An Exploration Study of Students' Engagement and Perception of the Teaching and Learning Environment

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The purpose of this study is two-fold: (1) to examine students' perceptions of their capabilities in their respective study programs, and (2) to examine students' perceptions of the quality of the teaching and learning environment. A stratified sample of college students was chosen and consisted of 1086 students (320 male 29.5%, and 766 female students 70.5%) from 3rd and 4th-year students. T-test results indicated that female students tend to be more self-managed and cooperative learners than male students, where male students scored higher on creative thinking, teaching for understanding, feedback to assist learning, assessment, the relationship between teachers and students, and workload. Moreover, t-test indicated that 4th-year students scored higher than 3rd-year students on critical thinking, self-managed learning, adaptability, problem-solving, communication skills, interpersonal skills, group work, and computer literacy. The computed ANOVA showed that there were significant differences between all colleges on the dimensions of the students' engagement questionnaire, except for self-managed learning and the relationship between teachers and students.

Keywords: students' engagement, teaching & learning environment, academic success, higher education

INTRODUCTION

Student engagement is increasingly recognized in higher education as an essential cornerstone and valuable concept that has a significant impact on the process of teaching and learning and contributes to the overall improvement of student academic performance (Kahu, 2013; Oz & Boyaci, 2021).

Student engagement is generally seen as one of the basic requirements and indicators of high-quality teaching, but finding a simple definition is a challenge, as it is affected by a number of different factors and components. However, the Glossary of Education Reform (2016) defined it as "the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education". It can be said that student engagement will not only be achieved by students engaging in learning activities but also by investing in their own education. This may include factors such as attendance, participation in classroom activities, and how much they have their own learning experience. It can also include elements such as a sense of belonging and setting a goal of learning.

A high level of student engagement is usually an indicator of success in the teaching profession (Skinner, Zimmer-Gembeck, & Connell, 1998). However, reaching this high level of engagement can in fact be a major challenge in modern classrooms. This task is also further complicated by the fact that student engagement can be measured in different ways, and the concept itself does not contain a single universally agreed definition.

Student engagement refers to the level of a student's physical and mental commitment to their academic experience. Consequently, highly engaged students are those who put a lot of effort into their studies, spend a lot of time on campus, engage actively in student organizations, and communicate regularly with both instructors and other students (Buchele, 2021).

Students who are fully engaged in the learning process will make repeated attempts to learn and will pay close attention to the topics explained and will show a desire to fully understand these topics beyond what is required of them to pass a test or complete a particular task (Glossary of Education Reform, 2016). Student engagement can be understood more by comparing it to matters indicating non-student engagement, including lack of motivation to learn, lack of interest in materials, limited engagement in classroom activities and/or indicators of deliberate academic delay.

The classroom environment is one of the most important factors affecting students' learning, and the ideal classroom is when students view their classrooms as positive and supportive. The learning environment is not limited only to the classroom where students receive different knowledge, but also a variety of psychological, educational and social factors that together form the learning environment (Banna et al., 2015). However, the classroom is the first element of the learning environment. The basic elements of the learning environment are the classroom, the teacher, and the student. Educators are keen to create a learning environment with values, principles, and positive practices by members of the school community.

RESEARCH PROBLEM

Research has demonstrated that students' engagement in the learning process improves their concentration and focus and encourages them to use more critical thinking skills. Teachers can play an important role to encourage students' engagement which then improves achieve the learning objectives.

The success of any education depends on the educational environment in which it occurs, the learning environment plays an important role in achieving the goals of education along with the curriculum, the teacher and modern teaching methods that play the role of the learner. It is the heart of the educational process, and in order to achieve the goals of education, the learning environment must be attractive and interesting, where students feel comfortable, secure, challenged and motivated. Therefore, the main objective of this exploratory study was to investigate the students' perceptions of their capabilities and the quality of their teaching and learning environments in various academic programs at the University of Bahrain.

