

***Developing Qualitative Research Methodology:  
Using Focus Groups as a Single Research Method in a Student Motivation Study***

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**Abstract**

This paper presents the process that was used to design a research method for a study using focus groups as the main data collection method to investigate male students' experience of higher education in the United Arab Emirates (UAE). The methodology design process covered research paradigm, ontology, epistemology, and research characteristics and considerations. The alignment between research question and research method was then explored followed by the justification for using focus groups as the only method to conduct the study. The intention was to choose a research method that will dictate collecting and analyzing data from a representative sample of the student population to reach an understanding of the elements that impact motivation by the students themselves. Student motivation, whether it is intrinsic or extrinsic, is a complex construct involving multiple theories such as behavioral, humanistic, and cognitive theories implying that there are multiple factors that impact student motivation. The intent was to understand how students' college and non-college experiences affect their decisions to continue or drop out of college. In this regard, focus groups was used in this study to explore participants' feelings and beliefs that shape their behavior and perceptions through their discussions and recollections of their study experience. Besides obtaining thorough clarification of the different accounts of participants to the same issues, focus group helped the researcher obtain valuable insights opinions, views, emotions, and impressions of the participant students using their own expressions and words.

Keywords: Paradigm, Ontology, Epistemology, Focus Groups, Methodology, Student Motivation

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# **1 Methodology**

This paper focuses on the methodology used to design a study (Alkaabi, 2016) which explored the aspects of the UAE social environment that students perceived important to their learning, and that impact their motivation and decisions, in some cases, to opt out of college.

## **1.1 Research Paradigm, Methodology & Method**

### **1.1.1 Paradigms: Introduction**

In scientific research, it is important to choose a research paradigm. A paradigm is a “comprehensive belief system, world view, or framework that guides research and practice in a field” (Willis, 2007, p. 8). Paradigm designation varies from one author to another (Guba, 1990). In its classical, simplistic designation, a paradigm can be quantitative or qualitative in nature (Willis, 2007). A more recent addition is a mixed paradigm utilizing both quantitative and qualitative approaches (Creswell, Clark, Gutmann, & Hanson, 2003).

A modern, generally accepted designation is the three paradigms of post-positivism, critical theory and interpretivism which are dominant in social science research literature (Willis, 2007). Each paradigm has its own “values, terminology, methods and techniques to understand social phenomena” (Kumar, 2014, p. 31).

Post-positivism accepts scientific methods and objective data where the nature of reality is external to human mind (Saunders, Lewis, & Thornhill, 2009). On the contrary, in critical theory, explaining the structure of reality is accomplished using ideological and value oriented subjective inquiry to “determine local instances of universal power relationships and empower the oppressed” (Willis, 2007, p. 83). Interpretivism utilizes a subjective inquiry approach where reality is socially constructed and has two major notions; rationalism, the notion that empiricism is not always the better way to gain knowledge; and relativism, the notion that reality is shaped by one’s experience and culture (Willis, 2007). Interpretivism is sometimes referred to as constructivism.

There are three characteristics that set paradigms apart, ontology, epistemology and methodology (Guba, 1990). Characteristics of the current research ontology, epistemology and methodology are analyzed hereafter, followed by the paradigm chosen to reflect these characteristics.

### **1.1.2 Research Ontology and Epistemology**

A paradigm contains assumptions about issues of truth (ontology) and knowledge (epistemology). In Figure 1-1(a), ontology and epistemology can be thought of as branches of philosophy called metaphysics, which at its core is concerned about the what and how that dictate ontology and epistemology in nature. The what part is set to find out the characteristics of things and the how part is set to question how we know that these things exist (Willis, 2007).

