A study of Emirati Undergraduates Students' Perceptions of Cooperative Learning

دراسة حول مفهوم التعليم التعاوني لدى الطالبات الاماراتيات في المرحلة الجامعية

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ABSTRACT

The purpose of this study is to investigate the Emirati students' perception of using cooperative learning to progress their learning process. The study site is one of the Higher Colleges of Technology campuses in United Arab Emirates. The sample size is two hundred and twenty four participants that have been selected randomly from different programs. This study combines both the quantitative and qualitative research methods which include questionnaire and interviews to reach the final research findings and researcher recommendations.

The findings of this research prove the importance of using cooperative learning to improve the students' learning process. The final overall recommendations indicate the need to increase the usage of cooperative learning techniques to ensure a sustain improvement of students' learning process.

Keywords: UAE, Students, Teaching Methods, Cooperative Learning, Learning Process.

الملخص

تهدف هده الدراسة إلي تقصي تأثير التعلم التعاوني في تطوير العملية التعليمية في المرحلة الجامعية. تم تنفيذ هذه الدراسة في إحدي كليات مجمع كليات التقنية العليا في دولة الإمارات العربية المتحدة من خلال عينة حجمها ٢٢٤ طالبة تم إختيارهم بشكل عشوائي من مختلف التخصصات.

تنطلق هذه الدراسة من نظريات مختلفة تفيد بأهمية التعلم التعاوني بين الدارسين في المرحلة الجامعية وتأثيره الإيجابي في تطوير التعلم؟ وقد تم استخدام منهج بحثي متعدد الأساليب في جمع البيانات والمعطيات الازمة عن طريق الإستبيان والمقابلات الشخصية لإعطاء نظرة شاملة لجوانب الدراسة.

توصلت الباحثة ــ من خلال هذه الدراسة ــ إلى أهمية التعلم التعاوني لتطوير عملية التعلم لدي الدارسين في المرحلة الجامعية على الصعيدين الأكاديمي والشخصي حيث تشير المقترحات النهائية إلى الحاجة لزيادة استخدام التقنيات المختلفة من التعلم التعاوني لتعزيز تطوير العملية التعليمية.

الكلمات الرئيسية: الإمارات، الطالبات، طرق التدريس، التعلم التعاوني، عملية التعلم

Dedication

This dissertation is dedicated to my lovely mother, father and sister who inspire me to make a difference in my life, who always show me how to keep moving even when I do not want to do it.

I would like to thank someone special in my life who always inspires me to be a better person and made me believe that anything is possible.

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ACRONYMS

BUiD: British University in Dubai

CL: Cooperative Learning

CS: Central Services

HEIs: Higher Education Institutions

HCT: Higher College of Technology

LBD: Learning By Doing

MOHESR: Ministry of Higher Education and Scientific Research

PBL: Problem-Based Learning

RKWC: Ras Al Khaimah Women's College

RRC: Researcher Review Committee

SPSS: Statistical Package for the Social Science

UAE: United Arab Emirates

UAEU: United Arab Emirates University

ZPD: Zone of Proximal Development

CHAPTER ONE: INTRODUCTION

"Education is like a lantern which lights your way in a dark alley- Sheikh Zayed bin Sultan Al Nahyan - May Allah rest his soul in peace". (Langton 2013)

Education is one of the top priorities of the United Arab Emirates (UAE). The founding fathers considered it a great imperative to educate and train it's people. Though the education system is still in its early stages, concerted efforts are being done to fast track the development of quality education in the UAE (Kirk 2010).

Since the declaration of the UAE in 1971, higher education has become an important aspect of the country's development strategies. The UAE government established the first federal higher education institution in 1977, which is the UAE University (UAEU) under their mission which is a"….. a research focused, student-centred educational experience, the university develops the intellectual, practical, creative and leadership abilities of the nation's men and women while enhancing cultural, social and economic growth" (see UAEU website, 2014). Later, as the local demand for university education grew; the UAE government established other Higher Education Institutions (HEIs) which now consist of UAEU, Zayed University, and the Higher Colleges of Technology (HCT). The Higher Colleges of Technology opened in 1988 and has 17 branches throughout the UAE that provide a high quality of education for their students by offering different fields where they can learn by doing (Kirk, 2012).

In the last two decades, with the increasing demand for education, the UAE government has offered semi-governmental institutions like; American University of Sharjah, Ajman University of Sciences and Technology. Eventually, more private higher education

institutions were established like; British University in Dubai, New York University in Abu Dhabi and other private universities and colleges around the UAE (Kirk, 2012).