The current study explores the students' engagement and perception of the teaching & learning environment at the University of Bahrain. Specifically, the following questions are sought by this study:

1. Are there any significant differences in the students' engagement as measured by their overall perception of developing their skills and abilities in their respective study programs due to gender, year level, college and achievement level?
2. Are there any significant differences in the eight scales measuring students' perceptions of developing their skills and abilities in their respective study programs due to gender and year level?
3. Are there significant differences in the students' engagement as measured by their overall perceptions of the quality of the teaching and learning environment due to gender, year level, college and achievement level?
4. Are there significant differences in the nine scales measuring students' perceptions of the quality of the teaching and learning environment due to gender and year level?
5. Is there any significant relationship between students' perceptions of developing their skills and abilities and their perception of the quality of the teaching and learning environment?

6. Is there any significant effect of the variables of Gender, College, Year Level and achievement level on the students' perceptions of developing their skills and abilities and their perceptions of the quality of the teaching and learning environment?

LITERATURE REVIEW

Students' engagement is looked at as an important component in the teaching and learning process. Educators all over the world believe that students' engagement leads to educational success (Skinner, Zimmer-Gembeck, & Connell, 1998). Although there are many definitions for student engagement in literature, there seems to be a consensus among some researchers that students' engagement is the extent to which students are involved in classroom activities (Astin, 1993; Chickering and Gamson, 1987).

Students' engagement was conceptualized into three components, affective, behavioral, and cognitive (Parsons, Nuland, & Parsons, 2014; Malloy, Parsons, & Parsons, 2013; Shernoff, 2013; Fredricks, Blumenfeld, & Paris, 2004). These components indicate the extent students are actively engaged in classroom activities (Connell, 1990; Connell & Wellborn,1991; Fiedler, 1975; Wellborn, 1991).

Fredricks et al. (2004) defined these three concepts clearly. Behavioral engagement refers to the students' positive attitudes in getting involved in school activities and positive attitudes of the students during the resolution of activities. Emotional engagement is students' emotional reactions to the activities and other elements of the school environment. Cognitive engagement involves the students' mental involvement in the learning process. It is the students' attempts to comprehend the activities and learn from them.

Students' engagement is crucial in the classroom (Christenson, Reschly, & Wylie, 2011; Fredricks, Blumenfeld, & Paris, 2004; National Research Council, 2004; Skinner, Kindermann, Connell, & Wellborn, 2009). It is important because it predicts the achievement of the learning outcomes and the willingness to participate in a variety of educational activities (Furrer & Skinner, 2003; Skinner & Belmont,1993). When classroom instructions are based on students-center activities, learning happens (Ivey & Johnston, 2013). Skinner and Pitzer (2012) stated that students' engagement is "a robust predictor of students' learning, grades, achievement test scores, retention, and graduation" (p. 21). They also mentioned that "Engagement is the direct pathway to cumulative learning, long-term achievement, and eventual academic success" (pp. 23–24). Teachers can observe students' engagement and reaction to the educational activities and their attendance and readiness for classes. Some researchers show the connection between students' engagement and their motivation. If students are motivated through teachers' teaching strategies, this will affect their engagement in the classroom and school activities (Ames & Archer, 1988).

To engage students with classroom activities, teachers are ought to use effective teaching strategies, for example using group activities. Group activities encourage students to participate and interact with classmates actively. Students can discuss and share ideas and work together as a team (Kanthan, 2011). Integration of technology, especially games, can be an effective way of engaging students. Such activities will increase students' engagement and motivation (Fitz-Walter; Tjondronegoro & Wyeth, 2012). A name for this kind of activity is called gamification (Werbach & Hunter, 2012). Applications like Kahoot, Quizlet, Paddles and many others are used where there are rewards, usually scores, for good performance (Liu, Alexandrova, & Nakajima, 2011). If students do the activities and finish them successfully, this can be considered a sign of engagement (Birch & Ladd, 1997; Finn et al., 1995).

Although many researchers contended that using different teaching strategies can keep the students engaged, there are still some problems to maintain all students' enthusiasm to engage in the activities. Some groups of students may not develop the necessary levels of engagement to reach their full learning potential (Gapp and Fisher, 2012). Students' engagement can happen in the classroom if the teacher develops an appropriate learning environment (Pianta et al., 2002). Chin (2002) indicated that students' engagement can be enhanced if students feel comfortable. Classroom environment refers to the general physical and atmosphere of a classroom. Teachers have the power to prepare the classroom environment to create a positive teaching and learning process.

