*, *41*(2), 231–246. https://doi.org/10.1080/03075079.2014.927850

Eisenberg, M. B. (2008). Information literacy: Essential skills for the information age. *DESIDOC Journal of Library & Information Technology*, *28*(2).

Elmborg, J. (2006). Critical information literacy: Implications for instructional practice. *The Journal of Academic Librarianship*, *32*(2), 192–199. https://doi.org/10.1016/j.acalib.2005.12.004

Elsweiler, D., & Ruthven, I. (2007). Towards task-based personal information management evaluations. *Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 23–30.

Erlam, G. D., Smythe, L., & Wright-St Clair, V. (2017). Simulation is not a pedagogy. *Open Journal of Nursing*, *07*(07), 779–787. https://doi.org/10.4236/ojn.2017.77059

Evans, R. W., Avery, P. G., & Pederson, P. V. (2000). Taboo topics: Cultural restraint on teaching social issues. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 73*(5), 295–302. https://doi.org/10.1080/00098650009600973

Field-Rothchild, K. (2018). Chapter 7: Research as inquiry. In G. Veach (Ed.), *Teaching information literacy and writing studies: Volume 1, first-year composition courses* (pp. 87–95). Purdue University Press. https://doi.org/10.2307/j.ctv15wxpj8

Fisher, K. E., Landry, C. F., & Naumer, C. (2007). Social spaces, casual interactions, meaningful exchanges: "Information ground" characteristics based on the college student experience. *Information Research, 12*(2), 12–2.

Fisher, K. E., & Naumer, C. M. (2006). Information grounds: theoretical basis and empirical findings on information flow in social settings. In A. Spink & C. Cole (Eds.), *New directions in human information behavior* (pp. 113–134). Springer.

Fister, B. (1992). The research processes of undergraduate students. *Journal of Academic Librarianship, 18*(3), 163–169.

Flick, U. (Ed.). (2014). *The SAGE handbook of qualitative data analysis*. SAGE.

Folk, A. (2016). Academic self-efficacy, information literacy, and undergraduate course-related research: Expanding Gross's imposed query model. *Journal of Library Administration, 56*(5), 540–558. https://doi.org/10.1080/01930826.2015.1105545

Forero, R., Nahidi, S., De Costa, J., Mohsin, M., Fitzgerald, G., Gibson, N., McCarthy, S., & Aboagye-Sarfo, P. (2018). Application of four-dimension criteria to assess rigour of qualitative research in emergency medicine. *BMC Health Services Research, 18*(1), 120. https://doi.org/10.1186/s12913-018-2915-2

Fosen, C. (2006). "University courses, not department courses": Composition and general education. *Composition Studies, 34*(1), 11–33.

Framework for Information Literacy for Higher Education. (2015). Association of College & Research Libraries. http://www.ala.org/acrl/standards/ilframework

Francke, H., Sundin, O., & Limberg, L. (2011). Debating credibility: The shaping of information literacies in upper secondary school. *Journal of Documentation*, *67*(4), 675–694.

Freedman, L., & Johnson, H. (2000). Who's protecting whom? "I hadn't meant to tell you this", a case in point in confronting self-censorship in the choice of young adult literature. *Journal of Adolescent & Adult Literacy*, *44*(4), 356–369.

Gao, J., Picoral, A., Staples, S., & Macdonald, L. (2021). Citation practices of L2 writers in first-year writing courses: Form, rhetorical function, and connection with pedagogical materials. *Applied Corpus Linguistics*, *1*(2), 100005. https://doi.org/10.1016/j.acorp.2021.100005

Gebril, A., & Plakans, L. (2013). Toward a transparent construct of reading-to-write tasks: The interface between discourse features and proficiency. *Language Assessment Quarterly*, *10*(1), 9–27. https://doi.org/10.1080/15434303.2011.642040

General Education (Common Core) Requirements: CGES Catalog. (n.d.). Central Methodist University. Retrieved September 4, 2022, from https://cges-catalog.centralmethodist.edu/info/General%20Education%20Requirements.html

Gocsik, K., Braunstein, L. R., & Tobery, C. E. (2016). Approximating the university: The information literacy practices of novice researchers. In B. J. D'Angelo, S. Jamieson, B. Maid, & J. R. Walker (Eds.), *Information literacy: Research and collaboration across disciplines* (pp. 163–184). The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2016.0834.2.08

Grabe, W., & Zhang, C. (2013). Reading and writing together: A critical component of English for Academic Purposes teaching and learning. *TESOL Journal*, *4*(1), 9–24. https://doi.org/10.1002/tesj.65

Green, K. E., & Lawlor, A. (2016). *Read, write, connect: A guide to college reading and writing* (2nd edition). Bedford/St Martin's, Macmillan Learning.

Grix, J. (2010). *The foundations of research* (2nd edition). Palgrave Macmillan.

Gross, M. (1998). The imposed query. *Reference & User Services Quarterly*, *37*(3), 236–243.

Gross, M., & Latham, D. (2007). Attaining information literacy: An investigation of the relationship between skill level, self-estimates of skill, and library anxiety. *Library & Information Science Research*, *29*(3), 332–353. https://doi.org/10.1016/j.lisr.2007.04.012

Gross, M., & Latham, D. (2009). Undergraduate perceptions of information literacy: Defining, attaining, and self-assessing skills. *College & Research Libraries*, *70*(4), 336–350.

Gross, M., & Latham, D. (2011). Experiences with and perceptions of information: A phenomenographic study of first-year college students. *The Library Quarterly*, *81*(2), 161–186.