The three public Higher Education Institutions hire qualified teachers from different countries to encourage diversity of teaching methods and create a cross cultural educational environment. All these efforts are geared to promote highest quality education for the UAE Nationals which ultimately is aimed towards the realization of the Emiratization policy. H.H Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and the Ruler of Dubai launched 2013 as Emiratization year (Zaman 2012). With the implementation of this policy, there is a need to employ more and more UAE national in all fields which includes teaching in higher education institutions.

> *The development of education, the competencies and capabilities of the U.A.E nationals will remain our main priority. – Sheikh Mohammed Bin Rashid Al Maktoum, Rule of Dubai and Prime Minister of the UAE (Dossari 2009)*

With the cross cultural composition of teachers comes diversity in style and approaches in teaching. In the educational environment, teaching methods play an important role in providing different strategies for students' engagement in the learningprocess. This is to ensure students'achievement, maintenance of quality education and excellent reputation for the college or the university in the society. Slavin (1996) states that cooperative learning shows positive potential to be used in higher education. Therefore, it is very important to investigate theeffectiveness of cooperative learning usage in improving the learning process as perceived by college students

1.1 Statement of the Problem

The quality of education is linked to many factors. Among the factors that Abaalkhail and Irani (2012) identified are: faculty recruitment, teaching quality, and pedagogy. They have considered the paramount importance of high quality recruitment of academic staff and the pedagogy. One of the requirements of quality education is having quality pedagogy. The quality of teaching methods significantly affects the quality of education. According to Henard and Roseveare (2012) quality teaching is the use of pedagogical techniques to produce learning outcomes for students. These methods and strategies consequently produce effective teaching outcomes.

Awofala (2012) defines effective teaching as "producing the required results that are a reflection of teachers and the objectives of education through tangible changes in students' learning where Centra (1993) points out that effective teaching " produces beneficial and purposeful student learning through the use of appropriate procedures". Additionally, Cabrera and Nasa (2002) state that effective teaching is "one that produces demonstrable results in terms of the cognitive and affective development of the college students" (p.3). According to the above definitions and othersintroduced by researchers, it is obvious that teaching pedagogy is an important key in developed any educational system.

Interacting inside the classroom is considered an important aspect of college experience where interaction between teacher and students is associated with students' academic development as well as their personal development (Lau, 2003; Pascarella &Terenzini, 1991). Teacher-student interaction is an important aspect in increasing students' educational aspirations (Gurin and Katz, 1966), influencing academic development (Bean, 1980; Chickering and McCormick, 1973; Spady, 1971) and personal and social development (Chickering and McCormick, 1973; Lacy, 1978; Weidman, 1979).

Based on the aforementioned factors, this study will determine theeffectiveness of cooperative learning in improving the learning process from college students' perspective.

1.2 Background of the Research

There are three main public HEIs in the UAE that provide the industry and community with highly qualified graduates. One of these universities is Higher College of Technology (HCT) which was opened in 1988 by the pervious Minister of the Ministry of Higher Education H.H Sheikh Nahayan bin Mabarak Al Nahayan. HCT has seventeen campuses in urban and rural locations in the UAE for men and women that provide a variety of programs. It gives students the needed abilities and knowledge to be well prepared for their future work (see HCT website, 2013). Furthermore, HCT offers different types of learning by doing to students beside the traditional methods like, workshops, training courses and educational field tours that lead to an excellent reputation of the HCT colleges.

Therefore, at the beginning of the new academic year 2012-2013, the pervious chancellor of the Ministry of Higher Education, H.H Sheikh Nahyan bin Mubarak Al Nahyan launched a new program called Learning by Doing – LBD, which is "….an educational approach where students acquire essential knowledge and skills through active, self-reflection engagement with the world inside the classroom and beyond and it can occur in many contexts which comes under different strategies like collaborative work, laboratory work, research paper and projects, presentations and problem solving" (see HCT website 2013). He added that our HCT students and teachers already adopt an LBD philosophy through using different strategies in the learning process like problem-based learning, experiential education and other strategies (see HCT website 2013).