The structure of the classroom and the implementation of certain academic activities can gauge the students' engagement, for example, a high level of engagement is observed when students work in groups (Cavanagh, 2011; Rocca, 2010). Relationships among students and between students with their teachers are other factors that support students' participation and overall learning (Russell and Slater, 2010; Finn, Pannozzo, & Voelkl, 1995; Skinner & Belmont, 1993).

The school environment can also play a role in encouraging students to engage in activities. Sullivan et. al. (2009) claim that if there is no proper preparation, it will be hard for students to perform the tasks and that could harm students rather than improve their learning. The classroom set-up and organization make students commit and willing to be active participants. Furthermore, a number of researchers identified that different physical environments like classroom arrangements, learning materials, posters, and classroom size can affect the learning process (Faulk & Evanshen, 2013).

The relationship between students' perceptions of the learning environment and students' achievements has been studied by many researchers (Fraser & Walberg, 1991; Goh & Khine, 2002). Banna et al. (2015), Britt (2015), and Meyer (2014) believe that there is an association between student engagement and students' cognitive development and their success. This association is shown in a meta-analysis study by Fraser (1994).

METHODOLOGY

Sample and Data Collection

A stratified sample of college students was chosen and consisted of 1086 students (320 male 29.5%, and 766 female students 70.5%) from 3rd and 4th- year students. Participants of the study were drawn from 7 colleges at the University of Bahrain, Engineering, Science, Arts, Business, Law, Information Technology and Bahrain Teachers College. The study sample was chosen from all the university colleges as illustrated in table 1.

TABLE 1
SAMPLE DISRIBUTION BASED ON GENDER AND COLLEGE

College	Male		Female		Total	
	Number	Percentage %	Number	Percentage %	Number	Percentage %
Engineering	64	46.4	74	53.6	138	12.7
Science	16	14.2	97	85.8	113	10.4
Arts	33	28.4	83	71.6	116	10.7
Business Admin	35	32.1	74	67.9	109	10.0
Law	71	24.7	217	75.3	288	26.5
IT	84	37.3	141	62.7	225	20.7
BTC	17	17.5	80	82.5	97	8.9
Sum	320	29.5	766	70.5	1086	100

This study is a quantitative descriptive study, investigating different variables that influence students' engagement levels and perception of the teaching and learning environment at the University of Bahrain (UoB).

Variables such as college, year, gender and GPA were all considered independent variables and important to further understanding students' engagement levels. While the student engagement level was considered a dependent variable and was measured by the Student Engagement Questionnaire (SEQ) (Kember, Leung, & McNaught, 2005) which is comprised of three sections using a 5-point Likert scale.

Construct validity was calculated based on the correlation between the different domains of the instrument and the overall score on both parts of the instrument, the students' perceptions of their abilities and the student's perceptions of the quality of teaching and learning (inter-correlation among cluster scales) as illustrated in table 2.

TABLE 2
INTER-CORRELATION BETWEEN THE DIMENSIONS OF THE FIRST PART OF THE INSTRUMENT (STUDENTS' PERCEPTION OF THER ABILITIES AND THE TOTAL SCORE)

Dimensions	Pearson-r between the dimensions of students' perceptions of their capability and the total score	
	Factors	Significant Level
Critical thinking	**0.615	0.01
Creative thinking	**0.618	0.01
Self-managed learning	**0.598	0.01
Adaptability	**0.593	0.01
Problem solving	**0.656	0.01
Communication skills	**0.706	0.01
Interpersonal skills and group work	**0.685	0.01
Computer literacy	**0.532	0.01

**Sig. at 0.01

TABLE 3
INTER-CORRELATION BETWEEN THE DIMENSIONS OF THE SECOND PART OF THE INSTRUMENT (STUDENTS' PERCEPTION OF QUALITY OF THE TEACHING AND LEARNING ENVIRONMENT AND THE TOTAL SCORE)

Dimensions	Pearson-r between the dimensions of students' perceptions of the quality of the teaching and learning environment and the total score	
	Factors	Significant Level
Active learning	**0.639	0.01
Teaching for understanding	**0.746	0.01
Feedback to assist learning	**0.730	0.01

