

Weston, H. (2021), *The cultural dimensions of information use: A focus on the experience of Emirati students in Higher Education*

The cultural dimensions of information use: A focus on the experience of Emirati students in Higher Education

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Abstract

Upon transitioning to higher education, Emirati students bring their cultural values and sentiments into the teaching and learning environment. Using the Explanatory Sequential component of mixed methods approach, this research focused on Emirati students enrolled in higher education. The exploration of national culture revealed insights into how information use is experienced. This research provides empirical data contributing to the discussion of how culture intersects with information use in higher education. New contributions underpin the relationship between culture and information use. They also support the design and implementation of pedagogical approaches that recognize cultural diversity of learners.

Keywords: culture, information use, Hofstede

Introduction

The information use behaviour of Emirati students at the tertiary institution level is a constant source of curiosity for western-trained information professionals and educators. Interesting mannerisms based upon accessing information, synthesizing information and referencing surface regularly. Having observed Emirati students in a college setting for seven years, it became apparent to me that there are some unique traits that are observable within an information seeking context that may be attributed to national culture. As a librarian, I worked closely with faculty and students in the role of Information Literacy coordinator and eventually supervisor of three federal college libraries. The way students used information became a point of great interest to me and caused me to consider the relationship between information use and culture.

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One easily observable behaviour is the tendency for students to head explicitly approach the teacher or librarian for direction, without independently problem solving the research question first. On the surface this may seem like students are lazy or unimaginative. However, in the Emirati culture, teachers signify authority and it is considered a sign of respect to confer first and be guided by your teacher. However, observations made by educators and library staff are simply points of discussion and without the empirical data to support them, there is no data on which to focus understanding of how to better support Emirati students engaging with information. An overview of the contextual setting will help explain the complexities of studying information use through the lens of culture and why mixed methods was an obvious choice to conduct empirical research of the phenomenon of culture and information use.

The Culture Context

The research on culture and its impact is diverse and abounding. When dealing with cultural research, the most challenging aspect is “defining culture itself” (Gauvain et al., 2011, p.126). In fact, Jones (2007) suggests that there are “164 working definitions for culture” (p.2). When trying to obtain a working definition of culture, researchers may end up excluding many elements of culture (Gauvain et al., 2011) however, it is important to generate a definition that works within the field of research involving aspects of information literacy development. Furthermore, when considering the possibilities of cultural definitions and frameworks, it is important to settle on a model that will allow the best possible exploration of Emirati national culture in the context of information use.

After reviewing a variety of cultural models, Hofstede’s framework of Cultural Dimensions and his definition of culture was considered for this study. This model was followed bearing in mind that the focus of this research was first and foremost, information use of Emirati college students. Hofstede’s model utilizes national culture to explore values and dimensions, and literature reviewed on the national culture suggests the UAE is a nation which has a strong sense of national identity due to lack of, or resistance to, exposure factors that influence change (Burden-Leahy, 2009). The strong monarchy, homogenous national religion, national education system for Emiratis only and social media expectations to express pride and love for the UAE, all contribute to create an impenetrable nucleus of national identity (Raven & O’Donell, 2010). This, combined with the informed discussion Hofstede provides around the cultural dimensions and learning in the context of education (Hofstede et al., 2010), provides the rationale to use Hofstede’s model. It is important to note that a relational perspective to information use is the area that should remain in the foreground of this research; and culture is to be explored in terms of the relationship that may exist with information use. For example, the findings of Heinström (2010) and Steinwachs (1999) support that external phenomena can influence the way information is used or experienced, thus encouraging the exploration of culture in this research.

While culture has been studied in the Emirati ESL context, there is a significant gap in the research which would reveal whether an external element such as culture would influence student information use and ultimately the information literacy experience. When considering methodology to explore this research, it became evident that using a mixed methods approach would add value to understanding how Emirati higher education students experience

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information via a relational exploration. The ability to use both qualitative and quantitative approaches is aligned to the belief that there are “singular and multiple realities that open to empirical inquiry” which are positioned “toward solving practical problems in the ‘real world’” (Feilzer, 2010, p.8). Mixed methods research allows the researcher to shift between philosophical frameworks of quantitative and qualitative research, in an attempt to “‘know’ the social world” (Cresswell & Plano Clark, 2011, p.45). By adopting a “pluralistic stance” in being allowed to gather all dimensions of data, mixed methods researchers can effectively answer their research question (Cresswell & Plano Clark, 2011). This branch of research would contribute to discovering a way forward to use these findings in order to support Emirati students to use information to learn comprehensively, incorporating all the critical elements of information use that are evident in higher education contexts. The cultural context informed Phase one of the research and data was gathered and analysed quantitatively. Phase two focused on information use and was gathered and analysed qualitatively.