HCT started its educational system with expat teachers and staff, however, with the development of the education system in the UAE, the Ministry of Higher Education and Scientific Research (MOHESR) initiated the "Emiratization" program that supports, educates and trains national female and male graduates to be part of the human capital of the HCT in staff, teachers and management levels. Emiratization is "strategically an important indicator for HCT and the UAE as the overall national work-force development plan calls for the greater role of Emirati professionals in higher education" (Institutional Effectiveness Report 2012, p12). In 2012, statistics showed that the Emiratization rate at HCT of teacher recruitment was 2.8% where the management and administration rate

was 14.9%. Ras Al Khaimah Women's College (RKWC) has the highest Emiratization rate compared to other colleges with 52% of the management and administration being Emirati (Institutional Effectiveness Report 2012).

Kirk (2010) states that the recruitment of teachers in the HCT comes from different foreign countries and some Arab countries who hold higher degrees from international universities in Europe, North America or Australia who bring to the HCT a variety of teaching methods based on their culture and nationalities. It is worth mentioning that in 2012 the Emiratization rate at the HCT of Emirati teachersrecruitment has been increased from 1.7% to 2.8% in comparison to around 87% expat teachers (Institutional Effectiveness Report 2012).

1.3 The Research Questions

The main issue of this study is to determine the effectiveness of cooperative learning in improving the learning process. In order to address this question adequately, this study will tackle the following question:

1. What is the effectiveness of cooperative learning in improving the learning process as perceived by college students?

1.4 The Significance of the Research

This topic was chosen because the researcher is interested from the personal side and from reading the literature. From the personal side, as the researcher graduated from HCT colleges, she went through the same learning process that the participants of this study are going through which the researcher will give a knowledge of how the cooperative learning affects the learning process. Furthermore, currently the researcher is working in the Student Services department which allows her to contact students on daily basis. Through her position, she finds out students' learning experiences through their complains and comments.

From the literature side, there are many different types of teaching methods that teachers can use in their teaching learning process such as discussion methods (Orlich el at, 2011), direct instruction (Reece and Walker. 2007), cooperative learning (Slavin, 1996), and guided discovery (Reece and Walker. 2007). Slavin (1996) points out that cooperative learning strategy is the most important and successful strategy used in educational research. Ahmed and Mahmood (2010) further supported Slavin (1996) states that cooperative learning shows positive potential to be used in higher education. Researchers show that teacher-student interaction is linked to students' satisfaction with academic and non-academic aspects of college (Astin, 1977; Spady, 1971). Dean et al (2011) show that high students' achievement is related to the relationship between the teacher and the students. However, when the relationship between the student and the teacher is weak, it reflects negatively on student learning. Also, Mortmore and Sammons (1987) agree that classroom interaction has a good impact on student learning. Through literature reading, the researcher did not find any studies that investigate the effectiveness of the cooperative learning in improving the learning process from Emirati college students' perspective.

To answer this research question, this study will focus on the effectiveness of cooperative learning to improve the learning process from students' perspective through investigating the following objectives:

- Exploring the teachingmethods
- Understanding the effectiveness of cooperative learning strategy in improving learning process

1.5 The Organization of the Research

This study is comprised of five chapters followed by references and appendices. Chapter one shows the background of the study, purpose, problem and question of this study. Chapter two outlines the literature review by exploring in general the teaching method used by teachers and the effectives of cooperative learning strategy in improving learning process as perceived by college students. Chapter three will discuss the context, sample, ethical issues, methodology used for this research, research design and data

collection.Chapter four will provide an in-depth analysis of findings and discussion of theteaching methods in general used by teachers and the effectiveness of cooperative learning in improving the learning process as perceived by college students. The final chapter will conclude the study with some recommendations and limitations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Teaching in Higher Education in the UAE

Education is one of the top priorities of the United Arab Emirates (Kirk 2010). Though the education system is still in its early stages, concerted efforts are being made to fast track the development of quality education in the UAE (Kirk 2010). In the last two decades, with the increasing demand for education, the UAE government has explored the establishment of higher education institutions as higher education becomes an important aspect of the country's development plan. These institutions consist of three federal institutions, emirates-supported semi government institutions and private, foreign institutions under the federal or local government. The three federal institutions (UAEU, Zayed University and HCT) were the beginning of the higher education in the UAE.

Since 1970s, the UAE has been recruiting expatriate teachers, originally, at the beginning they focused on other Arab countries since they are not expensive and accessible. Later, the recruitment started from foreign countries such as; America, Britain, Australia, Canada and New Zealand. This allows the higher education in the UAE to have a multicultural environment in the learning process (Kirk 2010).

