

## **Engineering Students' Well-Being Experiences: A Freshman Year Experience Program**

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### **Abstract:**

*Freshman university students often face challenges adjusting academically due to a number of complex factors, including increased academic demands and changes to their social environment. Universities, mindful of the financial and academic costs of attrition, seek effective initiatives to increase retention rates. One such initiative, called the Freshman Year Experience program (FYE), is taken by the Petroleum Institute (PI) in the United Arab Emirates. This study, conducted with 80 second-semester students with a mean age of 19, sought to identify the effect FYE had on students' well-being. Data were collected from written papers that required students to reflect on experiences of well-being. Results showed that students experienced many types of well-being during the FYE program; common factors included meetings with advisors, workshops, and social and volunteer activities. Participants' self-confidence, self-awareness, and ability to communicate effectively were also affected. It is argued that an integrated, structured intervention program linked to the needs of freshman students has the potential to positively affect feelings of belonging, a desire to learn, and motivation for overcoming barriers to success.*

### **Key Words:**

well-being; reflective writing; growth; freshman; positive psychology.

## **Introduction**

Entering university is a happy and exciting experience for many freshmen. Students are eager to meet new people, explore new opportunities, and take steps towards a professional life. These positive emotions, however, can be affected by challenges encountered during the freshman year, including changes to the social environment and increased academic expectations. Such challenges can lead to mental health issues as well as physical health problems, reducing well-being and putting optimal functioning at-risk. This is particularly relevant to freshman students who are also transitioning to early adulthood (Sawyer, Miller-Lewis & Clark, 2007). Taking proactive measures may be helpful in limiting the effects of these consequences. This paper examines the effects of such an initiative taken by the Petroleum Institute (PI), an engineering and research university located in Abu Dhabi in the United Arab Emirates (UAE).

## **Background on the Petroleum Institute**

The Petroleum Institute (PI) offers undergraduate degrees in Chemical Engineering, Mechanical Engineering, Materials Science and Engineering, Petroleum Engineering and Petroleum Geosciences. Its mission is to provide the oil, gas and energy sectors in the UAE with talented and well-balanced engineers to contribute to the country's social and economic development. With this aim, the PI recruits nearly 500 students a year. Currently, it has approximately 1,960 graduate and undergraduate students, all of whom are on full scholarships. Students are guaranteed a job with the Abu Dhabi National Oil Company (ADNOC) upon graduation which, along with a number of other international oil companies, finances and governs the PI. In addition, a majority of the students, Emirati nationals, also receive a monthly stipend if they maintain good academic standing. The PI desires to reduce attrition among freshman students to ensure a continuous supply of highly trained and talented engineers so they can positively contribute to the work of ADNOC. Achieving this goal, however, can be particularly difficult given the rigorous standards and challenging curriculum that freshman students encounter as they embark on their engineering studies. This is partly due to the fact that all but a handful of students at the PI are second-language learners of English at an institute of higher education where English is the medium of instruction. The split nature of the campus, where male and female students receive separate, but parallel educational experiences, contributes to a unique and culturally sensitive study environment.

## **Well-Being and Positive Psychology**

Ensuring a degree of well-being for engineering students cannot be guaranteed by developing technical skills alone; it is also important to focus on soft skills, such as understanding how best to communicate with others, raising self-awareness, and developing self-confidence. The implementation of these skills requires a commitment to life-long learning which encourages individuals to continuously seek opportunities for developing new knowledge. As a result, students' academic and personal development can be improved, and their feelings of well-being enhanced.

Seligman and Csikszentmihalyi (2000) point out that the main focus of psychology as a discipline since World War II has been on the concept of healing. More recently,

there has been a shift from solely repairing pathology to building positive qualities in individuals (Seligman, 2011), exemplified by the field of positive psychology, “the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions” (Gable & Haidt, 2005, p. 104). Boniwell (2006) identifies three levels of positive psychology: the subjective, the individual and the group.

The subjective level is about feeling good as compared to doing good or being a good person. It focuses on well-being emanating from positive experiences that create positive feelings such as satisfaction, optimism and flow.

The individual level, on the other hand, is related to what constitutes a good life and a good person. The focus is on human strengths and virtues such as courage, perseverance and interpersonal skills.

The group level centers around factors that help develop citizenship, such as civic responsibilities, social responsibilities, and work ethics. These three levels of positive psychology can be interdependent. For instance, engaging in community life through civic involvement projects contributes to the well-being of the community.