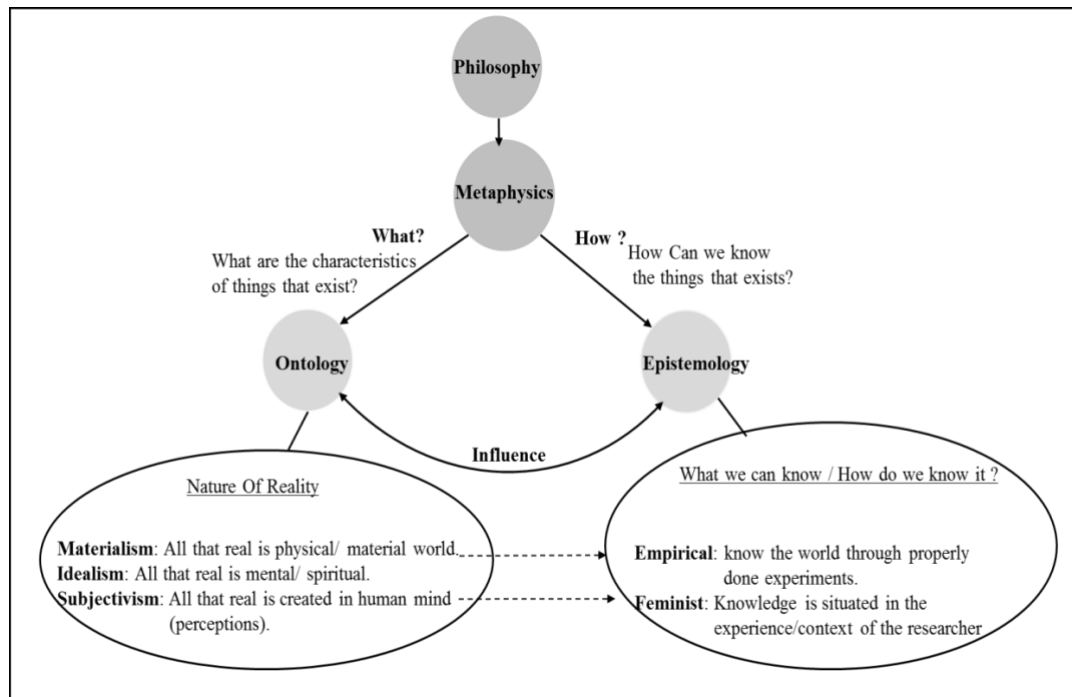


Figure 1-1: Ontology vs. Epistemology  
Source: Modified from Willis (2007, pp. 9-10)

Ontology is concerned about the nature of reality while epistemology is concerned about how we know this reality. In ontology, there are different positions, mainly materialism, idealism and subjectivism. Materialism stresses that all that is real is physical world, while in idealism all that is real is mental. In between these two strands, subjectivism proposes that all that is real is in the perceptions of the human mind.

These ontological positions influence epistemological views. Materialistic ontology drives an empirical epistemology approach in which one knows about the world through properly done experiments. On the contrary, a feminist epistemology is derived by subjectivist ontology. It claims that knowledge is situated in the experience and context of the researcher.

Further, a paradigm describes laws and theoretical assumptions, instrumentation techniques, a guide to work within its epistemology and ontology and how to apply the whole framework into the practice of research design (Willis, 2007, p. 8). A paradigm will dictate the progress of research from the design process to the conclusion (Flowers, 2009). According to Rubin and Rubin (2012), a research paradigm gives the researcher:

1. Guidance on how to conduct research.
2. Research standards to follow that are specific to the paradigm chosen for the study.
3. Weakness and strength of the techniques utilized for the research. The researcher should benefit from the strengths as well as address, and minimize the effects of, the weaknesses in the design.

The understandings of ontology and epistemology were used to determine the research paradigm and the related design. Considering that ontology is concerned about reality, and how the researcher views reality, the research took into account that reality is subjective. To be more specific, the researcher followed a subjective ontology, where reality exists in the experience of the students that will take part in the research.

This dictates that the research epistemology proposes that knowledge is gained through observation and interpretation of these experiences students have. Therefore, true objectivity is difficult to achieve in this social research because the researcher's values and preferences are present (Flowers, 2009).

### 1.1.3 Research Characteristics

The study (Alkaabi, 2016) has several characteristics. First, the central phenomenon of the research circles around the elements that impact UAE male students' motivation, leading them to diminished academic achievement and inevitably in some cases to drop out of college. The quest here is to develop an understanding of these phenomena; an understanding that the literature review in the previous chapter concludes has not been fully realized prior to the current study.

Second, the literature review, has played a small part in exposing the elements that impact UAE male undergraduate motivation, but has played a bigger role in justifying the need for the research. This justification comes from the fact that UAE research into students' perspectives on the subject at hand is at best scarce and inconclusive. Third, the research questions have been formulated to be general enough to comprehend students' own experiences.