Assessment	**0.726	0.01
Relationship between teachers and students	**0.678	0.01
Workload	**0.576	0.01
Relationship with other students	**0.515	0.01
Cooperative learning	**0.422	0.01
Coherence of curriculum	**0.608	0.01

**Sig. at 0.01

Internal consistency reliability estimates were assessed with Cronbach Alpha. The alpha value for the first domain was 0.819, and for the second domain was 0.857, therefore the questionnaire was considered to be reliable.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences 26.0 (SPSS). Frequencies, means, and standard deviations were calculated for all survey questions. In addition, t-test, ANOVA and Pearson product-moment correlation coefficient tests were used to determine significant differences between groups.

RESULTS

The results are presented according to the six main questions of the study as follows:

1. Are there any significant differences in the students' engagement as measured by their overall perceptions of developing their skills and abilities in their respective study programs due to gender, year level, college and achievement level?

To answer this question, a t-test was calculated and revealed that there were no differences between male and female students in their overall perception of their developing their skills and abilities in their respective study programs. The mean score of 3.87 for males and 3.89 for females, with the t- value of (-0.749) was not significant (see table 4).

TABLE 4
T-TEST FOR COMPARING MALE AND FEMALE STUDENTS AT THEIR OVERALL PERCEPTINS FOR DEVELOPING THEIR SKILLS AND ABILITIES IN THEIR RESPECTIVE PROGRAMS

Dimension	Male N = 317		Female N = 766		Total Overall		t-value	Sig. Level	Direction of Difference
	M	SD	M	SD	M	SD			
Students' perception for developing their skills and abilities	3.866	0.530	3.891	0.507	3.879	0.519	-0.749	Not sig.	-

**Sig. at 0.01

For the year level, the t-test revealed a significant difference between year three (M= 3.81) and year four students (M = 3.95), with a t-value of (4.16) which was significant at 0.001. Year four students had a better perception for developing their skills and abilities compared to year three students (see table 5).

TABLE 5
T-TEST FOR COMPARING YEAR THREE AND FOUR THREE STUDENTS AT THEIR OVERALL PERCEPTION FOR DEVELOPING THEIR SKILLS AND ABILITIES

Dimension	3rd year N = 533		4th year N = 553		t-value	Sig. Level	Direction of Difference
	M	SD	M	SD			
Year Level	3.818	0.526	3.947	0.494	-4.164	0.001	4th Year

**Sig. at 0.01

For the college variable, ANOVA test revealed significant difference between colleges at 0.001 with F-value 10.48, as shown in table 6.

TABLE 6
RESULTS OF ONE-WAY ANOVA FOR IDENTIFYING SIGNIFICANT DIFFERENCES BETWEEN COLLEGES ON THE STUDENTS' PERCEPTIONS FOR DEVELOPING THEIR SKILLS AND ABILITIES

Dimension	Sum Squares	df	MS	F- Value	Sig. level
Students' perception for developing their skills and abilities	15.78	6	2.63	10.84	0.01

**Sig. at 0.01

Scheffe test revealed that Bahrain Teachers College Students (BTC) have a better overall perception of developing students' skills and abilities than students at College of Engineering, College of Science, College of Law and College of Business. Students at College of Art have a better overall perception for developing their skills and abilities than students at College of Engineering, College of Business, College of Law and College of Business. Students at IT College have a better overall perception of developing their skills and abilities than students at the college of Business.

For the achievement level, ANOVA test revealed significant difference at 0.001 with F-value 6.073, as shown in table 7.

TABLE 7
RESULTS OF ONE-WAY ANOVA FOR IDENTIFYING SIGNIFICANT DIFFERENCES IN THE ACHIEVMENT LEVELS ON STUDENTS' PERCEPTIONS FOR DEVELOPING THEIR SKILLS AND ABILITIES

Dimension	Sum Squares	df	MS	F- Value	Sig. level
Students' perception for developing their skills and abilities	6.297	4	1.574	6.073	0.001

**Sig. at 0.01

Scheffe test revealed that students with higher GPA (more than 3.0) have better overall perception for developing their skills and abilities, comparing to students with GPA less than 2.00.

2. Are there any significant differences in the eight scales measuring students' perception of developing their skills and abilities in their respective study programs due to gender and year level?