To further describe the field, Boniwell (2006) adds that positive psychology adopts the same scientific method as mainstream psychology, only with a focus on positive experiences rather than negative ones. Among the questions it asks are ‘what works?’ instead of ‘what does not?’, and ‘what is right with this person?’ instead of ‘what is wrong?’

## **Positive Education**

Due to an increased awareness of mental illnesses among children and adolescents, the traditional role of schools has expanded beyond the teaching of academic skills. The need for a holistic approach with a greater focus on well-being has been recognized (Green, Oades, & Robinson, 2011), and has given way to the concept of positive education, which seeks to apply the principles of positive psychology to the field of education (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Thus, positive education encompasses a number of concepts and strategies intended to develop positive emotions, resilience, positive mindsets, and happiness in students (Seligman et al., 2009). The concept of personal development, which seeks to enhance an individual’s academic success and social/emotional well-being, fits as a strategy under this umbrella term and involves the acquisition of knowledge, skills and aptitudes (Turner & Thompson, 2014).

The emphasis on students’ social and emotional growth has contributed to the creation of educational programs that focus on well-being as a core component of student success. Seligman et al. (2009) provide examples of these programs. One is the Penn Resiliency Program (PRP) which teaches students to evaluate thoughts, confront emotions and solve problems in order to improve relationships with other people in both academic and non-academic contexts. Another is the Strath Haven Positive Psychology Program, which aims at increasing students’ identified strengths in their daily lives. Among the target strengths are kindness, courage, wisdom and perseverance. The program also promotes resilience, positive emotion, and students’

sense of meaning and purpose. Finally, the Geelong Grammar School (GGS) in Australia aims to equip students with skills such as the development of resilience, gratitude, and positive emotion. These concepts are embedded in various courses; for instance, geography teachers ask students to research how people's well-being can be enhanced by the physical geography of a place. Prompts given to students shift the focus from negative situations to positive ones, as exemplified in the following: Instead of using a prompt such as 'Give a speech on a time you were embarrassed or made a fool out of yourself', students would be provided with a prompt like 'Give a speech about when you were of value to others'. Thus, students are encouraged to think and feel positively and experience well-being across a variety of contexts. Integrating this approach to learning has had positive effects on student academic achievement and may well serve to promote creative thinking, increase life satisfaction, and reduce incidents of depression.

### **University Students' Well-being**

Well-being among university students has also been investigated by a number of researchers. For example, Adams, Berzonsky, and Keating (2006) found that parental support and positive relationships with university staff and peers can increase students' well-being by providing a foundation for psychosocial maturity and moral development. Trotter and Roberts (2006) recommend a holistic approach to enhancing early student experience at university, suggesting that all departments and senior management should be incorporated in the implementation of coordinated policies that serve to increase well-being, much like the case at the Geelong Grammar School (Seligman et al., 2009). This holistic approach includes regular and structured personal tutor meetings, attention to student-student and staff-student relationships, and opportunities for involvement in part-time employment and other commitments.

In the case of international students, host universities can help increase their well-being in variety of ways (Cho & Hongsik, 2015). For example, introductory orientation programs intended to help students adjust to new educational environments can be useful. Also, students with financial constraints may be helped through the provision of financial support either in the form of scholarships or on-campus part-time jobs. Well-being can also be enhanced if they are offered opportunities to join social clubs where they can build new relationships with other students from their own or similar cultures.

While these measures can enhance the experience of individuals and help ameliorate many of the challenges inherent in transitioning from one context to another, university students face a growing amount of pressure caused by several factors, including increased tuition costs, a reduction in financial aid, and more competitive admission standards (Cooke, Bewick, Barkham, Bradley, & Audin, 2006). Students may also face challenges adjusting to the changes in their lifestyles including study habits, social relationships, eating habits, and sleeping patterns, all of which can negatively affect their well-being. A study involving over 3,000 Egyptian undergraduate students found that students often suffered from reduced well-being as a result of exams, presentations, and lack of time for studies (Ansari, Labeeb, Moseley, Kotb, & El-Houfy, 2013). Social well-being was also studied in over 700 Turkish students (Ozdemir & Tuncay, 2008), where 60% of students reported low levels of well-being as a result of

feeling lonely, and many required economic, social and psychosocial support to help enhance their well-being. Al-Darmaki (2011) noted that Emirati college students faced similar personal, career, academic and social issues. Yet, many university students find it difficult to seek support for personal and emotional issues (Douglass & Islam, 2009; Trotter & Roberts, 2006). Indeed, some turn to family and friends rather than seek professional help to address these issues (Al-Darmaki, 2011), which, for many, may be ineffective.