Gross, M., & Latham, D. (2012). What's skill got to do with it?: Information literacy skills and self-views of ability among first-year college students. *Journal of the American Society for Information Science and Technology*, *63*(3), 574–583. https://doi.org/10.1002/asi.21681

Gunter, K. K., Briggette, L. E., Laughlin, M., Wilgar, T., & Zamin, N. F. (2023). Strengthening the core: Designing and implementing a new, sustainable WAC/WID program. In M. J. Kelly, H. M. Falconer, C. L. González, & J. Dahlman (Eds.), *Adapting the past to reimagine possible futures: Celebrating and critiquing WAC at 50* (pp. 59–72). The

WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2023.1947.2.04

Hall, J. (2005). Plagiarism across the curriculum: How academic communities can meet the challenge of the undocumented writer. *Across the Disciplines*, *2*(9).

Hardof-Jaffe, S., Hershkovitz, A., Abu-Kishk, H., Bergman, O., & Nachmias, R. (2009). Students' organization strategies of personal information space. *Journal of Digital Information*, *10*(5).

Harrington, S., Malencyzk, R., Peckham, I., Rhodes, K., & Yancey, K. B. (2001). WPA Outcomes statement for first-year composition. *College English*, *63*(3), 321–325.

Head, A. J. (2013). Project information literacy: What can be learned about the information-seeking behavior of today's college students? *SSRN Electronic Journal*, 472–482. https://doi.org/10.2139/ssrn.2281511

Head, A. J., & Eisenberg, M. (2010a). How today's college students use Wikipedia for course-related research. *First Monday*, *15*(3).

Head, A. J., & Eisenberg, M. B. (2010b). Truth be told: How college students evaluate and use information in the digital age. Project Information Literacy progress report. *Project Information Literacy*.

Hermida, Dr. J. (2009). The importance of teaching academic reading skills in first-year university courses. *The International Journal of Research and Review*, *3*, 20–30. https://doi.org/10.2139/ssrn.1419247

Higgs, J. (Ed.). (2013). *Realising exemplary practice-based education*. Sense Publishers.

Hirvela, A., & Du, Q. (2013). "Why am I paraphrasing?": Undergraduate ESL writers' engagement with source-based academic writing and reading. *Journal of English for Academic Purposes*, *12*(2), 87–98. https://doi.org/10.1016/j.jeap.2012.11.005

Hjørland, B. (2002). Epistemology and the socio-cognitive perspective in information science. *Journal of the American Society for Information Science and Technology*, *53*(4), 257–270. https://doi.org/10.1002/asi.10042

Hofer, B. K. (2000). Dimensionality and disciplinary differences in personal epistemology. *Contemporary Educational Psychology*, *25*(4), 378–405. https://doi.org/10.1006/ceps.1999.1026

Hofer, B. K., & Pintrich, P. R. (Eds.). (2009). *Personal epistemology: The psychology of beliefs about knowledge and knowing*. Routledge, Taylor & Francis Group.

Holland, D., & Lave, J. (2019). Social practice theory and the historical production of persons. In *Cultural-Historical Approaches to Studying Learning and Development* (pp. 235–248). Springer, Singapore.

Holliday, W., & Li, Q. (2004). Understanding the millennials: Updating our knowledge about students. *Reference Services Review*, *32*(4), 356–366. https://doi.org/10.1108/00907320410569707

Hongisto, H., & Sormunen, E. (2010). The challenges of the first research paper: Observing students and the teacher in the secondary school. In A. Lloyd & S. Talja (Eds.), *Practising information literacy: Bringing theories of learning, practice and information literacy together* (pp. 95–120). Centre for Information Studies.

Hopwood, N., Rooney, D., Boud, D., & Kelly, M. (2016). Simulation in higher education: A sociomaterial view. *Educational Philosophy and Theory*, *48*(2), 165–178. https://doi.org/10.1080/00131857.2014.971403

Horning, A. (2007). The definitive article on class size. *WPA: Writing Program Administration*, *31*(1–2), 11–34.

Horning, A. (2010). Reading, writing and digitizing: A meta-analysis of reading research. *Reading Matrix: An International Online Journal*, *10*(2).

Howard, R. M. (1995). Plagiarisms, authorships, and the academic death penalty. *College English*, *57*(7), 788–806.

Howard, R. M., Serviss, T., & Rodrigue, T. K. (2010). Writing from sources, writing from sentences. *Writing & Pedagogy*, *2*(2), 177–192. https://doi.org/10.1558/wap.v2i2.177

Human Rights Watch. (2022). United Arab Emirates: Events of 2021. In *World Report 2022*. https://www.hrw.org/world-report/2022/country-chapters/united-arab-emirates

IELTS Partners 2009–2017. (n.d.). *IELTS Performance for test takers 2015*. Retrieved June 19, 2017, from https://www.ielts.org/teaching-and-research/test-taker-performance

Jackson, R. (2008). Information literacy and its relationship to cognitive development and reflective judgment. *New Directions for Teaching and Learning*, *2008*(114), 47–61. https://doi.org/10.1002/tl.316

Jacobs, H. L., & Jacobs, D. (2009). Transforming the one-shot library session into pedagogical collaboration: Information literacy and the English composition class. *Reference & User Services Quarterly*, 72–82.

Jacobson, T., & Mackey, T. (2013). Proposing a metaliteracy model to redefine information literacy. *Communications in Information Literacy*, *7*(2), 2.

Jamieson, S. (2013). Reading and engaging sources: What students' use of sources reveals about advanced reading skills. *Across the Disciplines*, *10*(4), n4.

Jamieson, S. (2016). What the citation project tells us about information literacy in college composition. *Information Literacy: Research and Collaboration across Disciplines*, 115–138.