To answer this question, a t-test was calculated to compare means between the eight scales measuring students' perception of developing their skills and abilities in their respective study programs. A t-test revealed that male students (M = 3.38) have better perception than female students (M = 3.15) in developing their creative thinking skills. This difference was significant at 0.001 with a t-value 3.38.

On the other hand, the t-test revealed that female students (M = 4.23) have a better perception than male students (M = 4.02) in developing their self-learning skills. This difference was significant at 0.001 with a t-value of -3.73, see table (8).

TABLE 8
T-TEST FOR COMPARING MALE AND FEMALE STUDENTS AT THEIR OVERALL PERCEPTION OF CREATING THINKING AND SELF-MANAGE LEARNING

Dimension	Male N = 317		Female N = 766		Total		t-Value	Sig. Level	Direction of Difference
	M	SD	M	SD	M	SD			
Creative Thinking	3.383	0.989	3.157	1.025	3.232	1.019	3.338	0.001	Male Students
Self-Manage Learning	4.025	0.866	4.230	0.723	4.157	0.777	-3.734	0.001	Female Students

**Sig. at 0.01

For the year level, t-test revealed that four-year students have better self-perception in developing seven out of eight skills that lead to better learning outcomes compared to third- year students. These skills are critical thinking, self-managed learning, adaptability, problem-solving, communication skills, interpersonal skills and group work, and computer literacy. For more details on comparing means and t-values, see table (9).

TABLE 9
T-TEST FOR COMPARING YEAR THREE AND YEAR FOUR STUDENTS AT EIGHT SCALES MEASURING PERCEIVED DEVELOPMENT OF LEARNING OUTCOMES OF CAPABILITIES

Dimension	3rd year n= 533		4th year n= 553		t-value	Sig. t.	Direction of Difference
	M	SD	M	SD			
Critical thinking	4.104	0.716	4.211	0.608	-2.647	0.01	4th Year
Creative thinking	3.197	1.019	3.249	1.021	-0.849	Non-Sig.	-
Self-managed learning	4.099	0.792	4.238	0.749	-2.959	0.01	4th Year
Adaptability	3.988	0.711	4.113	0.698	-2.926	0.01	4th Year
Problem solving	3.781	0.793	3.95	0.691	-3.765	0.001	4th Year
Communication skills	3.795	0.819	3.974	0.807	3.630-	0.001	4th Year
Interpersonal skills and group-work	3.721	0.905	3.831	0.927	1.970-	0.05	4th Year
Computer literacy	3.854	0.931	4.016	0.925	2.870-	0.01	

**Sig. at 0.01

3. Are there significant differences in the students' engagement as measured by their overall perceptions of the quality of the teaching and learning environment due to gender, year level, college and achievement level?

To answer this question, a t-test was calculated and revealed that there was a significant difference between male (M = 3.57) and female students (M = 3.44) in their overall perceptions of the quality of the teaching and learning environment. the t-value was -3.24.749, which was significant at 0.001. See table (10).

TABLE 10
T-TEST FOR COMPARING MALE AND FEMALE STUDENTS AT THEIR OVERALL PERCEPTION FO THE QUALITY OF THE TEACHING AND LEARNING ENVIRONMENT

Dimension	Male N = 317		Female N = 766		Total		t-Value	Sig. Level	Direction of Difference
	M	SD	M	SD	M	SD			
Students' perception for the quality of the teaching and learning environment	3.568	0.589	3.439	0.602	3.477	0.595	-3.243	0.001	Male Students

**Sig. at 0.01

For the year level, the t-test revealed no significant difference between year three and year four students. The mean score for year three of 3.49 for year three and 3.47 for year four students, with a t-value of 0.59 was not significant. See table (11).

TABLE 11
T-TEST FOR COMPARING YEAR THREE AND YEAR FOUR STUDENTS AT THEIR OVERALL PERCEPTION FOR THE TEACHING AND LEARNING ENVIRONMENT

Dimension	3rd year n= 533		4th year n= 553		t-value	Sig. level	Direction of Difference
	M	SD	M	SD			
Year Level	3.488	0.607	3.466	0.595	0.598	Not sig.	-

**Sig. at 0.01

For the college variable, One Way ANOVA test revealed significant difference between colleges at 0.001 with F-value (5.27) as illustrated in table 12.