Therefore, the three public Higher Education Institutions hire qualified teachers from different countries to encourage a diversity of teaching methods and create a more cross cultural educational environment. Moreover, HCT started its education system with expat teachers and staff. Kirk (2010) states that the recruitment of teachers in the HCT comes from different foreign countries and some Arab countries who hold higher degrees from international universities in Europe, North America or Australia who bring to the HCT a variety of teaching methods based on their culture and nationalities.

Teaching in higher education has been roughly still the same for decades. Subban (2006) states that the teachers are committed to provide a high quality of education, but Johnson & Johnson (2002) point out that college teachers seem to be more committed towards conducting research than developing and improving their teaching strategies.

Teaching and learning is considered to be two sides of a coin where they complete each other to constitute instruction.There are different ranges of teaching methods that teachers can use in their teaching learning process to provide an activeenvironment for student's engagement. Orlich et al (2011) state that teachers know that students learn in different ways which leads the teachers to use different teaching methods related to students' needs. They point out that "reflective teachers incorporate social aspects in their instructional planning. They cognitively make the necessary adjustments in their instruction so that all students have an opportunity for success." (Orlich et al 2011, p 17). According to Henard and Roseveare (2012) quality teaching is the use of pedagogical techniques to produce learning outcomes for students. These methods and strategies consequently produce effective teaching outcomes.

Dynamic instructional strategy is one of the teaching methods used in the classroom. Orlich, et al (2011) state that "instruction is the key ingredient of school-based learning" (p.22). There are different instructional strategies where the instructor could use one or more based on the students' needs. These instructional strategies are used in the classroom to increase the students' engagement and motivation.

Furthermore, having more effective instructional strategies requires a high level of teacher-centered presentation, feedback, a good schedule and evaluation of the learning materials with clear instruction (Westwood, 2001c). Purdie and Ellis (2005) state that the role of the instructor is to be a facilitator rather than a director through giving the chance for all the learners to obtain knowledge, build a good image of the learning through discussion, sharing ideas, reflections and having their own activities. In addition, Akhtar (2012) states that "teaching should not be considered as a product-focused process rather itshould be discovering the information internalized by the students" (p.10959).

2.2 Teaching Methods

In this literature review, there are many types of teaching methods that have been identified to be associated with effective teachers by different researchers Grasha, Cabrera, Nasa, Malikow, Minor, Reyes, Sanchez, Astin, Endo, Harpel and others. These

methods provide an active environment for student's engagement in their learning process and the higher education teachers try their best to become more effective teachers to increase the students' level of learning and to improve their teaching practice through exploring different kinds of teaching methods (Sajjad 2010). The most important teaching methods used in higher education level are explained below:
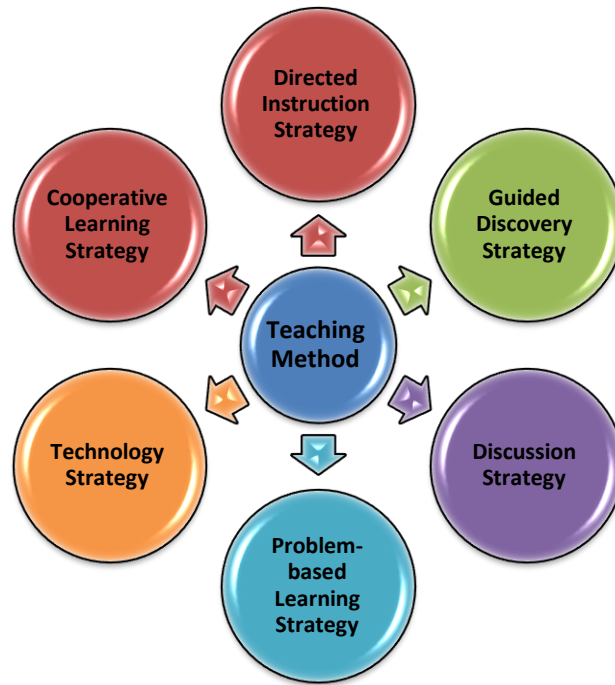
Figure 1: Teaching Methods Types

2.2.1 Directed Instruction Strategy

Price and Nelson (2011) define this as "model-lead-test" which means the teacher shows, tells and leads their students in practicing the lesson, then evaluates them and aspires to keep students engaged. This strategy is useful through giving information to the students who have the difficulty in using investigative discovery learning methods and the teacher has to be aware of this type of strategy in the class through planning, organizing and delivering in a logical sequence (Ministry of Education, 2002). It consists of a variety delivery models such as; lecture and handout. The lecture where the teacher talks or gives

a verbal presentation to their students about the topic is considered to be a traditional method of instruction, but it is the backbone of the teaching methods among other methods. The handout model is where the teacher gives an incomplete handout or asks them to make their own notes to encourage the students to participate (Bligh 2000, Reece and Walker 2007).