Jamieson, S., & Howard, R. M. (2013). Sentence-mining: Uncovering the amount of reading and reading comprehension in college writers' researched writing. *The new digital scholar: Exploring and enriching the research and writing practices of nextgen students*, 111–133.

Johannisson, J., & Sundin, O. (2007). Putting discourse to work: Information practices and the professional project of nurses. *The Library Quarterly*, *77*(2), 199–218. https://doi.org/10.1086/517843

Johnson, J. P., & Krase, E. (2012). Coming to learn: From first-year composition to writing in the disciplines. *Across the Disciplines*, *9*(2), 1.

Johnston, B. (2020). Information literacy, lifelong learning and the needs of an ageing population. In S. Goldstein (Ed.), *Informed societies: Why information literacy matters for citizenship, participation and democracy* (pp. 207–228). Facet Publishing.

Johnston, B., & Webber, S. (2003). Information literacy in higher education: A review and case study. *Studies in Higher Education*, *28*(3), 335–352.

Kaefer, F., Roper, J., & Sinha, P. N. (2015). *A software-assisted qualitative content analysis of news articles: Examples and reflections*.

Katz, I. R. (2007). Testing information literacy in digital environments: ETS's iSkills assessment. *Information Technology and Libraries*, *26*(3), 3–12.

Kaye, J., Vertesi, J., Avery, S., Dafoe, A., David, S., Onaga, L., Rosero, I., & Pinch, T. (2006). To have and to hold: Exploring the personal archive. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 275–284. https://doi.org/10.1145/1124772.1124814

Keck, C. (2006). The use of paraphrase in summary writing: A comparison of L1 and L2 writers. *Journal of Second Language Writing*, *15*(4), 261–278. https://doi.org/10.1016/j.jslw.2006.09.006

Kemmis, S. (2021). A practice theory perspective on learning: Beyond a 'standard' view. *Studies in Continuing Education*, *43*(3), 280–295. https://doi.org/10.1080/0158037X.2021.1920384

Kennedy, M. L. (1985). The composing process of college students writing from sources. *Written Communication*, *2*(4), 434–456. https://doi.org/10.1177/0741088385002004006

Kim, K.-S., Sin, S.-C. J., & Yoo-Lee, E. Y. (2014). Undergraduates' use of social media as information sources. *College & Research Libraries*, *75*(4), 442–457. https://doi.org/10.5860/crl.75.4.442

Kim, S., Sinn, D., & Syn, S. Y. (2020). Personal health information management by college students: Patterns of inaction. *Information Research: An International Electronic Journal*, *25*(1). https://informationr.net/ir/25-1/paper851.html

Kirszner, L. G., & Mandell, S. R. (2016). *Practical argument: A text and anthology* (3rd edition). Bedford/ St. Martin's.

Kocatepe, M. (2021). Reconceptualising the notion of finding information: How undergraduate students construct information as they read-to-write in an academic writing class. *Journal of English for Academic Purposes*, *54*, 101042. https://doi.org/10.1016/j.jeap.2021.101042

Kranich, N. (2017). *Mind the gap: Connecting academic libraries and campus communities* [Application/pdf]. https://doi.org/10.7282/T3FR0015

Kuglitsch, R. Z. (2015). Teaching for transfer: Reconciling the framework with disciplinary information literacy. *Portal: Libraries and the Academy*, *15*(3), 457–470.

Kuhlthau, C. C. (1991). Inside the search process: Information seeking from the user's perspective. *Journal of the American Society for Information Science*, *42*(5), 361–371.

Kuhlthau, C. C., Heinström, J., & Todd, R. J. (2008). The 'information search process' revisited: Is the model still useful. *Information Research*, *13*(4), 13–14.

Kurfiss, J. G. (1988). *Critical thinking: Theory, research, practice, and possibilities*. Association for the Study of Higher Education.

Kwaśnik, B. H. (2020). Changing perspectives on classification as a knowledge-representation process. *KO KNOWLEDGE ORGANIZATION*, *46*(8), 656–667.

Land, R., Rattray, J., & Vivian, P. (2014). Learning in the liminal space: A semiotic approach to threshold concepts. *Higher Education*, *67*(2), 199–217. https://doi.org/10.1007/s10734-013-9705-x

Latham, D., & Gross, M. (2013). Instructional preferences of first-year college students with below-proficient information literacy skills: A focus group study. *College & Research Libraries*, *74*(5), 430–449.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Leckie, G. J. (1996). Desperately seeking citations: Uncovering faculty assumptions about the undergraduate research.. *Journal of Academic Librarianship*, *22*(3), 201.

Leckie, G. J., Given, L. M., & Buschman, J. (Eds.). (2010). *Critical theory for library and information science: Exploring the social from across the disciplines*. Libraries Unlimited.

Leckie, G. J., Pettigrew, K. E., & Sylvain, C. (1996). Modeling the information seeking of professionals: A general model derived from research on engineers, health care

professionals, and lawyers. *The Library Quarterly: Information, Community, Policy*, *66*(2), 161–193.

Lee, H.-L. (2008). Information structures and undergraduate students. *The Journal of Academic Librarianship*, *34*(3), 211–219. https://doi.org/10.1016/j.acalib.2008.03.004

Lewandowsky, S. (2020). The 'post-truth' world, misinformation, and information literacy: a perspective from cognitive science. In S. Goldstein (Ed.), *Informed societies: Why information literacy matters for citizenship, participation and democracy*. Facet Publishing.

Limberg, L. (1999). Three conceptions of information seeking and use. *Exploring the contexts of information behaviour*, 116–135.

Limberg, L. (2000). Phenomenography: A relational approach to research on information needs, seeking and use. *New Review of Information Behaviour Research*, *1*, 51–67.