Fourth, the intention in the methodology is to choose a paradigm and a research method that will dictate collecting and analyzing data from a representative sample of the student population to reach an understanding of the phenomena as viewed by the students themselves without neglecting to mention researcher reflexivity and bias. The above mentioned characteristics are synonymous with a qualitative research paradigm. Thus, the research is best suited to employ a qualitative approach. The research characteristics, as mentioned previously, are mentioned in Table 1-1 (b) below.

Table 1-1: Research Characteristics

Research Stage	Qualitative Research Characteristics	Current Research Characteristics
<b>Research problem</b>	Exploring a problem and developing a detailed understanding of a central phenomenon	Yes (Motivation of UAE Male Undergraduates )
<b>Literature Review</b>	Having literature review play a minor role but justify the problem	Yes (scarce UAE research/ Gap exists)
<b>Purpose/ Research Question</b>	Stating the purpose and research question in a general and broad way so as to the participants' experience	Yes
<b>Data collection</b>	Collecting data based on words from a small number of individuals so that the participants' views are obtained	Yes Data to be collected from small students sample
<b>Data analysis</b>	Analysing the data for description and themes using text analysis and interpreting the larger meaning of the findings	Yes Results are to be shown from a student's perspective
<b>Discussion</b>	Writing the report using flexible, emerging structures and evaluative criteria and includes the researchers' subjective reflexivity and bias	Yes Discussion is based on student's views and mentions of researcher role and bias.

Source: Modified from Creswell (2011, P16)

### 1.1.4 Research Considerations

Current research considerations are listed in Table 1-2 below. These considerations have a close resemblance to those of interpretive constructivism (Rubin & Rubin 2012). The six considerations of interest include how people view and attribute meaning to events or objects; people have different perspectives of the same event and hence reach different conclusions; multiple and sometimes contradicting views of the same event occur and can simultaneously be true; people in groups create and share understandings amongst themselves; knowledge is sought using a deductive approach and the researcher’s self-awareness is realized.

Table 1-2: Considerations of Interpretivism & Current Research

Interpretive Constructivism considerations	Current Research Considerations
How people view an object or event and the meaning that they attribute to it are what is important	It is important to know how students: View their college environment (classes, teachers, facilities, etc.) View their social environment (families, friends, etc.) Interpret the events or incidents that impact their motivation
People look at matters through distinct lenses and reach somewhat different conclusions Multiple, apparently conflicting versions of the same event or object can be true at the same time.	Students construct their views, opinions based on their own experiences, expectations and bias. Students will often offer different perspective, disagree or contradict each other’s view on certain events or objects based on their own view and ‘reality’.
Groups of people create and share understandings with each other	Students study together at the same college, and routinely interact with their colleagues, teachers and are subjected to similar events, college rules or experiences. Students then, create and share their understandings of the ‘things’ or ‘realities’ in their environment with each other. For example, they might share similar views on a certain teacher or subject they have.
Follows a deductive approach to knowledge	Students’ views, stories and recollections of events, their words, the way they say it and their modes when they say it is important to deduce the themes of the research.
Researcher self-awareness is emphasized	Researcher is not neutral. Researcher role including bias and assumptions and how the research is influenced by it is exposed. Researcher will learn how to listen to students, and acknowledge that their understandings are different than his.

Source: Modified from Rubin and Rubin (2012, pp. 19-20)

The study at hand focuses on the exploration and impact of both social issues specific to UAE culture and academic issues on student motivation. Reflecting on these considerations, the research shares common principles of interest. These include the importance of how students view their experiences; the awareness that multiple versions of truth exist in students’ opinions; the fact that students being in groups in the classroom or the college environment implies that they share common understanding; themes will be deduced from students’ opinions and views; and finally the researcher places emphasis on reflecting and presenting his own self-awareness and the steps followed to minimize its effects on the research. An

integrated knowledge is at core of the researcher’s interest with the rejection of reductionism (Boersema, 2008).

### 1.1.5 Research Paradigm: Interpretivism

In light of the research ontology and epistemology and research characteristics and considerations highlighted in the previous sections, the research adopts an interpretive/constructionist paradigm to be able to understand what drives or inhibits UAE undergraduate student motivation. The considerations of the research reflect an interpretive paradigm. The general characteristics of an interpretive paradigm are presented in Table 1-3 below.