### **First Year Experience Programs (FYE)**

In recent years, universities have instituted initiatives and programs to meet the needs of incoming students. An overarching goal of many of these programs is to reduce attrition and increase academic and social success (Howard & Jones, 2000; Pitts, White, & Harrison, 1999; VanderStoep & Pintrich, 2008). This is accomplished in a number of ways, including offering workshops and seminars to disseminate information and to create purposeful experiences and activities to develop skills (Terenzini, Pascarella, & Blimling, 1996; Ting, Grant & Plenert, 2000; Zhao & Kuh, 2004). Collectively, these efforts are called First Year Experience programs (FYE).

Successful FYE initiatives share similar attributes. They are tailor-made to address a specific institutional context (Barefoot & Gardner, 1993) and consider the specific needs of students. Thus, in the case of the PI's FYE program ensuring that the cultural and religious traditions of students, the vast majority of whom are Arab and Muslim, is honored and respected is ever present. For example, male and female students maintain separate campuses both academically and socially. The kinds of experiences and activities that can be offered outside of the classroom to both males and females can also be affected by travel and curfew restrictions as well as societal norms. With this context in mind, the PI's FYE program aims to promote learner development through purposeful structured activities in order to provide students with the essential skills and knowledge required for a more fulfilling life at the university and beyond.

The FYE program is based on the three Ss: Success, Skill and Socialize (Bielenberg, Moore, Seela, & Balfageeh, 2014). 'Success' aims at helping students make a smooth transition to university life with the help of academic advisors, counselors and peer mentors, while the 'Skills' component provides students with opportunities to develop the skills necessary for academic success. Through weekly workshops that include a range of topics such as managing one's time, working effectively in small groups, and overcoming test anxiety, students are encouraged to apply new knowledge and skills to their particular context in order to become more successful. Finally, 'Socialize' offers student experiences that promote further academic success and personal growth through social activities designed specifically for male and female students. While the PI's male and female campuses are separate, similar activities are often offered to both genders in line with the university's policy of treating all students equally. One such activity is a day camp where a range of team-building activities are organized in a fun and engaging atmosphere. Other activities designed to encourage students to integrate with the larger PI community include athletic competitions such as football and paintball outings for males, museum visits, and an original designer clothes competition for females. In addition, through various athletic,

recreation and resident life programs, the 'Socialize' component offers the students the chance to feel a part of the PI community. Finally, to provide a deeper learning experience students engage in intensive readings and classroom discussions that are tied to seminar topics and reflective writing tasks as well as meetings with advisors and counselors.

## **Reflective Thinking and Writing for Greater Well-Being**

In considering the tenets of positive psychology, positive education, and the stressors faced by university students, we - as the researchers of this current study - believe that the necessity for nurturing students' well-being requires instruction to be geared towards the development of personal reflection, i.e., "the purposeful thinking, integration of information, and the development of concepts" that "facilitate the formation of memories, thereby strengthening the integration of learning and experience" (Dzubak, 2013, p. 1). This suggests that learning content matter alone is insufficient. Students need to make sense of what they learn in relation to their previous experiences, and increase their self-awareness in light of new learning. This reflective thinking cycle provides for new perspectives on experiences, encourages behavioral change and the application of knowledge, and helps increase one's commitment to future practice (Burns & Bulman, 2000).

Personal reflection and purposeful reflective writing was selected as the intervention for the present study on the basis of its merits for promoting well-being. Writing reflectively on experiences encourages individuals to construct meaning out of them (Pennebaker & Seagal, 1999), which is particularly true if one expresses such emotion in narrative form. Writing about life goals for example, has been found to increase levels of happiness and decrease the number of the health center visits for physical ailments (King, 2001). Indeed, undergraduate students who were asked to write about an intensely positive experience reported greater physical health (Burton & King, 2004). As such, reflective writing appears to allow individuals to "gain a feeling of control over [their] emotional life or valued outcomes" (King, 2001, p. 806).

The psychological effects of reflective thinking are also supported by research showing that those who engaged in reflective writing experienced more happiness and less depression as a result of their engagement in reflection on positive events (Seligman, Steen, Park, & Peterson, 2005). Writing reflectively about difficult times can help individuals confront their challenges by putting to paper thoughts and feelings that help them move forward (Lyubormirsky, Sousa & Dickerhoof, 2006). This applies not only to individuals reflecting on traumatic events, but also to those who write on seemingly less important experiences. Articulation of life experiences through writing promotes self-construction by helping the writer to raise awareness of one's emotions, needs and priorities (Burton & King, 2004), and consequently, helps the writer acquire more self-regulation skills. Narrative writing is thus a recognized positive psychology intervention that has been shown to improve well-being (Burg et al., 2010; Pennebaker, 1989; Walsh, 2012).