Limberg, L. (2007). Learning assignment as task in information seeking research. *Information Research*, *12*(1), 12–1.

Limberg, L., Alexandersson, M., Lantz-Andersson, A., & Folkesson, L. (2008). What matters? Shaping meaningful learning through teaching information literacy. *Libri*, *58*(2), 82–91.

Limberg, L., Sundin, O., & Talja, S. (2012). Three theoretical perspectives on information literacy. *Human IT: Journal for Information Technology Studies as a Human Science*, *11*(2).

Lloyd, A. (2005). No man (or woman) is an island: Information literacy, affordances and communities of practice. *The Australian Library Journal*, *54*(3), 230–237. https://doi.org/10.1080/00049670.2005.10721760

Lloyd, A. (2010a). Framing information literacy as information practice: Site ontology and practice theory. *Journal of Documentation*, *66*(2), 245–258. https://doi.org/10.1108/00220411011023643

Lloyd, A. (2010b). *Information Literacy Landscapes: Information Literacy in Education, Workplace and Everyday Contexts*. Chandos Publishing.

Lloyd, A. (2011). Trapped between a rock and a hard place: What counts as information literacy in the workplace and how is it conceptualized? *Library Trends*, *60*(2), 277.

Lloyd, A. (2012). Information literacy as a socially enacted practice: Sensitising themes for an emerging perspective of people-in-practice. *Journal of Documentation*, *68*(6), 772–783. https://doi.org/10.1108/00220411211277037

Lloyd, A. (2014). Following the red thread of information in information literacy research: Recovering local knowledge through interview to the double. *Library & Information Science Research*, *36*(2), 99–105. https://doi.org/10.1016/j.lisr.2013.10.006

Lundh, A. (2010). Studying information needs as question-negotiations in an educational context: A methodological comment. *Information Research: An International Electronic Journal*, *15*(4), n4.

Lupton, M. (2008). Evidence, argument and social responsibility: First-year students' experiences of information literacy when researching an essay. *Higher Education Research & Development*, *27*(4), 399–414. https://doi.org/10.1080/07294360802406858

Lush, A. (2014). Fundamental personal information management activities – Organisation, finding and keeping: A literature review. *The Australian Library Journal*, *63*(1), 45–51. https://doi.org/10.1080/00049670.2013.875452

MacLean, M. (2021). Insight 253: National identity in the UAE. *Middle East Institute–National University Singapore*.

Maid, B., & D'Angelo, B. (2016). Threshold concepts: Integrating and applying information literacy and writing instruction. In B. J. D'Angelo, S. Jamieson, B. Maid, & J. R. Walker (Eds.), *Information literacy: Research and collaboration across disciplines.* (pp. 37–50). WAC Clearinghouse and University Press of Colorado.

Malone, T. W. (1983). How do people organize their desks? Implications for the design of office information systems. *ACM Transactions on Information Systems (TOIS), 1*(1), 99–112.

Marinara, M., Alexander, J., Banks, W. P., & Blackmon, S. (2009). Cruising composition texts: Negotiating sexual difference in first-year readers. *College Composition and Communication, 61*(2), 269–296.

Markey, K., Leeder, C., & Hofer, A. R. (2011). BiblioBouts: What's in the game? *College & Research Libraries News, 72*(11), 632–645.

Marsh, B. (2015). Reading-writing integration in developmental and first-year composition. *Teaching English in the Two Year College, 43*(1), 58.

Martin, D. E., Rao, A., & Sloan, L. R. (2011). Ethnicity, acculturation, and plagiarism: A criterion study of unethical academic conduct. *Human Organization*, 88–96.

Martin, J. (2006). Online information literacy instruction: Challenges in an arab context. *Learning and teaching in higher education: Gulf perspectives, 3*(2), 22–35.

Martin, J. D., Naqvi, S. S., & Arwah, I. (2020). Attitudes about censorship and internet surveillance among south Asians and nationals in the Arab Gulf: Predictors of digital self-expression values. *International Communication Research Journal, 55*(1).

Marton, F., & Booth, S. (1997). *Learning and Awareness*. Lawrence Erlbaum Associates.

Marton, F., & Pong, W. Y. (2005). On the unit of description in phenomenography. *Higher Education Research & Development, 24*(4), 335–348. https://doi.org/10.1080/07294360500284706

Maybee, C. (2006). Undergraduate perceptions of information use: The basis for creating user-centered student information literacy instruction. *The Journal of Academic Librarianship*, *32*(1), 79–85.

McCabe, D. L., Feghali, T., & Abdallah, H. (2008). Academic dishonesty in the Middle East: individual and contextual factors. *Research in Higher Education*, *49*(5), 451–467. https://doi.org/10.1007/s11162-008-9092-9

McCracken, I. M., & Johnson, B. (2015). *Sustainable partners: Librarians and instructors using threshold concepts to reinforce information literacy*. Georgia International Conference on Information Literacy. https://digitalcommons.georgiasouthern.edu/gaintlit/2015/2015/40

McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith-a failure of analysis. *Human Relations*, *55*(1), 89–118.

Mery, Y., Newby, J., & Peng, K. (2012). Why one-shot information literacy sessions are not the future of instruction: A case for online credit courses. *College & Research Libraries*, *73*(4), 366–377.

Meyer, J., & Land, R. (2003). Threshold concepts and troublesome knowledge (1): Linkages to ways of thinking and practising within the disciplines. In C. Rust (Ed.), *Improving student learning – ten years on*. Oxford Centre for Staff and Learning Development.