Table 1-3: Interpretivism Paradigm Characteristics

<b>Nature of Reality</b>	•	Socially constructed
<b>Purpose of the research</b>	•	Reflect understanding
<b>Acceptable methods and data</b>	•	Subjective and objective research methods are acceptable
<b>Meaning of data</b>	•	Understanding is contextual
	•	Universals are deemphasized
<b>Relationship of research to practice</b>	•	Integrated activities
	•	Both guide and become the other

Source: Adapted from Willis (2007, p. 95)

### 1.1.6 Research Methodology: Qualitative Descriptive Approach

The third characteristic of a research paradigm is methodology, which is the “identification, study, and justification of research methods” (Johnson & Christensen, 2012, p. 589). Typically, researchers have been adapting the four main types of qualitative methodological approaches including phenomenology, ethnography, case study and grounded theory. However, researchers are not obliged to follow the typical methodology choices and in fact, when considering the topic, time and available resources, a qualitative descriptive methodology can be a useful alternative to the mainstream approaches in qualitative research (Neergaard, Olesen, Andersen, & Sondergaard, 2009). Qualitative descriptive studies are the least theoretical of qualitative methodologies and aim to comprehensively summarize experiences of individuals or groups in their natural settings (Lambert & Lambert, 2012).

Descriptive research has been used in many educational research studies. Descriptive studies on students in educational settings have covered many subjects , such as the context of students’ perceptions on satisfaction and self-confidence (Ma, 2013), student leadership and self-motivation (Collins, 2012), academic caring (Mackintosh, 2006), student personal qualities (Pitt, Powis, Levett-Jones, & Hunter, 2014), students’ reflective practice (Duffy, 2009), perceptions and behaviour of university students (Daniels & Roman, 2013), computer learning (Smith, 2007), students’ self-management techniques (McDougall, 1998), students’ achievement (Fransisca & Zainuddin, 2012) and student motivation (Chang, 2010; Griner, 2012; Haller, 2014; Järvelä, Volet, & Järvenoja, 2010; Oliveira et al., 2014).

A qualitative descriptive approach, represented in Figure 1-2 below, is adapted for this exploratory research to uncover the determinants affecting students’ motivation in college.

Student motivation, whether it is intrinsic or extrinsic, is a complex construct involving multiple theories such as behavioral, humanistic and cognitive theories (Eggen & Kauchak, 2012), implying that there are multiple factors that impact student motivation. Examples of these factors could include, teachers, parents, administrators, interests, personality, pedagogy, technology and interaction. Therefore, the study should follow a design that ensures understanding the elements that impact motivation of students as a group rather than an individual.

The intent is to understand how students' college and non-college experiences affect their decisions to continue or drop out of college. Knowing what students go through in their first year of college is vital to understanding how their motivation is affected. Several groups, from different classes and colleges are studied where students describe their current experience to further explore and understand the impact of students' experiences on their motivation.