## The Present Study

UAE college students, like many around the world, suffer from issues that may negatively affect their well-being. Al-Khatib (2013) identified depressive symptoms among more than 500 students at a UAE university. These students experienced lower levels of life satisfaction and self-esteem, reducing their well-being. Unhealthy eating habits have also been identified as a factor decreasing UAE students' well-being (Oyelere, 2011). Yet, not all students are aware of what enriches their lives and often lack fundamental reflective thinking skills. A documented low level of preparedness for such skills is often found among freshman university students. For instance, Khelifa (2009) reports that professors at a local UAE university felt challenged by their students' low academic maturity levels, which they believe was caused in part by poor preparation in high school. Professors argued that students' limited English language abilities, lack of literacy skills in general, and deficiencies in global awareness hampered their critical thinking skills and ability for abstraction. Critical thinking does not appear to receive recognition by the majority of the national high schools in the UAE (Freimuth, 2014). This is further supported by Nazzal's (2013) findings that students mainly learn rote grammar in their high school Arabic classes with little emphasis placed on writing. High school students' lack of interest in reading can also translate into poor writing skills at the university level (Swan, 2013), which can prove to be a challenge when they are required to think and write critically. Among more than 3,650 mostly Emirati students at Zayed University, Thomas, Raynor, and Al-Marzooqi (2012) found that male and female married students often experience different challenges. Married males, for example, reported that studying, working full-time, and managing the workplace was particularly difficult, while married females indicated that as a parent, meeting the time demands of a child was challenging to manage. Both male and female married students also acknowledged that managing their relationships with their spouses was challenging. Well-being, thus, among UAE college students, is affected by a number of factors, and understanding these can assist in identifying appropriate interventions.

As such, this study aims to answer two questions:

1. What factors affect students' well-being during their engagement in FYE and
2. What does student well-being consist of?

## Method

### *Participants*

Out of 1,960 graduate and undergraduate students at the PI, 80 freshman male engineering students enrolled in the two researchers' classes participated in the study. This qualitative study, therefore, relied on a purposive sample. The majority of the participants (82.5%) were UAE citizens, while 17.5% came from Australia (1.25%), Egypt (2.5%), Ireland (1.25%), Jordan (3.75%), Palestine (3.75%), Sudan (2.5%), and the USA (2.5%). Ages ranged from 18 to 23 with a mean age of 19.

### **Design and Procedure**

In this small-scale exploratory study, a descriptive research design was adopted with the aim of investigating the participants' well-being as a result of their engagement in the FYE program at PI. The descriptive research design is particularly useful when exploring the characteristics of a target population (Shields & Rangarajan, 2013) such as the students at PI. Trying to understand "the meaning people have constructed, that is, how people make sense of their world and the experience they have in the world" (Merriam, 2009, p. 13) is an important aspect of this qualitative study. Although descriptive statistics tend to be limited in a qualitative study, it is nonetheless important to identify frequencies in order to discover patterns (Boundless, 2013). In this way, data from qualitative analyses can be turned into numbers such as frequencies by studying emerging patterns (Green, 2001).

The researchers chose a required second-semester communication course (COMM151) to serve as the venue through which student experiences in the FYE program could be examined. As part of the curriculum, students in COMM151 were required to conduct projects related to their FYE experiences. They were also given assignments aimed at helping them to reflect on those experiences. The current study focused on one of the assignments administered toward the end of the FYE program. The assignment included a seminar topic addressing interpersonal and intrapersonal communication, at the end of which the students were given a written examination that required them to reflect on their seminar readings and class discussions in relation to their FYE experiences. The writing task for the exam was designed by the researchers to help students reflect on their experiences of interpersonal and intrapersonal communication in the 'Skills', 'Success' and/or 'Social' components of the FYE program, and to discuss how their engagement in the program contributed to their well-being. The wording of the prompt reflected the philosophy of positive education by focusing on positive experiences, as suggested by Seligman et al. (2009).

Students also completed two writing exams that mirrored, in format, the one examined in this study. Although this was not a part of the current research, it was expected that completing the additional writing tasks would help students become more familiar with the structure and format of the exam used in the current study. The students' reflective writing exam papers were analyzed independently by the two researchers to establish inter-rater reliability. The researchers then compared notes to determine similar themes for analysis. Next, coding was compared to validate the accuracy. This was done with the belief in the value of inter-rater reliability to enhance the analysis of qualitative data (Mays & Pope, 1995). Finally, the frequencies and proportions of emerging themes were determined.