The information use context

There is an expectation on UAE higher education institutes to enrol national students so that they can obtain degrees in order to fill managerial positions. Simultaneously, the institutes attempt to preserve national culture (Dada, 2011, p.206). This process is called Emiratisation. While this is a cultural consideration, Emiratisation also provides the context as to the growth of enrolments in order to obtain a degree to support a managerial career. Also due to the growth of education in the UAE over the past fifty years, it is likely that the broad range of Emirati students have not been exposed to and supported by the same constructivist, socio-cultural pedagogy in the methodical way their western counterparts have (Dahl, 2010; Sowa & De La Vega, 2009). Information literacy skills and higher order critical thinking are curriculum bound, tied to skills (Arab Knowledge Report 2010; 2014) and little application is given to independent knowledge construction (Dada, 2011, p.207). Whilst the UAE higher education system has embraced the western approaches of constructivism and socioculturalism in their pedagogical frameworks, many institutions bought franchises of flourishing overseas universities and colleges.

Upon facing information use situations in the higher education context of the UAE, faculty and information professionals tend to approach information literacy as a set of skills to be learned and demonstrated in a certain time frame (competency), rather than supporting the relationship between the user and the information which provides an experience (relational) (Guntun et al., 2016). This acknowledges an approach due to existing ESL teaching frameworks, which also rely on a competency-based method of teaching and learning. This also supports the sociocultural approach more readily adopted by university and college educators in the UAE therefore highlighting the gap in the literature, which considers a relational approach to information use in higher education in the UAE. The phenomenon of information use in the UAE context formed Phase two of the mixed methods approach.

Aim of the Study

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This study addressed the limited research about Emiratis in higher education (Johnston, Partridge & Hughes, 2014; Martin, 2013; Van den Hoven, 2014) and in particular the gap in the research considering the relevance of culture in using information. The aim of this research was to explore the relationship between culture and information use. The guiding research question for this study was, “What are the cultural dimensions of information use among postgraduate Emirati students?” In order to explore this in detail, two sub questions were used to guide the study and research phases. The first sub question is, “What are the cultural dimensions of Emirati postgraduate students?” and this guided Phase One quantitative section of the research. The second sub question, “What is the relationship between these cultural dimensions and the students’ information use?” steered Phase two qualitative stage of the research.

Theoretical Framework for this study

The study undertaken, adopted the theoretical framework of Pragmatism. This worldview is associated with mixed methods research. Pragmatism utilises both quantitative and qualitative research methods but stands alone as a philosophy. It accommodates the belief that there is more than one system of philosophy and that researchers have a freedom of choice in their perspectives. Pragmatism is concerned with the problem or question to be researched and producing knowledge which best represents reality (Creswell, 2009; Feilzer, 2010).

Pragmatists believe that reality can be both singular and multiple, or “truth is what works at the time”, therefore grounding the research in social, historical or political context (Creswell, 2009). Ormerod (2006) clarifies that this philosophy does not accommodate an “anything goes” belief. Even though pragmatists are more focussed on the answer as opposed to the method, there is no excuse for “sloppy” research and this philosophy should never be “confused with expedient” research (Feilzer, 2010, p.14).

Therefore more than one system of philosophy may be used and pragmatic researchers have a freedom of choice in their perspectives. “Pragmatists look[ed] not at the origins of the idea but instead to its destination” (Tashakkori and Teddlie, 2003, p.75). Ultimately a paradigm should be appropriate for the purpose of the research. In the case of this research, the pragmatic approach was used because the desire was to produce socially useful knowledge. There was no way of knowing if the results of this research would show interdependent relationships, although pragmatism allows for a “commitment to uncertainty” and that any “knowledge produced is relative and not absolute” (Feilzer, 2010, p.14).

Mixed methods approach

A mixed methods approach was a choice that would address the complexities of culture and information use in this research. The classic definition of mixed methods is “the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process.” (Cresswell et al., 2003, p. 209) It is increasingly used

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amongst Education (Martin 2013; Igo et al., 2008), Health Science (Nicholson et al., 2011; Mayo et al., 2011) and Behavioral Sciences disciplines.

The published outcomes of this methodology are on the increase, with a focus on exploring how qualitative and quantitative research combine to transform data into original and innovative holistic research. Even specific mono methods, including Grounded Theory and Phenomenography are incorporated into the mixed method approach. Grounded Theory and Phenomenography are used extensively to explore information use, but mixed methods as an approach to exploring Information Literacy, research or information use is still marginal compared to other disciplines. Researchers use it because of its ability to triangulate data, produce rich data and guide the researcher. This is the case for this research on culture and information use.