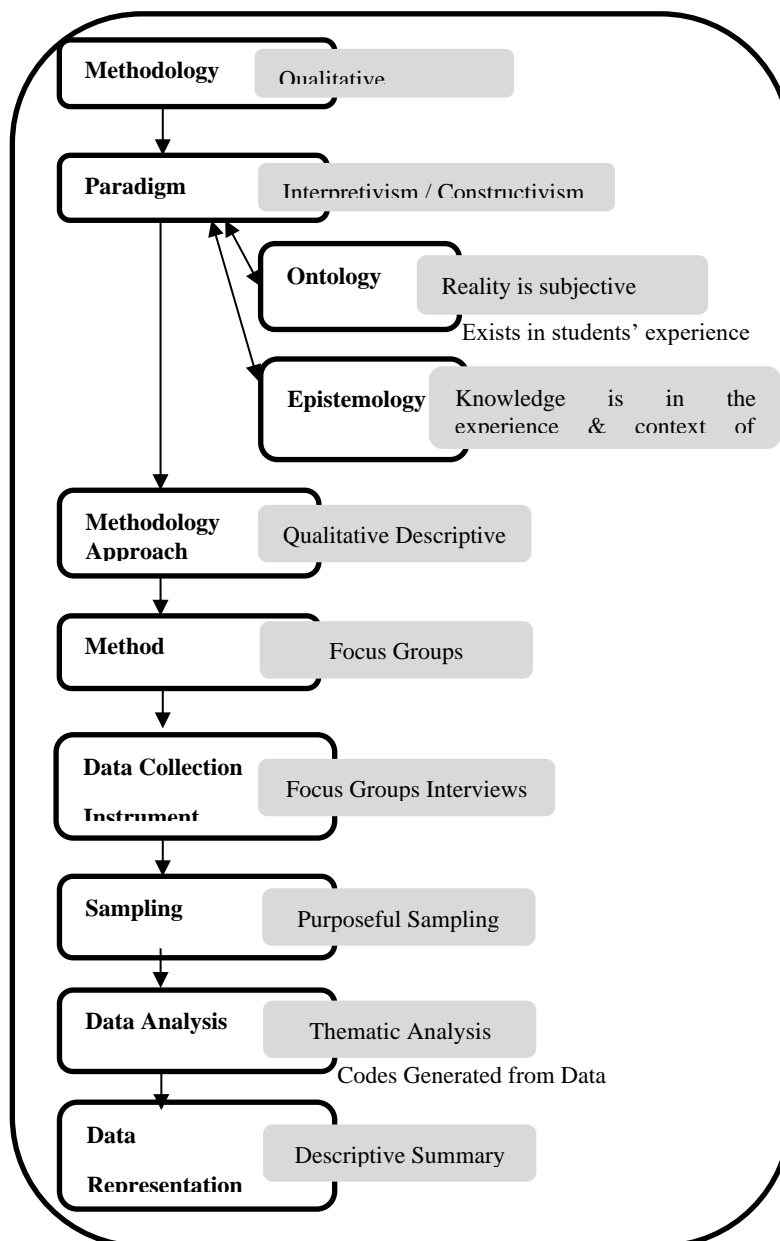


Figure 1-2: Research Methodology and Method  
Source: Developed for this study

### **1.1.7 Research Method: Focus Groups**

While a methodology is typically a general approach to the study, a method is a specific research technique that is aligned with the methodology (Silverman & Marvasti, 2008). Focus groups are group interviews (Morgan, 1997) in which participants engage in a discussion of a topic chosen by the researcher or moderator (Morgan, 1998). Focus groups can be defined as “carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment” (Krueger & Casey, 2000, p.12). Focus groups are also considered a form of unstructured interview that are “generally better for studying perceptions, attitudes, and motivation” (Connaway & Powell, 2010, p. 17). In this regard, focus groups explore participants’ feelings and beliefs that shape their behaviour and perceptions (Connaway & Powell, 2010) in their discussions which are then used as a prime data source to be analyzed to answer the topic’s inquiry (Liamputtong, 2013). Besides obtaining thorough clarification of the different accounts of participants to the same issues, a focus group helps researchers obtain valuable insights and “information about feelings, thoughts, understandings, perceptions and impressions of people in their own words” (Liamputtong, 2011, p. 6).

Focus groups have been used in a variety of educational research studies such as personal motivational characteristics and environmental social supports in college outcomes (Dennis, Phinney, & Chuateco, 2005), college students’ behaviour (Deliens, Clarys, De Bourdeaudhuij, & Deforche, 2014), teacher impact on students (Siegle, Rubenstein, & Mitchell, 2014), the use of technology in the classroom (Venkatesh, Croteau, & Rabah, 2014), perception of college learning (McIntosh, Fraser, Stephen, & Avis, 2013), undergraduate students’ attitudes (Lea, Stephenson, & Troy, 2003), student autonomy and motivation (Spratt, Humphreys, & Chan, 2002), students’ perceptions about e-book use in the classroom (Lim & Hew, 2014) and students’ instructional preference in their first year of college (Latham & Gross, 2013). When planned well, the technique can be efficiently used to carefully answer the research question. Following is a discussion of alignment between the focus group technique and the research question and its use as a sole research method.

#### **1.1.7.1 Research Question & Method Alignment**

This study was constructed following a qualitative descriptive method design to acquire first-hand knowledge and gain a better understanding of what social issues affect student motivation. It is essential that the research design follows a baseline design process. The flow of design of this study took into account Onwuegbuzie and Collins’ (2007) guidelines for a sound research design technique, where research goal, objectives, purpose and research questions guided the selection of the research design. In other words, the methodology and method chosen, analysis technique and discussion presentations were carefully constructed to answer the research question.