Michaud, M. E. (2016). *Information literacy in the first year of higher education: Faculty expectations and student practices* [Portland State University]. https://doi.org/10.15760/etd.3074

Mizrachi, D., & Bates, M. J. (2013). Undergraduates' personal academic information management and the consideration of time and task-urgency. *Journal of the American Society for Information Science and Technology*, *64*(8), 1590–1607. https://doi.org/10.1002/asi.22849

Morley, D. (2016). Applying Wenger's communities of practice theory to placement learning. *Nurse Education Today*, *39*(April), 161–162.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *1*(2), 13–22. https://doi.org/10.1177/160940690200100202

Morse, J. M., & Cheek, J. (2014). Making room for qualitatively-driven mixed-method research. *Qualitative Health Research*, *24*(1), 3–5. https://doi.org/10.1177/1049732313513656

Morse, J. M., & Niehaus, L. (2016). *Mixed method design: Principles and procedures*. Routledge.

Müller, H., & Camia, C. (2023). Between uniformity and polarization: Women's empowerment in the public press of GCC states. *Politics & Gender*, *19*(1), 166–194. https://doi.org/10.1017/S1743923X21000465

Nahl, D. (2005). Affective and cognitive information behavior: Interaction effects in internet use. *Proceedings of the American Society for Information Science and Technology*, *42*(1).

Neumann, H., Leu, S., & McDonough, K. (2019). L2 writers' use of outside sources and the related challenges. *Journal of English for Academic Purposes*, *38*, 106–120. https://doi.org/10.1016/j.jeap.2019.02.002

Nicolini, D. (2009). Articulating practice through the interview to the double. *Management Learning*, *40*(2), 195–212.

Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford University Press.

Nicolini, D. (2017). Practice theory as a package of theory, method and vocabulary: Affordances and limitations. In M. Jonas, B. Littig, & A. Wroblewski (Eds.), *Methodological*

reflections on practice oriented theories (pp. 19–34). Springer International Publishing. https://doi.org/10.1007/978-3-319-52897-7_2

Nicolini, D., & Monteiro, P. (2016). The practice approach: For a praxeology of organisational and management studies. In A. Langley & T. Haridimos (Eds.), *The SAGE handbook of process organization studies. London: Sage* (pp. 110–126). SAGE Publications.

Nicolini, D., & Roe, B. (2014). Surfacing the multiple. Diffractive methods for rethinking professional practice and knowledge. In T. J. Fenwick & M. Nerland (Eds.), *Reconceptualising professional learning: Sociomaterial knowledges, practices and responsibilities* (pp. 67–81). Routledge.

Niedbala, M. A., & Fogleman, J. (2010). Taking Library 2.0 to the next level: Using a course wiki for teaching information literacy to honors students. *Journal of Library Administration*, *50*(7–8), 867–882. https://doi.org/10.1080/01930826.2010.488986

Noll, E. (1994). The ripple effect of censorship: Silencing in the classroom. *The English Journal*, *83*(8), 59–64.

Norgaard, R. (2003). Writing information literacy: Contributions to a concept. *Reference & User Services Quarterly*, *43*(2), 124–130.

Norgaard, R. (2004). Writing information literacy in the classroom: Pedagogical enactments and implications. *Reference & User Services Quarterly*, *43*(3), 220–226.

Norgaard, R., & Sinkinson, C. (2016). Writing information literacy: A retrospective and a look ahead. *Information Literacy: Research and Collaboration across Disciplines. Fort Collins, CO: WAC Clearinghouse and University Press of Colorado*.

Nowrin, S., Robinson, L., & Bawden, D. (2019). Multi-lingual and multi-cultural information literacy: Perspectives, models and good practice. *Global Knowledge, Memory and Communication*, *68*(3), 207–222. https://doi.org/10.1108/GKMC-05-2018-0050

Olsson, M., & Lloyd, A. (2017). Being in place: Embodied information practices. *Information Research*, *22*(1).

Onuoha, U. D. (2016). Attitude to plagiarism and the personal information management behaviour of undergraduates at Babcock University, Nigeria. *Information Impact: Journal of Information and Knowledge Management*, *7*(1), 19–31.

Ormandy, P. (2011). Defining information need in health - assimilating complex theories derived from information science: Defining information need in health. *Health Expectations*, *14*(1), 92–104. https://doi.org/10.1111/j.1369-7625.2010.00598.x

Orme, W. A. (2008). Information literacy and first-year students. *New Directions for Teaching and Learning*, *2008*(114), 63–70. https://doi.org/10.1002/tl.317

Ose, S. O. (2016). Using Excel and Word to structure qualitative data. *Journal of Applied Social Science*, *10*(2), 147–162. https://doi.org/10.1177/1936724416664948

Palmer, M., O'Kane, P., & Owens, M. (2009). Betwixt spaces: Student accounts of turning point experiences in the first-year transition. *Studies in Higher Education*, *34*(1), 37–54. https://doi.org/10.1080/03075070802601929

Paragraph Development with PIE. (2020, September 15). Purdue Global Academic Success and Writing Resource Center and Blog. https://purdueglobalwriting.center/paragraph-development-with-pie-2/

Peary, A., & Ernick, L. (2004). Reading, writing, research: Incorporating strategies from composition and rhetoric into library instruction. *College & Undergraduate Libraries*, *11*(1), 33–43. https://doi.org/10.1300/J106v11n01_04

Perdana, R., Jumadi, J., Rosana, D., & Riwayani, R. (2020). The online laboratory simulation with concept mapping and problem based learning (OLS-CMPBL): Is it effective in

improving students' digital literacy skills? *Cakrawala Pendidikan*, *39*(2), 382–394. https://doi.org/10.21831/cp.v39i2.31491

Perkins, D. N., & Salomon, G. (1992). Transfer of learning. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (2nd ed., Vol. 2, pp. 6452–6457). Pergamon Press.