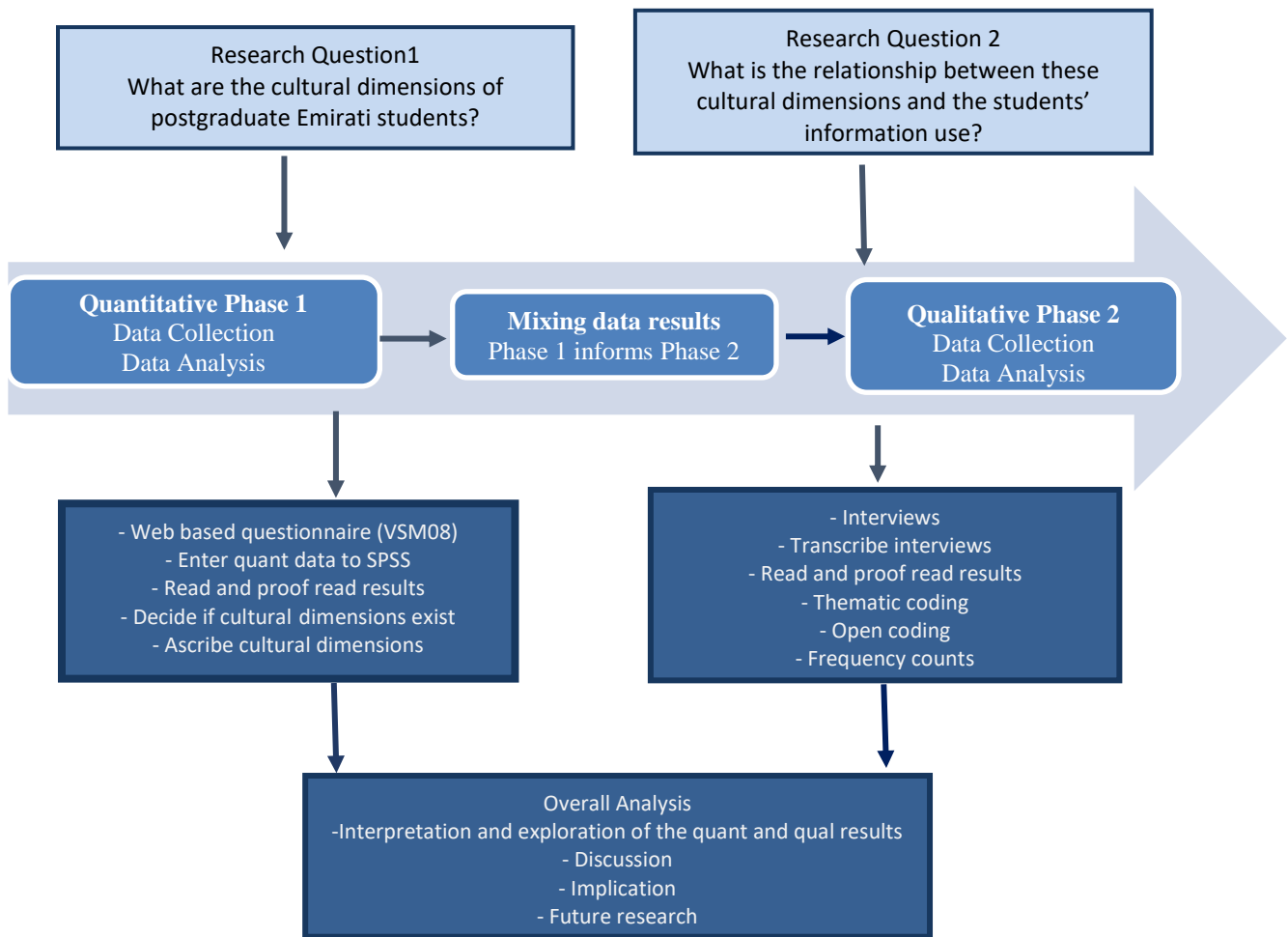
The decision to use the mixed methods approach was because of the complex nature of the overarching question – “What are the cultural dimensions of information use among post-graduate Emirati students?” Exploration of Emirati students’ information use experience whilst taking into account culture, is complex because it combines the two phenomena of information use and culture. A mix of quantitative and qualitative approaches better addressed the research question. This is because it allows this research to draw upon the nuances of both quantitative and qualitative approaches. These in combination enrich the study by yielding a greater and diverse range of data. Collectively these approaches under the umbrella of a mixed method study will strengthen the study (Cresswell et al., 2003; Greene & Caracelli, 1997). More specifically, when addressing the main research question, the quantitative approach allows the exploration of the ‘what’, while the qualitative allows exploration of the ‘how’ in terms of the students’ information use experience. This study aimed to explore the cultural dimensions evident in thinking about and using information.

The design used for this mixed methods research was Explanatory Sequential, meaning that the design has a two-phased approach, which began quantitatively, and those results were followed up with qualitative research. Traditionally this design is beneficial when quantitative data needs further explanation, or when the trends and relationships in the aforementioned data need explaining. However, the design of this Explanatory Sequential approach takes on a slight variation of the mainstream method (Figure 1). Although the quantitative phase precedes the qualitative research, priority is placed on the second qualitative phase. Cresswell and Plano Clark (2011) refer to this as participant selection variant.