Revisiting the research question, it is stated as what is the perception of first-year UAE male undergraduates of the factors that impact their motivation at UAE public higher education institutes? In order to be able to answer this question, an exploratory research method was designed to bring students to share, discuss and give their opinion in a friendly environment. Exploratory studies have been used in educational research to identify various phenomena or gain more insights into factors that have an effect on student learning and achievement outcomes (Dabbagh & Kitsantas, 2005; Ertmer et al., 2007).



The intention was to design such a method in a way that would encourage participants to share their thoughts more openly and discretely than they would in comparison to observation or individual interviews. Focus group interviews were chosen for this study because this technique expands the researcher’s options between the research question and a suitable qualitative method to answer it (Morgan, 1997, p. 17). Focus groups allow the study to “explore the nature and effects of ongoing social discourse in ways that are not possible through individual interviews or observations” (Kamberelies & Dimitriadis, 2008, p. 396). Table 1-4 below lists a comparison between focus group and both individual interviews and observation.

Table 1-4: Focus Groups vs. Observation and Individual Interviews

Focus Group	Individual Interviews	Observation
Explore group characteristics and dynamics as relevant constitutive forces in the construction of meaning and the practice of social life.	Individual interviews strip away the critical interactional dynamics that constitute much of social practice and collective meaning making	
Can be used strategically to cultivate new kinds of interactional dynamics and, thus, access to new kinds of information.		Observations are a bit of “Crap shoot” in terms of capturing the focused activity in which researchers may be interested.

Source: Adapted from Kamberelies & Dimitriadis (2008, p. 396)

Although the settings for group discussions are considered less natural than the usual natural environment that surrounds observation study, group discussions have an edge when it comes to the time duration and type of participant behaviour that is of interest to the study (Morgan, 1997). From a time perspective, the study at hand was inclined towards gathering data in a more limited timeframe than is usually required for observational study. Also, the focus was on discussing students’ behaviour, related to the focus group, but not on studying their behaviour as would be the case in observation methodology.

From a social context, in focus groups students were able to make “meaning of their past and current life experiences” (“Overview of focus group methodology,” 2012, p. 28). When compared to individual interviews, focus groups have the edge of observing interaction in a group. The ability to see the differences in opinions and experiences and the richness of content these differences introduce is immediate in focus groups, but in individual interviews these differences are reached after analyses of separate interviews (Morgan, 1997).

Further, Krueger’s (1994, p. 44) rationale for using focus group interviews is adapted by the researcher. This rationale favors the use of focus group interviews when: exploratory study is required; a communication gap between groups of people is present; the purpose of the research is to uncover factors; the themes of the research are to come from the group and the information in question is needed for a larger quantifiable investigation. In Table 1-5, the researcher has listed this study rationale for using focus group that adhere to Krueger’s (1994) recommendations.

Table 1-5: Rationale for Choosing Focus Groups for the Study

	Krueger's Rationale	Researcher's Rationale	Agree?
1	Insights are needed in exploratory study	The research is exploratory in nature to understand what students' think about the factors influencing their motivation	√
2	There is a communication or understanding gap between groups or categories of people	Students have different understanding of motivation than the policy makers and instructors. This research offers a chance to open a channel of communication between students and educators to better enhance students motivation.	√
3	The Purpose is to uncover factors relating to complex behaviour or motivation.	The research at hand is set to uncover a multitude of factors affecting student's motivation in college and non-college environment.	√
4	The researcher desires ideas to emerge from the groups	There is a host of factors studied internationally that impact student motivation. However, due to the specificity of the UAE culture, the researcher hopes to understand, from the students themselves, what UAE specific factors emerging as important to their motivation.	√
5	The researcher needs additional information to prepare for a larger-scale study.	The themes emerging from focus group data analysis will be used in a post-PhD quantitative study to generalize the finding of the study.	√

Source : Adapted from Krueger (1994, p. 44)

Focus groups “produce data that are seldom produced through individual interviewing and observation and that result in especially powerful interpretive insights” (Kamberelies & Dimitriadis, 2008, p. 397). Therefore, in this study, focus groups have been used instead of observation or individual interviews because it was better suited to answer the research question (Connaway & Powell, 2010; Liamputtong, 2013).

The use of focus groups permitted students to discuss the topic in a friendly, supportive, culturally appropriate and non-confrontational environment. Given that little qualitative work has previously been done to uncover the thoughts of male students in the UAE, these focus groups will provide educators and policy makers with important insights. They will help us better understand the bigger picture, the phenomena of students' dropping out from higher education and the factors educators and policy makers should be aware of when designing educational pedagogy, instructions and intervention programs.