2.2.2 Guided Discovery Strategy

This strategy helps students to be more active, motivated and independent learners. In this strategy, the teacher encourages students to express their personal opinions and reflect on their learning and evaluate it. This could be done through reflection and homework which is very effective in improving the students' learning and understanding. Homework and worksheets are independent work which the student can do it either inside or outside the classroom to ensure the understanding of the lesson (Reece and Walker 2007).

2.2.3 Discussion Strategy

Cross (1987) states that when the students are involved in learning tasks, they learn than if they just passively information. Perkins and Sairs (2001) point out that some research has found that team learning discussions and student-led discussions not only produce constructive student performance outcomes, but also imporve participation, leadership skills and self-confidence. Moreover, Yoder and Hochevar (2005) agree discussion produces higher level knowledge and understanding. There is also another study found that discussion strategy is the second best method because of more participation from students, students develop their thinking skills and creativity and the learning tend to be more effective (Sajjad 2010).

Other researchers like Hunt, Haidet, Coverdale and Richards (2003), have found that the discussion strategy produces a good learning outcomes in students compared with the traditional direct instruction strategy. On other hand, in another study by Barnes and

Blevins (2003) found that this strategy is less effective than traditional direct instruction strategy like lecture. However, Petty (2009) suggests that this strategy gives student's the chance to express their ideas and opinions with their teachers or their peers and listen also to their peers to discuss and evaluate other ideas and opinions. Moreover, Shabani (n.d) agrees with Petty (2009), saying that this method gives the students' the opportunity to share their experiences with their peers and it improves the listening ability and critical thinking. Furthermore, discussion could be held in any subject in any classroom with any age and it could be with small groups, large groups or with the whole class. Teachers use this strategy to achieve some important benefits.Some of these are; discussion strategy helps students to improve their thinking and build their understanding of the teaching contents. Another benefit is that this strategy helps the students to become more aware of the importance of communication, engagement and thinking skills (Arends 2007). Sajjad (2010) points out as well that this strategy develops thinking skills and creativity among students and they can exchange ideas, learn on their own and becomes more confident.

2.2.4 Problem- based Learning Strategy

Price and Felder (2006) state that problem-based learning (PBL) starts when students tackle with ill-structured, face real-world problem and work in teams to identify the problem and develop a practical solution while the teacher becomes a facilitator. Moreover, Arends (2007) believes that PBL mainly is designed to help students build up their critical thinking skills and problem solving skills through investigating and examining the situation. Moreover, Canter (2004) agrees that using this strategy will give the student's the opportunity to think about and investigate a problem and propose a solution and he added that this strategy helps to faster a good relationship between the teacher and the student. This strategy consists of the case study method and questioning method. The case study which also is known as the teaching cases method, is designed to test the ability of students to apply what they learn from different theories to real situations and it is based on developing problem solving and thinking skills (Husock, 2000). In the questioning method, the students are involved in contributing to the learning

and the teacher gives them feedback about the effectiveness of teaching (Reece and Walker 2007).

2.2.5 Technology in the classroom

Some students learn best by using direct instruction and discussion; others prefer using graphics, presentations. Therefore, the useofthe latest technology continues to allow educators to compare traditional methods with more modern strategy (Cholin 2005, Mehta and Kalra 2006). The introduction of technology in education continues to have a good opportunity within the traditional methods of learning and teaching in higher education (Bass 2000,Gandolfo 1998).These technologies are used in higher education for organizing course content, engaging students, assessing learning and developing the communication (Light, Cox, Calkins 2009). Cross and Adam (2007) suggest that there are four main underlying principles in introducing the technology in higher education which are; social, vocational, catalytic and pedagogical and all of these are important in using technology in teaching to enhance learning. There are varieties of technologies that the teacher can use either inside or outside the classroom. In addition, they are a variety of teaching methods which allow teacher and learners to interact to enhance learning. Some examples of technology that is used in higher education are; smartboards, presentation software, email applications, online assignments, e-portfolio, multimedia, e-textbooks and blackboard. All of these types of technology are involved in the student learning process.