In the first quantitative phase of the research set out to answer the first sub question which was, “What are the cultural dimensions of Emirati post graduate students?” Geerte Hofstede’s 2008 Value Survey Module (2008) was used to ascertain a cultural profile for the sample group. The participants combined results determined whether this group scored higher or lower on the dimensions integer scale developed by Hofstede. The results lead to the exploration of these students as information users through the interviews conducted for the second qualitative phase. Phase two was guided by a second sub question, “What is the relationship between these cultural dimensions and the students’ information use?” The interview questions were developed using a combination of data results and Hofstede’s research findings

as to how the dimensions manifest in learners or generally within education. Finally, the Phase one and two data was mixed or further integrated using thematic analysis to gain an understanding of how Emirati students' in Higher Education experience information use. This eventually led to establishing *cultural dimensions of information use*.

Figure 1. Visual model for Explanatory Sequential Mixed Methods design



Participants and phase one – questionnaire

The participants for the Phase one data collection were Emiratis who were currently completing or recently completed their master's degree. These students were chosen particularly because they were known to be actively involved in research. As the Higher Colleges of Technology is an applied research college and students are English as Second Language learners, the level at which bachelor's students were participating in independent research or information use was not always consistent. Therefore the master's cohort were considered the more stable group to collect data from. From the 297 possible responses, 100 students participated returning complete survey responses, providing a response rate of 33.67%.

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95% were studying part time and employed in full time work. The programs of study were chosen largely support their current career paths. The students have followed on from Diploma level or Bachelor level programs from the same institution, although not necessarily from the same Emirate.

Cultural Dimensions of Emirati Higher Education students

Looking at the first phase of data collection, the rationale for using Hofstede's VSM08 (Hofstede et al., 2008) aligns with the research paradigm which is Pragmatism, where there can be multiple truths contextualized in social, political and historical frameworks (Feilzer, 2010). There were many instruments that could have been utilised, but this quantitative instrument was chosen because of the specific cultural traits it explores and defines, and because of its reliability and validity.

The VSM08 survey instrument was administered via Google Forms in a questionnaire, which was in Likert scale format. The questionnaire contained the specific sets of questions which measured national culture. At the time of administering the online format of this questionnaire, VSM08 was the latest version of the survey available. Seven cultural dimensions are assessed via 28 questions. The dimensions are: Power vs. Distance, Individualism vs. Collectivism, Masculinity vs. Feminism, Uncertainty Avoidance, Long Term Orientation vs. Short Term Orientation, Indulgence vs. Restraint and Monumentalism vs. Self-Effacement. Each set of questions uses a five-point Likert scale to measure the participant response. The questions are grouped in sets with participants being asked to respond to levels of importance for the first fourteen questions. They were then asked to consider the levels of frequency in the next nine sets – with one question focusing on level of importance included in that grouping. The final set of five questions asks respondents to agree or disagree.

Analysis of the questionnaire data involved following the formula used to calculate each of the dimensions detailed in the Values Survey Manual (Hofstede et al., 2008) however it is useful to consider the evolution of the instrument and its calculations, most of which is explained in *Culture's Consequences* (2001). Originally, Hofstede had set specific calculations which were an essential part of the initial IBM international survey containing 126 questions - 60 core, 66 recommended and local managers were also able to add their own questions if needed (Hofstede, 2001, p.45).

By 1982, VSM82 contained 47 specified questions, as well as six demographic questions (Hofstede, 2001, pp.493-494). By the time VSM94 was developed in 1994, only 20 content questions remained as well as the usual 6 demographics. At this stage the fifth dimension Long Term Orientation vs Short Term Orientation was added. An index formula for calculating the five dimensions was developed, whereby the mean score of each question (question numbers appear in brackets) is calculated and multiplied by a set of coefficients and constants. The VSM08 questions are essentially the same as VSM94 but two more dimensions were incorporated, extending the questionnaire. The added dimensions were Individualism vs. Restraint and Monumentalism vs. Self-Effacement. At this time, Hofstede altered his prescribed formula calculations to allow researchers to manipulate the last constant in the equation so

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that the final index numbers fell into the zero to 100 ranges. This formula is designed to compare correlations between countries and as the VSM is a widely used instrument, previously there were often great differences in scores derived for countries. Hofstede has set the coefficients in the VSM08 to correct for this and try to make the contribution of each question to the index as equal as possible (Hofstede et al., 2010, p32-33). Therefore, the coefficients remain as Hofstede prescribes in the formula. However, depending on the nature of the samples, the constant “C” can be chosen to shift the “values between 0 and 100” (Hofstede et al., 2008, p. 7). An index formula for calculating the five dimensions was developed, whereby the mean score of each question (question numbers appear in brackets) is calculated and multiplied by a set of coefficients and constants.