### **Results**

The first research question aimed at determining the factors that influenced students' well-being. For this purpose, the reflective writing task required students to discuss the factors that had an effect on their well-being. A summary of results for this question can be found in Table 1.

**Table 1: Factors contributing to FYE students' well-being\***

<b>Factors</b>	<b>f</b>	<b>%</b>
Meetings with advisors	24	30
Social activities	19	27
Workshops	19	27
Voluntary activities	5	7
Seminars	5	7

**\*Percentages were calculated from the total number of papers (80) as individuals stated more than one factor.**

Table 1 shows that the most frequently reported factor that contributed to the students' well-being was the meetings with their advisors. This was a part of the 'Success' component of the FYE program. A total of 24 students (30%) referred to this as a source for their well-being. This factor was followed by social activities, which were a part of the 'Socialize' component of the FYE program. Activities for 'Socialize' included a day-out at Yas Marina Circuit (the venue for the Abu Dhabi Grand Prix), a football championship and a paintball game. This factor was noted by 24% of the students as a contributor to well-being. The same number of students (24%) thought that workshops offered as a part of the 'Skills' component of the FYE program played a role in their increased well-being. Voluntary activities such as helping to arrange furniture at a special needs school, hospital and a kindergarten were mentioned by 5 students (6%) as a trigger for enhanced well-being. A similar number of students (6%) identified seminars on a several subjects, like selecting a major, as an area of personal growth.

The second research question asked students to identify what their well-being consisted of. Table 2 shows the five overarching themes that emerged from analyzing data for this question. The most frequently reported type of well-being was self-confidence, which was identified in 44 student papers (55%). Many students, for example, stated that meeting with their advisors, in particular, encouraged them to build trust in their abilities to make decisions and reach out for help when needed. As one student said, "My advisor made me believe that I can make good decisions if I know myself." Some also stated that their confidence was boosted as a result of their engagement in seminars, workshops, and social activities. This was reflected by two students' remarks that by participating in workshops designed to promote self-regulation skills, they were able to realize their potential to make a difference in their own lives as well as the lives of others

**Table 2: Components of well-being experienced by FYE students\***

Components of well-being	f	%	Sample responses
<b>Self-confidence</b>	44	55	<p>-I was shy to speak to my advisor. I thought he might think I was not smart. But he was very welcoming and helped me increase my confidence.</p> <p>-I'm happy I visited my advisor that day and didn't do anything I would have later regretted...My advisor was very helpful, he told me that the best way to overcome this problem (between the student and his instructor) is facing the instructor, because interpersonal communication is the way to understand each other.</p>
<b>Self-awareness</b>	26	33	<p>-In the workshop I saw where I was wrong, and improved my study skills.</p> <p>-When it was my turn to speak (in front of an unfamiliar group of peers), I was nervous and confused, so someone told me have confidence in yourself and you will do good, so I was saying in myself, I will do good, I am better than anyone, so when I came to speak I wasn't nervous, and I did good.</p>
<b>Communication competence</b>	14	18	<p>-The workshop about conflict resolution helped me see how I talked to my team members was not good. Now I try to empathize with people before I react to what they say.</p> <p>-Everyone was involved in intrapersonal communication first to brainstorm a solution to the problem during a voluntary activity. This was not a usual thing we did before FYE.</p>
<b>Awareness of planning</b>	7	9	<p>-Time management workshop taught me to prioritize tasks.</p> <p>-After my workshop, I started to keep better track of my time and assignments. I wrote things down on a schedule I made.</p>
<b>Control over emotions</b>	3	4	<p>-When someone did not listen to me carefully I felt irritated, but instead of getting angry at them I controlled myself then I tried to speak with them again in a different way.</p> <p>-I had a bad experience with a classmate. I didn't get angry like I usually do because I tried to see through his eyes why he did what he did. I felt in more control because I didn't just start arguing.</p>

\*Percentages were calculated from the total number of papers (80) as individuals stated more than one factor.

While self-confidence was one of the components of students' well-being expressed by 44% of them, four of these students (9%) appeared to be positively affected by their improved image in the eyes of their peers. Some said that their engagement in the FYE program overall led them to behave differently, helping them to conduct themselves in a more mature and responsible manner. One student noted that his parents thought he acted more responsibly since the start of his studies as a freshman student. The student attributed this to his eagerness to participate in as many FYE activities as possible.

This, in turn, appeared to build his self-confidence and improved his interaction with peers, instructors and advisors.