TABLE 12
RESULTS OF ONE-WAY ANOVA FOR IDENTIFYING SIGNIFICANT DIFFERENCES BETWEEN COLLEGES ON THE STUDENTS' PERCEPTIONS FOR THE QUALITY OF THE TEACHING AND LEARNING

Dimension	Sum Squares	df	MS	F- Value	Sig. level
Students' perception for the quality of the teaching and learning environment	11.168	6	1.861	5.277	0.01

**Sig. at 0.01

Scheffe test revealed that Bahrain Teachers College Students (BTC) have a better overall perception for the quality of the teaching and learning environment than students at the College of Business. While students at IT College have better overall perception for the quality of the teaching and learning environment than students at the college of Business. For the achievement level, ANOVA test revealed a significant difference at 0.001 with F-value 5.68, as shown in table 13.

TABLE 13
RESULTS OF ONE-WAY ANOVA FOR IDENTIFYING SIGNIFICANT DIFFERENCES BETWEEN ACHIEVEMNET LEVELS ON THE STUDENTS' PERCEPTIONS FOR THE QUALITY OF THE TEACHING AND LEARNING ENVIRONMENT

Dimension	Sum Squares	df	MS	F- Value	Sig. level
students' perception for the quality of the teaching and learning environment	8.077	4	2.019	5.688	0.001

**Sig. at 0.01

Scheffe test revealed that students with higher GPAs (more than 3.0) have better overall for the quality of the teaching and learning environment compared to students with GPA of less than 2.00.

4. Are there significant differences in the nine scales measuring students' perception of the quality of the teaching and learning environment due to gender and year level?

To answer this question, a t-test was calculated to compare means between the nine scales measuring students' perception of the quality of the teaching and learning environment. A T-test revealed that male students have better perception than female students in developing four out of nine skills; these skills are teaching for understanding, feedback to assist learning, assessment and workload. While the t-test revealed that female students have better perception than male students in developing one skill which was the cooperative learning skill. For more details on these differences, see table 14.

TABLE 14
T-TEST FOR COMPARNG MALE AND FEMALE STUDENTS AT NINE SCALES MEASURING THEIR PERCEPTION OF THE QUALITY OF TEACHING AND LEARNING ENVIRONMENT

Dimension	Male N= 317		Female N=766		Total		t-Value	Sig. level	Direction of Difference
	M	SD	M	SD	M	SD			
Active learning	3.525	0.913	3.440	0.941	3.468	0.929	1.360	not sig.	-
Teaching for understanding	3.397	0.978	3.176	0.982	3.236	0.982	3.380	0.001	Male Students
Feedback to assist learning	3.473	0.908	3.346	0.916	3.380	0.910	2.080	0.05	Male Students
Assessment	3.638	0.758	3.515	0.821	3.549	0.796	2.296	0.05	Male Students
Relationship between	3.559	0.964	3.495	0.970	3.520	0.964	0.997	not sig.	-

teachers and students									
Workload	3.157	1.226	2.451	1.224	2.668	1.259	8.646	0.001	Male Students
Relation with other students	3.831	0.929	3.849	0.931	3.848	0.921	0.292-	not sig.	-
Cooperative learning	3.915	0.938	4.075	0.857	4.019	0.877	2.172-	0.01	Female Students
Coherence of curriculum	3.577	0.957	3.558	0.972	3.562	0.962	0.295	not sig.	-

**Sig. at 0.01

For the year level, a t-test was calculated to compare means between year three and year four students on the nine scales measuring their perception of the quality of the teaching and learning environment. A t-test revealed a significant difference in only one skill out nine on the perception of the workload skill. Year three students had a higher mean (M = 2.81) than year four students (M = 2.51) with a t-value of 3.95 at the significant level of 0.001. Year three students had a better self-perception of their skills to manage their workload, as illustrated in table 15.