The dimensions and calculations as outlined in the VSM08 are as follows (Hofstede et al., 2008):

Power vs Distance -

The extent to which people obediently accept a hierarchical distribution of power.

$$PDI = 35(m07 - m02) + 25(m23 - m26) + C(pd)$$

In which m07 is the mean score for question 7 and m02 is the mean score for question 2, etc; and C (pd) is the constant for power distance, etc.

Individualism vs Collectivism –

This refers to people’s need to be dependent on a “tightly-knit framework in society”, for example family and extensions of that family (collectivism) over a preference to be very responsible for one’s individual needs including immediate family (individualism).

$$IDV = 35(m04 - m01) + 35(m09 - m06) + C(ic)$$

Masculine vs Feminine –

The Masculine side of this dimension represents a preference for achievement, heroism, assertiveness, material rewards for success and is more competitive. Its opposite, femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life (Hofstede et al., 2010).

$$MAS = 35(m05 - m03) + 35(m08 - m10) + C(mf)$$

Uncertainty Avoidance –

The degree to which people in a country prefer structure versus unstructured situations, expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity (Hofstede et al., 2010).

$$UAI = 40(m20 - m16) + 25(m24 - m27) + C(ua)$$

Long Term Orientation vs Short Term Orientation –

Societies who score low on this dimension, prefer to uphold tradition and cultural practices and are suspicious of change. Those with a culture that scores high are forward planning, encouraging saving and advances in education and science.

$$LTO = 40(m18 - m15) + 25(m28 - m25) + C(ls)$$

Indulgence vs Restraint Indulgence –

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“Indulgence” stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun (Hofstede, Hofstede & Minkov 2010). “Restraint” stands for a society that suppresses gratification of needs and regulates it by means of strict social norms (Hofstede et al., 2010).

$$IVR = 35(m_{12} - m_{11}) + 40(m_{19} - m_{17}) + C(ir)$$

Monumentalism –

“Monumentalism” positions people in society to be, metaphorically speaking, like monuments: proud and unchangeable. Its opposite pole, Self-Effacement, positions people to be humble and flexible (Hofstede et al., 2010).

$$MON = 35(m_{14} - m_{13}) + 25(m_{22} - m_{21}) + C(mo)$$

The data gathered here informed the next phase of qualitative study and provided rich data about the national culture of these UAE Masters Students. The data retrieved was extremely pertinent to devising the qualitative interview questions. Overall, the results indicated the two dimensions, Power Distance and Monumentalism indicate a more authoritative, rules based, nationalistic culture; whereas the remaining dimensions were a little more egalitarian in their outlook.

Participants and phase 2 – interviews

The second instrument used was a purpose-developed interview and designed to tap into the phenomenon of culture and the information use experience. This was a challenging task as so many combinations of questions could have been derived from the Phase one results. However, the questions were generated from the findings on cultural dimensions and aligned with questions directly associated with information use.

Hofstede’s guidelines were used regarding the characteristics you would expect to see in a student profiling as high in all the cultural dimensions. This group scored low on the index for Uncertainty Avoidance, therefore the guidelines for low Uncertainty Avoidance characteristics were consulted. The actual scores for this groups’ cultural dimensions are detailed in the Findings section, p.18. These guidelines were then used to create interview questions related to using information. This allowed the researcher to tap into the experiences of the Emirati participants as they used and engaged with information. The same pool of participants from Phase one were approached for Phase two interviews, although some had graduated and moved on but were replaced with fresh cohorts who may not have been approached to complete the survey. In total, twenty participants were interviewed. Most of the participants were female with a ratio of four females to one male. This was not surprising given the cultural restrictions of male and female interaction.

In devising the questions, it was important to keep the overall concept of each dimension at the core, as well as to hone in to some of the applicable characteristics. Each dimension had many relevant characteristics; however, in an effort to keep the interview sessions manageable, not all aspects could be addressed. For example, Hofstede lists the following descriptors for the masculine dimension within the “School and Consumerism” sector:

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- Best student is the norm; praise for excellent students
- Competition in class; trying to excel
- Failing in school is a disaster
- More nonfiction is read
- The internet is used for fact gathering.

(Hofstede et al., 2010).

The interview questions generated from these descriptors tapped into competitiveness, the need to produce the best research and non-fiction and internet use. The questions are as follows:

- What sort of criteria determine whether you have found the best information?
- How long are you prepared to search for information?
- When you are not working on your formal study, what other types of information do you like to find?

Prior to the questions exploring Hofstede’s dimensions and information use, it was important to build a set of more general questions. These questions set the scene and provide a context. The scene setting questions settled the participant in to the interview situation. This was effective as the participant focused on their research topics and were very comfortable explaining them to the researcher. The rest of the discussion flowed relatively straightforwardly into the dimension-based questions.

Thematic analysis

The process of integrating the Phase one and Phase two data within this mixed methods research utilized thematic analysis. Formal thematic analysis uncovered the trends and relationships from the emerging and consequently integrated the data. The work of Braun and Clarke (2006) was instrumental in guiding this phase of the research analysis because of their commitment to using thematic analysis in a measured and rigorous manner.