Another factor found to contribute to their self-confidence was reduced-levels of shyness or their willingness to engage with others, which appeared in 9 out of these 44 students' papers (20%). Although being shy is not necessarily undesirable, students seemed to have increased their chances of academic achievement by being able to take more initiative when they needed assistance. Initially, some of these students avoided any confrontation with their peers, instructors or advisors if it meant that they had to speak their minds openly about a controversial issue. It appeared that their interaction with their advisors in particular helped them feel more relaxed when they needed their assistance or when they needed to express their feelings regarding problems with their instructors. The welcoming attitude of their advisors was a contributing factor. One student captured this sentiment well by stating that "My advisor often invited us to his office, and he was not very formal with me." As this quote suggests, students became less intimidated when advisors actively engaged with advisees in a more informal and personal manner.

The confidence level of some students appeared to have been boosted by the sense of inclusion they experienced. Three students in this category (7%) were found to exhibit growth. These students focused on the feeling of being a part of a larger group, something that was apparently missing during their first semester. Although this number is relatively small, it is also telling in that some students find being accepted by peers, especially outside of class, is something that is important to them. As one student stated, "I joined a football team. I knew I wasn't that good at football, but instead I was so excited to play on a team, this excitement made me play very good such that we reached the finals." The student went on to say how this experience helped him become more confident in his engagement with others.

The second most frequent theme was self-awareness. A total of 26 students (33%) indicated that they had become more aware of themselves as a result of their FYE experience. These students seemed to have enjoyed the opportunities to confront their feelings and were able to realize how their personality was affected by their interaction with others. Some also expressed an increase in awareness of the effect of their study habits on their academic success. Apparently, they did not realize that a lack of self-confidence and poor study habits could inhibit their academic progress. This realization seemed to have helped them adopt a positive attitude towards exerting more control over their lives.

Similarly, 14 students (18%) mentioned that their communication skills were enhanced as a result of their participation in seminars, social activities and workshops. Some stated that their interaction with other students in social activities was enhanced by the theoretical knowledge they gained through different seminars which helped them improve their ways of dealing with problems that arose between themselves and their peers. For example, they noted that they could now express their disagreements with their teammates more effectively and without hurting each other. This was mainly due to their willingness to engage in intrapersonal communication more before they reacted to what they perceived as wrong. Consequently, this improved their communication skills. Further analysis of these students' papers revealed that half of them enhanced their

communication skills by increasing their knowledge of the paralinguistic features of communication. For example, they managed to practice what they had learned in the seminar and workshop about body language, facial expressions and posture. As a result, they expressed greater awareness of these communication features and seemed to be able to avoid subsequent errors of this nature. As one student noted, "I did not know that [a particular] gesture was rude in my advisor's culture, so I avoided it next time I visited him."

Another theme that emerged in the data analysis was awareness of planning (9%). Students seemed to raise their awareness of planning through their meetings with their advisors. They generally seemed to have learned that they could communicate with their advisors more successfully if they prepared what they wanted to say to them by engaging in effective intrapersonal communication. Some also said that a workshop on time-management helped them realize the importance of planning. "I learned I should not leave things to the last minute. This is not a good excuse when I go to my advisor to talk about heavy workload."

Control over emotions emerged as the last theme. While a relatively low number of students (3; 4%) apparently took control of their emotions, the potential impact of this finding is important. Indeed, it appears that seminar experiences in intrapersonal communication and a workshop on conflict management strategies helped some students develop their social intelligence and the necessary skills to recognize and acknowledge the feelings of others as well as the possible reasons that individuals behave in certain ways. When necessary, they tried modifying their behaviors in order to be more effective. The following quote captures this idea: "When I talked to people about a certain thing, they misunderstood me and got the wrong impression about me because they were not paying enough attention...so I felt irritated but instead of getting mad at them I controlled myself then I tried to speak with them again in a different way." Such an approach to self-control appears to have helped this student avoid reacting in a confrontational manner by creating a mutual understanding between himself and others.

## **Discussion**

This study aimed to identify how university students' engagement in a Freshman Year Experience (FYE) at the Petroleum Institute in the UAE affected their well-being. The students' responses in the reflective writing examination showed that their well-being was influenced by their satisfaction with their studies as well as their social lives at the university. This finding supports the arguments in favor of initiatives taken to increase students' academic and social success (Howard & Jones, 2000; VanderStoep & Pintrich, 2008).