TABLE 15
T-TEST FOR COMPARING YEAR THREE AND YEAR FOUR STUDENTS AT EIGHT SCALES MEASURING PERCEIVED DEVELOPMENT OF LEARNING OUTCOMES OR CAPABILITIES

Dimension	3rd year N = 533		4th year N = 553		t-value	Sig. level	Direction of Difference
	M	SD	M	SD			
Workload	2.812	1.265	2.51	1.249	3.957	0.001	3rd Year

**Sig. at 0.01

5. Is there any significant relationship between students' perception of developing their skills and abilities and their perception for the quality of the teaching and learning environment?

To answer this question, Pearson product-moment correlation was calculated between the overall students' perception for developing their skills and abilities and their perception for the quality of the teaching and learning environment. The correlation coefficient was 0.59 which was significant at 0.001. This means that there was a positive relationship between students' perception of developing their skills and abilities and their perception for the quality of the teaching and learning environment.

6. Is there any significant effect for the variables of gender, College, Year Level and Achievement level on the students' perception of developing their skills and abilities and their perception of the quality of the teaching and learning environment?

To answer this question, the MANOVA test revealed that gender had a significant effect on students' perception of the quality of the teaching and learning environment, F = 5.65 and a significance level of 0.005. Gender had no significant effect (F = 0.78) on the students' perception of developing their skills and abilities. See table (16).

TABLE 16
MANOVA TEST FOR THE SIGNIFICANT EFFECT FOR THE INDEPENDENT VARAIBLES ON THE STUDENTS' PERCEPIONS OF DEVELPING THEIR SKILLS AND ABILITIES AND THEIR PERCEPTION SOF THE QUALITY OF THE TEACHING AND LEARNING ENVIRONMENT

Independent Variables	Dependent Variables	Sum Squares	df	MS	F- Value	Sig. level
Gender	Students' perception for developing their skills and abilities	0.17	1	0.17	0.788	Not Sig.
	Students' perception for the quality of the teaching and learning environment.	1.751	1	1.751	5.654	0.05
College	Students' perception for developing their skills and abilities	9.641	6	1.607	7.436	0.001
	Students' perception for the quality of the teaching and learning environment.	9.611	6	1.602	5.172	0.001
Year Level	Students' perception for developing their skills and abilities	2.924	1	2.924	13.532	0.001
	Students' perception for the quality of the teaching and learning environment.	0.349	1	0.349	1.127	Not Sig.
GPA	Students' perception for developing their skills and abilities	1.028	4	0.257	1.189	Not Sig.
	Students' perception for the quality of the teaching and learning environment.	2.44	4	0.61	1.97	Not Sig.

**Sig. at 0.01

It was also found that the college variable had a significant effect at 0.001 on students' perception of developing their skills and abilities (F = 7.43) and their perception of the quality of the teaching and learning environment (F = 5.17).

For the year level, MANOVA revealed a significant effect at 0.001 on students' perception for the development of their skills and abilities (F = 13.53), while the year level did not have any significant effect of students' perception of the quality of the teaching and learning environment (F = 1.12).

It was additionally found that there was no significant effect for the students' achievement level on their perception of developing their skills and abilities nor for their perception for the quality of the teaching and learning environment.

DISCUSSION

The aim of this study was to investigate the students' perceptions of their capabilities and the quality of their teaching and learning environments in various academic programs at the University of Bahrain. This topic has been investigated by many researchers (Fraser & Walberg, 1991; Goh & Khine, 2002). The relationship between learning environment and students' achievement has been studied by many researchers and was found to be positive in this study and this agrees with what was found by Banna et al. (2015), Britt (2015), and Meyer (2014) as well as in a meta-analysis study by Fraser's (1994).

The results of the study revealed that there is a significant difference between year three and year four students in their overall perception for the development of their skills and abilities. Year four students had a better perception of developing their skills and abilities compared to year three students. This can be due to the academic maturity of four-year students. For the year level, the t-test revealed a significant difference in only one skill out of nine on the perception of the workload skill. Year three students had a higher mean than year four students. Year three students had better self-perception of their skills to manage their workload. However, there was no significant difference was found between year three and year four students in their overall perceptions of the teaching and learning environment. It can occur as a result of the nearly same learning environment shared by all the students.