The transcripts were coded using inductive and deductive analysis. The inductive approach is data driven (Braun & Clarke, 2009) and encourages the researcher to remain open minded to themes surrounding participants information use experiences. It is an interpretative task but at the same time requires the researcher to engage in processes that will ensure understanding. These processes included meetings with supervisors, checking understanding with participants, transcribing, keeping memos, reading and coding data, establishing themes (Ezzy, 2013). The deductive approach allows the researcher to identify already established themes; in this case, the cultural dimensions identified in Phase 1 data collection surface in the interview discussions. Table 1 below shows the deductive coding process.

Table 1. Deductive Coding Process

Interview Transcript
Interviewer: Ok – thinking about some of the assignments you’ve had to do can you tell me a little bit about how you go finding information?

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Participant: First of all as we learn things - we have to learn all information. (1) First of all ask our Doctor what is the deadline? (2) After that we collect all our data from many places (3) for example from library as we have many electronic books we don't have so many books as hard copy, and from website maybe newspaper, magazines, some of the direct website for example the agricultural company and from that I can see from the company their items, content, what I need. Then also from Google Scholar. (4)

Deductive Coding

(1)	Information is also background support material ensuring deadlines
(2)	Power Distance – teacher sets initiatives
(3)	Information described as data
(4)	Information is found in multiple places, but usually online
(5)	Masculine – Internet used for fact gathering

Whilst transcribing the interviews, I kept detailed closely scrutinized memos, examined by supervisors to ensure analysis truly reflected the data in a reliable and valid way. This was true for coding and thematic analysis as well. To ensure rigor and validation, codes and themes were analysed at each iteration and coding memos were also created. Decisions to include or discard were only actioned after sound discussion with the supervisors associated with this research. Both quantitative and qualitative analysis techniques were used sequentially after data collection, but interpretations were also paralleled and integrated at various points of the analysis, for example when the interview questions were developed, resulting in the final merging of data for interpretation. When it comes to the discussion of mixed methods validity, it is not as simple as stating that the researcher validates the quantitative part of the study using measures appropriate to that phase and then applies appropriate measures to validate the qualitative study. Whilst this essentially does occur, the key objective and a strong argument for using mixed methods is that it uses the strengths of both approaches. If there are weaknesses in one study, the other approach should more than compensate (Onwuegbuzie & Johnson, 2006). This is a commonly held principle amongst mixed methods researchers and is used most constantly to justify this research approach. Aspects of this will be discussed in the Findings.

Findings

In this mixed methods study, two sub research questions were employed in order to answer the main research question, “What are the cultural dimensions of information use among post graduate Emirati students?” The first sub research question was, “What are the cultural dimensions of Emirati post graduate students?” and the findings of this phase were the assigning of cultural dimensions according to Geert Hofstede’s framework. The quantitative Phase one of this research used the 2008 version of the Values Survey Module developed by Hofstede. This instrument determined the scores of these students within the dimensions. The following scores were revealed:

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- Power vs. Distance - The results scored by this sample group was 95.2%. This means that according to these results the sample group is a high on the Power vs. Distance index, which is what Hofstede concurs in his results from collective Arab nations (Hofstede et al., 2010).
- Individualism vs. Collectivism - The sample group scored 72.10%, placing them higher on the index, indicating an Individualism ranking. This is completely different to Hofstede's findings where as his results from collective Arab nations determined the UAE to be Collectivist (Hofstede et al., 2010).
- Masculinity vs. Feminine - In the case of this sample group, the index score was 75.98, placing the students higher on the index, indicating a Masculine ranking. The research results may be indicative of the sample group being selected from a particular micro culture. This is true for the rest of the following results.
- Uncertainty Avoidance - In the case of this sample group, the index score was 18.15, placing the UAE higher on the index, indicating a weak Uncertainty Avoidance ranking. Hofstede's original findings in his results from collective Arab nations determined the UAE to be ranked at 68 on the index that leans slightly more towards a higher Uncertainty-Avoidance or anxiousness level (Hofstede et al., 2010).
- Long Term Orientation vs. Short Term Orientation - In the case of this sample group, the index score was 77.78, placing the UAE higher on the index, indicating Long Term Orientation. Hofstede's original findings in his results from collective Arab nations determined the UAE to be ranked at 23 on the index, which leans slightly more towards Short Term Orientation (Hofstede et al., 2010).
- Indulgence vs. Restraint - In the case of this sample group, the index score was 100.32, placing the sample group higher on the index, indicating an Indulgence culture. Hofstede's original findings in his results from collective Arab nations determined the UAE to be ranked at 34 on the index, which leans more towards Restraint (Clearly Cultural, 2102).
- Monumentalism vs. Self-Effacement - In the case of this sample group, the index score was 74.24, placing them higher on the index towards Monumentalism. Hofstede has no scores for Monumentalism in Arab nations in his published dimensions. Scoring highly on this index infers the unchangeable values and beliefs of a nation. Additionally, these nations very rigid view of their identity and "cultural flexibility" is seen as a betrayal of "national interests" (Raven, 2010, p.19).