Phillips, C., & Ahrenhoerster, G. (2018). Class size and first-year writing: Exploring the effects on pedagogy and student perception of writing process. *Teaching English in the Two Year College*, *46*(1), 9–29.

Pilerot, O. (2016). A practice-based exploration of the enactment of information literacy among PhD students in an interdisciplinary research field. *Journal of Documentation*, *72*(3), 414–434. https://doi.org/10.1108/JD-05-2015-0056

Pilerot, O., Hammarfelt, B., & Moring, C. (2017). The many faces of practice theory in library and information studies. *Information Research*, *22*(1).

Popken, R. (2004). Edwin Hopkins and the costly labor of composition teaching. *College Composition and Communication*, *55*(4), 618–641.

Principles for the postsecondary teaching of writing. (2018, June 6). *Conference on College Composition and Communication*. https://cccc.ncte.org/cccc/resources/positions/postsecondarywriting/

Purdy, J. P. (2012). Why first-year college students select online research resources as their favorite. *First Monday*, *17*(9). https://doi.org/10.5210/fm.v0i0.4088

Purdy, J. P., & Walker, J. R. (2013). Liminal spaces and research identity: The construction of introductory composition students as researchers. *Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture*, *13*(1), 9–41. https://doi.org/10.1215/15314200-1814260

Raymond, C., & Usherwood, S. (2013). Assessment in simulations. *Journal of Political Science Education*, *9*(2), 157–167. https://doi.org/10.1080/15512169.2013.770984

Rieh, S. Y., & Hilligoss, B. (2008). College students' credibility judgments in the information-seeking process. In M. J. Metzger & A. J. Flanagin (Eds.), *Digital media, youth, and credibility* (pp. 49–72). The MIT Press Cambridge, MA.

Roberts, J. (2006). Limits to communities of practice. *Journal of Management Studies*, *43*(3), 623–639.

Robinson, H., & Hall, J. (2013). Connecting WID and the Writing Center: Tools for collaboration. *The WAC Journal*, *24*(1), 29–47.

Robinson, S., & Johnson, F. (2012). The process and affective environment of students' personal information management. *Enhancing Learning in the Social Sciences*, *4*(2), 1–13.

Roig, M. (2001). Plagiarism and paraphrasing criteria of college and university professors. *Ethics & Behavior*, *11*(3), 307–323. https://doi.org/10.1207/S15327019EB1103_8

Romanowski, M. H., & Nasser, R. (2010). Faculty perceptions of academic freedom at a GCC university. *PROSPECTS*, *40*(4), 481–497. https://doi.org/10.1007/s11125-010-9166-2

Rose-Wiles, L. M., & Hofmann, M. A. (2013). Still desperately seeking citations: Undergraduate Research in the age of Web-scale discovery. *Journal of Library Administration*, *53*(2–3), 147–166. https://doi.org/10.1080/01930826.2013.853493

Roy, J. (2015, March 18). *An interview with the NYU professor banned from the United Arab Emirates* [News]. Intelligencer. https://nymag.com/intelligencer/2015/03/interviewing-the-nyu-prof-banned-from-the-uae.html

Rudd, M., & Telafici, M. (2017). An Arabian Gulf: First-year composition textbooks at an international branch campus in Qatar. In L. R. Arnold, A. Nebel, & L. Ronesi (Eds.),

Emerging writing research from the Middle East-North Africa region (pp. 115–132). The WAC Clearinghouse.

Saldaña, J. (2009). *The Coding Manual for Qualitative Researchers*. SAGE Publications.

Savolainen, R. (2007). Information behavior and information practice: Reviewing the "umbrella concepts" of information-seeking studies. *The Library Quarterly*, *77*(2), 109–132. https://doi.org/10.1086/517840

Savolainen, R. (2012). Conceptualizing information need in context. *Information Research*, *17*(4).

Savolainen, R. (2014). Emotions as motivators for information seeking: A conceptual analysis. *Library & Information Science Research*, *36*(1), 59–65. https://doi.org/10.1016/j.lisr.2013.10.004

Savolainen, R. (2017). Information need as trigger and driver of information seeking: A conceptual analysis. *Aslib Journal of Information Management*, *69*(1), 2–21. https://doi.org/10.1108/AJIM-08-2016-0139

Schatzki, T. R. (2001). Practice mind-ed orders. In T. R. Schatzki, K. D. Knorr-Cetina, & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 50–63). Routledge. http://www5.unitn.it/Biblioteca/it/Web/LibriElettroniciDettaglio/72129

Schatzki, T. R. (2003). A new societist social ontology. *Philosophy of the Social Sciences*, *33*(2), 174–202.

Schatzki, T. R. (2012). A primer on practices. In *Practice-based education* (pp. 13–26). Springer.

Schatzki, T. R. (2017). Practices and learning. In P. Grootenboer, C. Edwards-Groves, & S. Choy (Eds.), *Practice theory perspectives on pedagogy and education: Praxis, diversity*

and contestation (pp. 23–43). Springer Singapore. https://doi.org/10.1007/978-981-10-3130-4

Schatzki, T. R. (2019). *Social change in a material world*. Routledge.

Scheidt, D., Carpenter, W., Fitzgerald, R., Kozma, C., Middleton, H., & Shields, K. (2016). Writing information literacy in first-year composition: A collaboration among faculty and librarians. In B. J. D'Angelo, S. Jamieson, B. Maid, & J. R. Walker (Eds.), *Information literacy: Research and collaboration across disciplines* (pp. 211–236). The WAC Clearinghouse.