Fourth-year students are advanced in their studies at the university, that is why it is not surprising to find that they have better self-perception in developing seven out of eight skills that lead to better learning outcomes compared to year third-year students. These are critical thinking, self-managed learning, adaptability, problem-solving, communication skills, interpersonal skills, group work and computer literacy. Third-year students had better self-perceptions than fourth-year students for their skills to manage their workload. Furthermore, the results of One-Way ANOVA revealed a significant difference between colleges in the students' perception of developing their skills and abilities. Bahrain Teachers College Students (BTC) as an education college have a better overall perception of developing students' skills and abilities than students in other colleges.

In terms of gender, it was found that male students have a better perception than female students in developing their creative thinking skills, whereas female students have a better perception than male students in developing their self-learning skills. There were no other significant differences between them in the other skills.

Examining male and female students at their overall perception of the quality of the teaching and learning environment, it was revealed that there was a significant difference between male and female students, in favor of male students. This is in agreement with Harper, et al. (2004) study. However, there was no significant difference between year three and year four students, but there were significant differences between colleges. Here again, Bahrain Teachers College students (BTC) have a better overall perception of the quality of the teaching and learning environment than students at other colleges. It was also found that there were significant differences in the nine scales measuring students' perception of the quality of the teaching and learning environment due to gender and year level. The results showed that male students have better perception than female students in developing four out of nine skills; these skills are teaching for understanding, feedback to assist learning, assessment, and workload, while female students have better perception than male students in developing one skill which was the cooperative learning skill. There were also significant differences between all colleges on the dimensions of the engagement questionnaire, except for self-managed learning and the relationship between teachers and students.

Finally, the results found that there were significant effects for the variables of gender, college, and year level, but not for achievement level, on the students' perception of developing their skills and abilities and their perception of the quality of the teaching and learning environment.

Researchers usually measure students' engagement by their active participation, such as effort, or by their initiative by being responsible for their own activities. For example, in one line of research, engaged people to express their active task involvement by being goal-directed, focused, intense, persistent, and interested (Connell, 1990; Connell &Wellborn, 1991; Furrer & Skinner, 2003; Wellborn, 1991).

Furthermore, the results revealed that gender had a significant effect on students' perception of the quality of the teaching and learning environment, but not significantly on the students' perception of developing their skills and abilities. It was also found that the college variable had a significant effect on students' perception of developing their skills and abilities and their perception of the quality of the teaching and learning environment. For the year level, it was found a significant effect on students' perception of developing their skills and abilities, while the year level did not have any significant effect on students' perception of the quality of the teaching and learning environment. It was also found that there was no significant effect of the students' achievement level on their perception of developing their skills and abilities nor on their perception of the quality of the teaching and learning environment.

Overall, this study is in line with Astin's (1984) theory of involvement in which he assumed that students learn more when they are involved in the academic of collegiate experience. Astin (1993) and Pascarella et al., (1996) specified three academic practices that affect students' learning:

(a) quality of teaching
(b) interactions with other students and
(c) a supportive campus environment.

CONCLUSION

Achieving a high level of student engagement is essential for academic success and excellence in teaching. Students are more likely to retain valuable information and develop a comprehensive and thorough knowledge of whether they feel that the lessons they learn are interesting, fun, useful, meaningful and important to them.

The results of this study provide some interesting information to the stakeholders about the students' perceptions of students' capabilities and the quality of their teaching and learning environments in various academic programs at the University of Bahrain. As might be expected, achieving student engagement in modern classrooms requires using the appropriate learning environment. The learning environment can help ensure that students maintain focus and invest in their learning, ultimately improving learning outcomes and making lessons more valuable to them. Students are more motivated to learn and produce better, more promising academic results when they feel engaged, accountable for their learning, and at ease enough to actively participate in both group and individual activities.

Although there are some significant differences between the students in terms of gender, year level, college and achievement level, the positive side is that all students exerted that they are good at the eight scales (Critical thinking, Creative thinking, Self-managed learning, Adaptability, Problem-solving, Communication skills, Interpersonal skills and group-work, Computer literacy) measuring perceived development of learning outcomes or capabilities as well as on the nine scales (Active learning, Teaching for understanding, Feedback to assist learning, Assessment, Relationship between teachers and students, Workload, Relation with other students, Cooperative learning, Coherence of curriculum) measuring their perception of the quality of the teaching and learning environment.

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