This data was used to explore components of this cohort's information use experience in light of these cultural values and sentiments in Phase 2. Having understood how this cohort presented culturally, the Phase 2 sub research questioned went on to determine the cultural characteristics of these Emirati students' information use. The second sub question is, "What is the relationship between these cultural dimensions and the students' information use?" Clear intersections around cultural values, sentiments and information use are evident for this Emirati Masters cohort. These are described by the seven themes. The data revealed that when this group of students used information, the following *cultural dimensions of information use* were noted:

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Information personified – This involves the information users accessing information via people. In the case of the Emirati students, there was a reluctance to take control of their information use - especially in the early stages of their degree. As a result, they would tend to rely on their teachers or supervisors to make decisions on their behalf regarding their information use. This same characteristic showed that students tended to approach people with industry experience as they are seen to be more authentic and reliable due to their corporation experience and more available than written academic information sources.

Information for personal needs – This encompassed the sense that students were fulfilling personal information needs when using information. Information use should have a clear purpose when applied to learning. This was evidenced in the data by connecting with key information online using information to fill personal information gaps and equating value with information.

Information for personal development – This reflects assertive and focused information users. The data showed the students preferred to use non-fiction or factual information for both study and personal use. The students indicated they preferred to access this information online.

Ambiguous information (acceptable in spoken context) – This identified how students preferred to draw clear and well-formed conclusions when working with written information. Open-ended situations within written information frustrated and confused them. However, in oral discussions, the situation was different. Most students were quite comfortable if open ended or even unclear, as in an oral situation they welcome differences of opinion.

Using information purposefully – This indicated that the students showed grit, determination and general staying power when using information to learn. This cohort uses information in their second language, which is English. Students recounted that it was difficult to work with at times especially when using information to produce their dissertations as they were dealing with processing information, using dictionaries to understand terminology and finally creating a written work to reflect their learning. In addition, there were frustrations with not being able to find published academic information in their field of study. The participants detailed the challenges associated with using information to learn. However, those who pushed through these challenges applying staying power and determination found the experience very rewarding. They expressed that they could see the long-term benefits of becoming confident and independent researchers.

Enjoyment in the flow of information use – Students expressed their enjoyment in using information in two main ways: the ease with which they used information, and when they discovered new information. As students became more confident in their information use towards the end of their master's degree, they found ways to use information more effectively easing the challenges of using information. In addition, students expressed a deep enjoyment in the discovery of new information, which increased their learning. An added advantage for this cohort was the increase in leisure time resulting in the ability to use information with ease.

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Information contributors – This characterized these students as extremely proud of their nation and culture. The students looked to their leaders as inspirational sources of information as they followed their information, they shared on Snap Chat. Simultaneously, they expressed disappointment and frustration with the lack of published academic resources and the limited accessibility to government or company information often needed to reference the dissertation work they produced. This reinforced the desire to contribute to the knowledge economy of the UAE. They communicated the desire to publish their dissertation and project work as well as share their knowledge at a global level.

Mixed methods afford a “fuller picture” (Erzberger & Kelle, 2003, p. 469) of the intended research, combining the best possible outcomes of quantitative and qualitative methods. Owing to using mixed methods, cultural values and sentiments were examined in more detail and small inconsistencies were noted between the Uncertainty Avoidance scores of Phase one data and the *Ambiguous Information (acceptable in spoken context)* cultural dimension of information use from Phase two data. The interview data gathered in Phase two did not correspond overwhelmingly with the data in Phase one. In Phase one, the indication was that the sample group scored low on Hofstede’s index, indicating a lack of anxiety in new or unknown situations and the tendency to be easier going and laid back. However, in Phase two, many comments appeared to reflect the need for certainty or closure in information use scenarios, rather than an acceptance of ambiguous information indicating a tendency towards apprehension and frustration in situations, which are new or unknown.

Therefore, experiences around information use related to the characteristic of *Ambiguous information (acceptable in spoken context)* as reflected in the Uncertainty Avoidance dimension suggest a slight disagreement with Phase one results. Whilst students did not appear to experience anxiety over inconclusive or ambiguous information, they certainly expressed frustration or displeasure in instances when information did not draw clear conclusions for them to access. Open ended and more flexible discussion around information was welcomed. In situations where information was obtained orally, these students were definitely relaxed and welcomed the exchange of different ideas and opinions. Even though, the questions developed for Phase two were developed with the knowledge gained from Phase one data collection, Phase two data to produced distinct, observable and meaningful findings. The mixed methods design of this research revealed that although this cohort presented as low on the Uncertainty Avoidance dimension because of the questionnaire delivered in Phase one; in the Phase two interviews it was discovered that these results might not have been conclusive. Whilst these students welcomed the exchange of ideas and respected different opinions in oral contexts, the research suggested that when it came to their written information, these students liked to form very clear conclusions. Open-ended information situations made them feel confused; they preferred to read information that contained clear findings, which in turn guided their research. An ongoing awareness that Emiratis are an oral culture and contextually these higher education students were more comfortable in spoken discussions where intertextual clues are more clearly available than in written textual information should be noted. At any time, I could check and compare the sets of data findings for clarification if there were any concerns but either most importantly the findings combined or *mixed* to produce resilient, focused and multi-layered results because the two types of data collection were employed.