Schoonenboom, J., & Johnson, R. B. (2017). How to Construct a Mixed Methods Research Design. *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie*, *69*(S2), 107–131. https://doi.org/10.1007/s11577-017-0454-1

Schreiber, T. (2014). Conceptualizing students' written assignments in the context of information literacy and Schatzki's practice theory. *Journal of Documentation*, *70*(3), 346–363. https://doi.org/10.1108/JD-01-2013-0002

Schreiber, T. (2017). Information seeking as idea-generating and idea-stabilising feature in entrepreneurship courses at university. *Information Research*, *22*(1).

Schwartz, D. L., Bransford, J. D., & Sears, D. (2005). Efficiency and innovation in transfer. *Transfer of learning from a modern multidisciplinary perspective*, *3*, 1–51.

Schwartz-Shea, P. (2020). "Member-checking": Not a panacea, sometimes a quagmire. *Qualitative and Multi-Method Research*, *17–18*(1). https://doi.org/10.5281/ZENODO.3946815

SCONUL. (2011). *The SCONUL Seven Pillars of Information Literacy Core Model For Higher Education*. Society of College, National and University Libraries. https://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf

Seaboyer, J., & Barnett, T. (2019). New perspectives on reading and writing across the disciplines. *Higher Education Research & Development*, *38*(1), 1–10. https://doi.org/10.1080/07294360.2019.1544111

Seamans, N. H. (2002). Student perceptions of information literacy: Insights for librarians. *Reference Services Review*, *30*(2), 112–123. https://doi.org/10.1108/00907320210428679

Sera, L., & McPherson, M. L. (2019). Effect of a study skills course on student self-assessment of learning skills and strategies. *Currents in Pharmacy Teaching and Learning*, *11*(7), 664–668. https://doi.org/10.1016/j.cptl.2019.03.004

Sheriff, R. E. (2000). Exposing silence as cultural censorship: A Brazilian case. *American Anthropologist*, *102*(1), 114–132.

Shi, L. (2004). Textual borrowing in second-language writing. *Written Communication*, *21*(2), 171–200. https://doi.org/10.1177/0741088303262846

Shi, L. (2010). Textual appropriation and citing behaviors of university undergraduates. *Applied Linguistics*, *31*(1), 1–24. https://doi.org/10.1093/applin/amn045

Shinners-Kennedy, D., & Fincher, S. A. (2013). Identifying threshold concepts: From dead end to a new direction. *Proceedings of the Ninth Annual International ACM Conference on International Computing Education Research*, 9–18.

Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. SAGE Publications.

Sin, S.-C. J. (2015). Demographic differences in international students' information source uses and everyday information seeking challenges. *The Journal of Academic Librarianship*, *41*(4), 466–474. https://doi.org/10.1016/j.acalib.2015.04.003

Skeffington, J. K. (2012). Enhancing transfer from first-year composition: A pedagogy of shorter essays. *Journal of Teaching Writing*, *27*(2), 27–45.

St Clair-Thompson, H., Graham, A., & Marsham, S. (2018). Exploring the reading practices of undergraduate students. *Education Inquiry*, *9*(3), 284–298. https://doi.org/10.1080/20004508.2017.1380487

Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed.). Sage Publications.

Stewart, K. N., & Basic, J. (2014). Information encountering and management in information literacy instruction of undergraduate, students. *International Journal of Information Management*, *34*(2), 74–79. https://doi.org/10.1016/j.ijinfomgt.2013.10.007

Stonebraker, I., Maybee, C., & Chapman, J. (2019). Undergraduate students' experiences of using information at the career fair: A phenomenographic study conducted by the libraries and career center. *The Journal of Academic Librarianship*, *45*(4), 358–367. https://doi.org/10.1016/j.acalib.2019.05.002

Sundin, O. (2008). Negotiations on information seeking expertise: A study of web-based tutorials for information literacy. *Journal of Documentation*, *64*(1), 24–44.

Sundin, O., & Johannisson, J. (2005). The instrumentality of information needs and relevance. In C. Crestani & I. Ruthven (Eds.), *Information context: nature, impact, and role* (pp. 107–118). Springer-Verlag.

Syn, S. Y., Sinn, D., & Kim, S. (2020). Impact of contexts, resource types and perceptions on information management within the personal domain among college students. *Aslib Journal of Information Management*, *72*(6), 909–927. https://doi.org/10.1108/AJIM-05-2020-0163

Taha-Thomure, H. (2001). *Academic freedom in Arab universities*. University of New Orleans.

Talja, S. (2010). Jean Lave's practice theory. In G. J. Leckie, L. M. Given, & J. Buschman (Eds.), *Critical theory for library and information science: Exploring the social from across the disciplines* (pp. 205–220). Bloomsbury Publishing.

Talja, S., & Hansen, P. (2006). Information sharing. In A. Spink & C. Cole (Eds.), *New directions in human information behavior* (pp. 113–134). Springer.

Talja, S., & Nyce, J. M. (2015). The problem with problematic situations: Differences between practices, tasks, and situations as units of analysis. *Library & Information Science Research*, *37*(1), 61–67.

Talja, S., Tuominen, K., & Savolainen, R. (2005). "Isms" in information science: Constructivism, collectivism and constructionism. *Journal of Documentation*, *61*(1), 79–101. https://doi.org/10.1108/00220410510578023

Taylor, R. S. (2015). Question-negotiation and information seeking in libraries. *College & Research Libraries*, *76*(3), 251–267. https://doi.org/10.5860/crl.76.3.251

Taylor, S. J., DeVault, M., & Bogdan, R. (2015). *Introduction to qualitative research methods: A guidebook and resource* (4th ed.). Wiley. http://public.eblib.com/choice/publicfullrecord.aspx?p=4038514

The WAC Clearinghouse. (n.d.). *What is Writing in the Disciplines?* Retrieved December 6, 2023, from https://wac.colostate.edu/repository/resources/teaching/intro/wid/

Townsend, L., Hofer, A. R., Hanick, S. L., & Brunetti, K. (2016). Identifying threshold concepts for information literacy: A Delphi study. *Communications in Information Literacy*, *10*(1), 23–49.