The factors we identified to influence students' well-being are noteworthy and can be considered as one of the contributions of this study to the literature. Green et al. (2011) highlight the need for students' holistic development with a focus on well-being. This goal seems to be satisfied partly by the FYE program's attempt to change the traditional role of PI faculty by asking them to take on a more holistic role of academic advising in addition to their teaching responsibilities. Students often expressed that their self-esteem was positively affected by their conversations with their advisors. Overall, students seemed to be satisfied with the advising system and felt a sense of belonging

at the PI as a result of these interactions. This has likely contributed to the development of positive emotions among many PI students toward the university (Hazari, 2013) and may increase the retention rate targeted by the institution, as was found to be the case at the Center for Studies of Higher Education at the University of California-Berkeley (Soria, 2012). The findings of the current study also support earlier research (Al-Asmi & Thumiki, 2014) on the positive influence of engagement with advisors on students' problem solving skills.

Another notable factor that had an effect on students' well-being stemmed from the activities connected to the 'Socialize' component of the program. Students participated in various extracurricular activities organized to encourage them to expand their circle of friends, develop interpersonal skills, and engage in new experiences. In doing so, students were compelled to interact with others in meaningful and memorable ways. This helped them feel accepted and valued. As a result, many developed a deeper relationship with their peers and instructors, which is expected to have a positive impact their well-being (Boniwell, 2006).

Their engagement in the workshops was also commonly expressed as a contributing factor to their personal well-being. By focusing on students' apparent lack of skills in areas such as time-management, the workshops encouraged their confrontation with a disorienting dilemma (Mezirow, 2000) so that students were forced to question their habits and the influence of those habits on their academic success. For some, an awareness of their lack of skills encouraged them to engage in deeper thinking and promote positive changes. This is reflected in the words of a student who noted, "Now I know why it was difficult for me to meet deadlines. In [the time-management] workshop, I learned I can do better." This finding echoes the results of earlier research (Howard & Jones, 2000; Seligman et al., 2009) indicating students' enhanced awareness of bad study habits encourages behavioral modifications and has a positive effect on their self-confidence as successful learners.

The analysis of the data in response to the second research question revealed that the components of their well-being fell within five main domains: self-confidence, self-awareness, communication competence, planning and control over emotions. Some of these were discussed above in relation to the factors that contributed to their well-being. Given that self-awareness and self-confidence were the two most common themes that emerged from the data, it is possible that FYE has the potential of bringing about long-term change in the way students perceive themselves. This is important to the well-being of freshman students as well as their self-concept, as it offers those new to an environment of higher education the chance to see themselves as capable of adjusting to an otherwise unfamiliar context. Pasha and Munaf (2013) found that students' global self-esteem was positively correlated with their overall adjustment to university life and academic performance. As positive self-worth, positive attitudes, and peer relations have been linked to a more positive self-concept and greater academic achievement (Seyfried, 2014; Tattao, 2014), the FYE program may be a key contributor to PI students' social and academic well-being. Nurturing a growth mindset (rather than a fixed mindset) has far-reaching positive consequences for academic success (Dweck, 1999; 2006). When individuals see intelligence as malleable and fluid, they are better

able to envision their performance improving through hard work and appropriate feedback.

Additionally, some students gained awareness of how certain behaviors such as poor study habits, lack of goal setting or time management skills can inhibit their personal development. Indeed, raising awareness about such issues has been shown to directly impact student self-confidence and success (DeBerard, Spielmans, & Julka, 2004; Howard & Jones, 2000; VanderStoep & Pintrich, 2008). Being cognizant of these issues encourages students to increase their self-regulation skills by not only setting meaningful goals (Bandura, 1997), but by adjusting those goals when necessary (Wrosch et al., 2003).

The findings also lend support to the importance of student engagement with the larger campus and community. As Seligman (2011) states, engagement is a large component of well-being, as well as a pathway towards it. Furthermore, well-being is directly linked to students exploring new and often unfamiliar areas of engagement, including social and volunteer activities (Sternberg, 2006; Weiner, 2000). This is consistent with other studies suggesting that such engagement can lead to meaningful growth and change over time (DeBerard et al., 2004; Terrion & Daoust, 2011). As noted by participants in the present study, PI's FYE program encouraged students to meet individuals outside of their regular circle of friends (e.g., by joining a football team) and to participate in activities outside of their comfort zone (e.g., by volunteering at a school for disabled children), which in turn had a positive impact on their sense of well-being.

Helping students widen their network of friends may be of particular interest as it can contribute to their well-being in ways that might not appear important to the casual observer (Bruch, Higbee & Siaka, 2007; Jackman, 2005). However, given the important role collectivism (Lambert, Pasha-Zaidi, Passmore, & York Al-Karam, 2015; Oyserman, Coon & Kemmelmeier, 2002; Wright & Bennett, 2008) plays among students in the UAE, the need to belong is strong. Thus, it is not surprising that forming relationships contributes to one's well-being (Diener, Emmons, Larsen & Griffin, 1985). Although this may be an indirect benefit of the FYE program, encouraging acceptance of peers through purposeful activities can have a positive effect on students' well-being. This is an aspect of FYE that deserves to be expanded in order to take advantage of the positive implications of collectivism inherent in the cultural background of PI students.