Limitations

As with all research, there are contributions and there most certainly will be limitations. In the case of this research the limitations were:

Limitation 1: Working with students using their second language. Although English is the language of instruction and communication in tertiary institutions, there was always the potential for confusion or misunderstanding from both parties. This concern was more heightened at the survey stage (Phase 1) of the research where students could not ask clarification questions. The pilot study was crucial in mitigating any potential misunderstandings. The participants were carefully questioned around whether this survey should be delivered in Arabic or English. The participants were very clear that they found the survey in English clear to follow.

Limitation 2: During the interviews, I was careful to check for understanding and ensured that the participant understood that it was perfectly acceptable to ask questions. Again, I was careful to ensure that all of the participants felt comfortable enough so that at any stage they could ask for the question to be rephrased. There are instances where it was clear intentions of the questions were not understood and in those cases, the responses were set to the side of the data and not considered overall.

Limitation 3: Using a small cross section of society to explore information use through the lens of national culture. Hofstede's model was used as a data collection and analysis framework. Whilst the study did not intend to study national culture, the Master cohort (297 students) was a very small section of the overall Emirati higher education students. They were selected because I considered them to be using information in sustainable periods.

Limitation 4: Three of the cultural dimensions in Phase one findings scored around the 50th percentile range on their indexes. I noted that Individualism vs. Collectivism scored 52, Long Term vs. Short Term scored 57 and Monumentalism vs. Self-Effacement scored 54. Therefore, a limitation was knowing whether to assign a high, low or medium descriptor to each of these. It also followed that there was a choice as to which characteristics to use to describe how the student cohort profiled. Hofstede has described countries that have received similar rankings as "upper-medium and medium" (Hofstede et al., 2010, p. 80) and gone on to discuss the characteristics associated with scoring on the high end of the index. I chose to err towards the high-end descriptors but remained aware that other lower end characteristics might also be present.

Discussion

Mixed methods is definitely a more time consuming approach compared to undertaking one round of data collection. However, rich and robust data was evident because of using this approach. This explanatory sequential approach not only provided a holistic picture of national cultural sentiments and national values, but also how they form part of the relationship that exists between the individual and the information those individuals are engaging with. Ground-

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breaking work that has gone on before regarding the information use experience, research and Information Literacy using many approaches to research. However, in this case, the approach of mixed methods is proving to be a very successful vehicle with which to explore information use through a cultural lens.

Added to this, the suitability of a pragmatic position allowed the production of socially useful knowledge whilst taking into account the social, historical or political context of the phenomenon being explored. It was previously outlined that Pragmatism is best suited to this research because it enables the connection of technical concerns and epistemological concerns used to understand and generate knowledge. Furthermore, it argues “for a properly integrated methodology for the social sciences” – such as information science (Morgan, 2007, p.73).

The ways researchers can seek to explore where information literacy and culture intersect amongst those who use information in academic environments are various. Mixed methods allowed a mature analysis of culture and information use experience within this growing population of Emirati researchers. More widely, in the context of globalization and international education, the findings contribute to cross cultural understandings. As educators seek out teaching opportunities overseas, and particularly the UAE, an awareness of the information use amongst postgraduate Emirati students will better prepare teachers to support these students in using information to learn. Educators who work with Emirati students in these situations may understand their information use more meaningfully by taking into account the cultural dimensions of these students’ information use.

The study revealed that cultural dimensions of information use exist within the context of the UAE and internationally. When the challenges of using information such as perceived limited resources, using a second language to use information and knowing how to take control of your information use are brought to light - ethical, creative and critical use of information will become a key part of the information literacy experience. Similarly, the experiences that encourage learning when using information, such as - encountering new information, enjoying the experiences around being a confident researcher and contributing to a national resource band of information, all contribute to ethical, critical and creative information use.

The research has made a significant contribution to new understandings about Emirati students’ use of information to learn. This is partly due to using a mixed methods approach. This framework allowed culture and information use to be fully explored but also due to the thirteen findings which emerged illuminating the way information use is experienced by higher education Emirati students. These findings pave the way for further work to be explored firstly in culture and information use within nations which have united cultures similar to the UAE’s situation; and secondly around cultural influences on information literacy in other less similar contexts.

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