Trace, C. B. (2007). Information creation and the notion of membership. *Journal of Documentation*, *63*(1), 142–164. https://doi.org/10.1108/00220410710723920

Tuominen, K., Savolainen, R., & Talja, S. (2005). Information literacy as a sociotechnical practice. *The Library Quarterly*, *75*(3), 329–345. https://doi.org/10.1086/497311

United Arab Emirates. (2019, February 13). Human Dignity Trust. https://www.humandignitytrust.org./country-profile/united-arab-emirates/

Wang, L. (2007). Sociocultural learning theories and information literacy teaching activities in higher education. *Reference & User Services Quarterly*, *47*(2), 149–158.

Wang, L., Bruce, C., & Hughes, H. (2011). Sociocultural theories and their application in information literacy research and education. *Australian Academic & Research Libraries, 42*(4), 296–308. https://doi.org/10.1080/00048623.2011.10722242

Ward, J., & Winstanley, D. (2003). The absent presence: Negative space within discourse and the construction of minority sexual identity in the workplace. *Human Relations*, *56*(10), 1255–1280.

Warner, D., & Procaccino, J. D. (2004). Toward wellness: Women seeking health information. *Journal of the American Society for Information Science and Technology*, *55*(8), 709–730. https://doi.org/10.1002/asi.20016

Webber, S., & Johnston, B. (2005). Information literacy in the curriculum: Selected findings from a phenomenographic study of UK conceptions of, and pedagogy for, information literacy. In C. Rust (Ed.), *Improving student learning: Diversity and inclusively: Proceedings of the 11th ISL symposium, Birmingham, 6-8 September 2004* (pp. 212–224). Oxford Brookes University.

Weeks, K. W., Coben, D., O'Neill, D., Jones, A., Weeks, A., Brown, M., & Pontin, D. (2019). Developing and integrating nursing competence through authentic technology-enhanced clinical simulation education: Pedagogies for reconceptualising the theory-practice gap. *Nurse Education in Practice, 37*, 29–38. https://doi.org/10.1016/j.nepr.2019.04.010

Wenger, E. (2010). Communities of practice and social learning systems: The career of a concept. In C. Blackmore (Ed.), *Social learning systems and communities of practice* (pp. 179–198). Springer.

Westbrook, L. (2008). E-government support for people in crisis: An evaluation of police department website support for domestic violence survivors using "person-in-situation" information need analysis. *Library & Information Science Research*, *30*(1), 22–38. https://doi.org/10.1016/j.lisr.2007.07.004

White, R. W. (2014). Belief dynamics in Web search. *Journal of the Association for Information Science and Technology*, *65*(11), 2165–2178. https://doi.org/10.1002/asi.23128

Whitmire, E. (2004). The relationship between undergraduates' epistemological beliefs, reflective judgment, and their information-seeking behavior. *Information Processing & Management*, *40*(1), 97–111. https://doi.org/10.1016/S0306-4573(02)00099-7

Whittaker, S. (2011). Personal information management: From information consumption to curation. *Annual Review of Information Science and Technology*, *45*(1), 1.

Whittaker, S., & Hirschberg, J. (2001). The character, value, and management of personal paper archives. *ACM Transactions on Computer-Human Interaction (TOCHI)*, *8*(2), 150–170.

Whittaker, S., & Massey, C. (2020). Mood and personal information management: How we feel influences how we organize our information. *Personal and Ubiquitous Computing*, *24*(5), 695–707. https://doi.org/10.1007/s00779-020-01412-4

Williams, P., Leighton John, J., & Rowland, I. (2009). The personal curation of digital objects: A lifecycle approach. *Aslib Proceedings*, *61*(4), 340–363. https://doi.org/10.1108/00012530910973767

Wilson, T. D. (1994). Information needs and uses: Fifty years of progress. In B. C. Vickery (Ed.), *Fifty years of information progress: A Journal of Documentation review* (pp. 15–51).

Wilson, T. D. (2000). Human information behavior. *Informing Science*, *3*(2), 49–56.

Wilson, T. D. (2006). On user studies and information needs. *Journal of Documentation*, *62*(6), 658–670. https://doi.org/10.1108/00220410610714895

Winslow, R. R., Skripsky, S., & Kelly, S. L. (2016). Not just for citations: Assessing Zotero while reassessing research. In B. J. D'Angelo, S. Jamieson, B. Maid, & J. R. Walker (Eds.), *Information literacy: Research and collaboration across disciplines. Fort Collins, CO: WAC Clearinghouse and University Press of Colorado* (pp. 299–316).

Wu, J., Yang, H. H., & He, X. (2012). A preliminary study on developing computer games for information literacy education. *Proceedings of the 4th International Conference on Internet Multimedia Computing and Service*, 223–226.

Zald, A. E., & Millet, M. (2012). Hitching your wagon to institutional goals. *Transforming Information Literacy Programs: Intersecting Frontiers of Self, Library Culture, and Campus Community*, *64*, 119.

Zayed University, Office of Institutional Research. (n.d.). *Fact Book 2017-2018*. Retrieved August 6, 2018, from https://www.zu.ac.ae/main/en/open_data.aspx