Finally, our focus on critical thinking and the use of reflective writing to bring about meaningful change in the way our students perceive themselves and others is worth understanding within the context of PI's FYE program. The focus on positive experiences in the reflective writing task generated positive thoughts and emotion, as suggested by Seligman et al. (2009). It was an important approach to helping students make sense of their new experiences.

## **Limitations and Directions for Future Research**

The main limitation of this study stems from its design which excluded a control group to compare the effects of the FYE program on the participants' well-being. While the researchers were able to interpret the data with this limitation in mind, they acknowledge the possibility that the positive effects identified may have been due to

maturation and other positive experiences college students are likely to experience. Another limitation related to the design of the study stemmed from the data-gathering instrument. First, the writing assignment used to collect data was a course-requirement. Consequently, some students may have felt stressed to comply with the course expectations. Their responses, therefore, may have been unduly influenced. Also, the writing assignment encouraged students to write about only positive experiences; thus, it is possible that some students may have embellished their essays in order to improve their chances of earning a satisfactory mark. Another limitation of this research study was the composition of the sample. The researchers chose to include only those freshman male students they were teaching at the time because accessing female student examination papers was not possible due to institutional regulations. Data were also collected from students who were required to complete the assignment. This prevented voluntary participation, with a possible effect on student responses as noted above.

PI's FYE program offers the potential for meaningful student well-being. As this study suggests, purposeful, deliberate, and planned opportunities for students to engage with peers, faculty, and the community can lead to positive encounters that have a direct impact on well-being. Yet, it is also important to note that unintentional consequences also invariably arise during such encounters. Anticipating these potential benefits of student engagement in PI's FYE is worth considering. For example, providing more opportunities for students to build upon initial encounters with those with whom they normally do not associate may encourage more meaningful relationship-building and a sense of community among individuals. This can be done by offering follow-up social activities and events where initial contact among students can be nurtured in a supportive and engaging atmosphere. Expanding PI's Student Life program, for example, may be one way of accomplishing this objective.

Future research can increase our understanding of how FYE initiatives influence students' well-being by including a control group to assess the possible effects. This could offer more insights into causal relationships. Our understanding of these can be enhanced if future researchers also consider collecting data through triangulation to improve the accuracy of the evaluations made about FYE's effects on college students' well-being. For this purpose, qualitative data from written responses can be supported with data from interviews and/or observations. The control and treatment groups can also be administered a different modality of data collection, which would help identify the effects of FYE on students' well-being more accurately.

Additional research could also consider how best to meet the needs of students that do not necessarily identify with a program like PI's FYE. While providing opportunities for the majority of students to experience well-being is important, equally important is to identify those students who do not feel that structured, prescribed programs fit their needs. Also, the effects of well-being on a student's physical health as well as psychological and emotional state are other areas in need of further study. Changes in PI freshman students' visits to the health center for physical consultation could be examined along with the number of times students access counseling services. Doing so might offer some insight into the effectiveness of FYE in encouraging students to take better care of their physical and psychological needs.

Conducting a longitudinal study of cohorts involved in PI's FYE, from intake to graduation and beyond can offer important insight into the long-term benefits of this type of program as well. This can be particularly beneficial if a control group that does not participate in FYE can be tracked. Finally, conducting a similar study involving both male and female students offers potentially important information about a number of factors affecting FYE participants, including gender differences and identity formation. Indeed, comparing the experiences of students in segregated campuses may offer insights into how best to meet the needs of both males and females. This is especially important in the Middle East and North Africa where segregated campuses are commonly found.

## Conclusion

The results of this study indicate that PI's FYE program appears to have a positive effect on the well-being of male freshman engineering students. Purposeful interactions between students, faculty, and the larger community contributed to the well-being of the individuals involved in this study. This study also offered some insight into the notion that many students compelled to actively participate in a program designed to encourage personal growth are likely to experience positive outcomes. This finding is important for many universities struggling to meet the needs of their students. There are benefits to incorporating the principles of positive psychology into programs designed to help students transition from high school to college and ensure their integration into the larger campus community. While each institutional context is unique, creating purposeful encounters among students, faculty, and the larger community has been shown to make a meaningful difference in the lives of many students with an overall positive effect on their well-being.

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