### 1.1.7.2 Focus Groups as a Self-Contained Method

The assumption that focus groups are to be used only in conjunction with other research methods stems from marketing research (Morgan, 1998) which has used focus groups mainly as a preliminary data collection tool or in a mixed method design (Morgan, 1997). Since then, focus groups were used more often in social science, among other fields like health and marketing, as a self-contained research method (Connaway & Powell, 2010; Liamputtong, 2013). In fact, focus groups “like other qualitative methods, can be a well-chosen, self-contained means for collecting research data” (Morgan, 1997, p. 18).

When focus groups are used as a self-contained method, they can be used for complex decision making, uncovering important issues, exploring new areas, and observing perceptions (Connaway & Powell, 2010). In this research, they were used as a tool to

examine the research question from students' perceptions. Focus groups as a self-contained research method can bring not only participants' opinions and attitudes but also their perspectives and experiences to form a richer and deeper understanding of the research subject in a way that is not possible in other methods.

The main characteristic of a self-contained focus group is that the research findings that are drawn from sharing and comparing experiences and perspectives can stand on their own as an acceptable body of knowledge (Morgan, 1997). People like to compare and share their experiences with others in a subject of interest and are less likely to challenge others' opinions in a group interaction. Knowing one's perspective is a better way to know what and how participants think in a certain way that led to formation of their own attitudes and opinions (Morgan, 1997).

From a methodological point of view, the focus group is a valid methodology just like grounded theory, narrative or communication theory ("Overview of focus group methodology," 2012, p. 26). Focus groups is a great tool for "revisiting epistemology, interrogating the relative purchase of both lived experience and theory, reimagining ethics within research practice, and enacting fieldwork in ways that are more attuned to its sacred dimensions" (Kamberelies & Dimitriadis, 2008, p. 396). The main argument for preferring focus groups over other methods for this research is the group interaction that takes place during the sessions that "reveals participant experiences and perspectives that may not be accessible without group interaction" (Liamputtong, 2013, p. 78).

### **1.1.7.3 Focus Groups Advantages**

There are many advantages of focus groups as noted by Krueger and Casey (2008), Liamputtong (2013) and Morgan (1997). These advantages include:

- Focus groups are quicker and less costly than individual interviews in collecting in-depth knowledge.
- Focus groups are flexible. This helps finding valuable and unexpected information that will enrich the findings of the research.
- Focus groups emphasize the interactions of the participants to produce information that gives an in-depth insight to human behaviour.
- Interaction amongst participants motivates some of them to talk about their own experiences when they see others share an experience similar to theirs.
- The chance of misunderstanding the topic of discussion is slim since participants are able to ask anything and clarify for each other in case of topic misunderstanding.
- If planned well, focus groups can stimulate participants' interests and enthusiasm and help build trust amongst the group and the researcher and can lead to participants forming friendship with each other.

### **1.1.7.4 Focus Groups Limitations**

Limitations of focus groups are not necessarily weaknesses in design but more of characteristics that the research acknowledged in the design process to avoid pitfalls and errors in data gathering, analysis and discussion. Some of the limitations of focus groups (Morgan, 1997) include the following:

- Information gathered from the sessions represent the participants' voices only and usually are not sufficient for a generalization to the population.

- Results are qualitative in nature and numbers are not in the interest of the researcher nor the research.
- Since the focus is on group interactions, complex beliefs and practices of individuals cannot be covered in focus groups.
- The perceptions and views of participants relate only to the topic of the discussions and cannot be used to forecast the behaviour of the participants in different areas or topics.
- Some issues that are related to group discussion might be present such as groupthink, where one person's opinion is nodded by the whole group, and cold groups, where not enough discussion and information is carried on. These could impact the quality of data and researcher or moderator should be prepared to overcome such situations during the session.

## **1.2 Conclusion: Summary**

The methodology design of the research follows an interpretive view as a philosophical approach. The nature of the relationships between research objectives, aims, purpose and questions have been explored in the research design. A descriptive qualitative approach has been chosen as the guiding principle for the design of the research. The study utilized a focus group method design to answer the research questions and fulfil the aims deemed important for the study as shown in the previous sections.

### **Note**

A portion of this article is taken from the author's PhD thesis (Alkaabi, 2016).

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