Finally, a number of researchers argue that cooperative learning is the most successful used in higher education (Cooper et al 1993; Johnson, Johnson, Smith, 1998; Kagan 1989; Slavin 1996).

2.3 Cooperative Learning Strategy

In the last few decades, cooperative learning (CL) which is new teaching learning strategy has become more prominent in higher education (Ahmed and Mahmood, 2010). Slavin (1996) asserts out that this strategy is most successful in the history of educational research. In addition, Ahmed and Mahmood (2010) agree that cooperative learning has showed potential to be used in higher education and in the early of 1990s, Roger and David Johnson adapted this strategy to higher education (Slavin 1996). Marzano (2003) and Wenglinsky (2002) point out that number of studies have found that cooperative learning often has a good impact on student accomplishments and their motivation. Abrami, Poulsen and Chambers (2004) define cooperative learning as "an instructional strategy in which students work actively and purposefully together in small groups to enhance both their own and their teammates learning". Moreover, Kagan (1989) provides an excellent definition of cooperative learning bylooking at general structures which can be applied to any situation. His definitionprovides an umbrella for the work cooperative learning specialists including the Johnsons, Slavin, Cooper, Graves and Graves and Millis. Kagan (1989) defines cooperative learning as "the structuralapproach to cooperative learning is based on the creation, analysis and systematicapplication of structures, or content-free ways of organizing social interaction in theclassroom."

There are many studies by different researchers pressure the importance of cooperative learning in the learning process and the positive impact on the students (Johnson & Johnson 1994). Moreover, Slavin (1980, 1995) the main founder of this strategy suggests that individual accountability and group goals are essential aspects of this strategy. In cooperative learning strategy, there are three important instructional goals which are; academic achievement, social skills and tolerance and acceptance of diversity (Arends 2007).

Furthermore, studies by other researchers such as; Venman, Benthum, Bootsma, Dieren and Kemp (2002), examined cooperative learning from different dimensions in teacher and higher education and they found that prospective teacher believed that cooperative learning had a beneficial effect in students' learning inside and outside the classroom.

Sullivan (1996) states that cooperative learning strategy is used to promote critical thinking of students via group work and discussion and he thinks that applying this strategy with traditional strategy of direct-instruction helps the development of analytical skills. In addition, Cooper et al (1993) in a review of article research, they find out that cooperative learning is more effective than traditional strategies in promoting self-esteem, social behavior and critical thinking.

In higher education classrooms, According to Orlich el at (2011)., it is a good ideas to use discussion approach to help students to exchange their ideas in either teacher-student interactions or student-student interactions in a group to have more knowledge about the discussion topic and it permits students to be more active learners, discover and state their opinions on the discussion topic Moreover, Reece and Walker (2007) suggest that discussion has some advantages for the students such as; it can encourage them to be more creative, criticize other's view and change their attitude. Furthermore, peer-teaching approach is considered to be a type of the collaboration learning. In higher education, each student has the responsibility for searching and understanding the topic to complete the task that is given by the teacher (Depaz&Moni. 2008).

Social interaction is an important function in student learning. Fogarty (1999) points out that "Vygotsky's theory states that we learn first through person-to-person interactions and then individually through an internalization process that leads to deep understanding" (p.77). Vygotsky's topic contribution to the learning process was the Zone of Proximal Development (ZPD) theory uses social interaction within the student learning process. He defined the ZPD as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or collaboration with more capable peer" (p.86) as it shown in figure 2. The actual development level includes skills a student has already and can perform independently, while potential development level refers to what a student is not able to do independently work but able to do it in groups work worth more competent peers (Lui 2012).

Vygotsky (1978) emphasized the importance of the ZPD and social interaction with the student in their learning process. This concept is applied throughout the HCT educational system. Students work in pairs or in groups to exchange their knowledge and experience. At the same time, this tends to improve their critical thinking skills, problem solving, teamwork and time management. The work of groups or pairs is different in each program. For instance, in Applied Communication program, learners work in a group outside the classroom to finish their film production. In the Engineering program, learners work in groups in labs to produce machine, and in the Information Technology program, labs are used to work in programming. Furthermore, in the Business, Foundation and Education programs, students work in groups to finish their tasks either to submit these tasks through reports or through presenting a presentation.
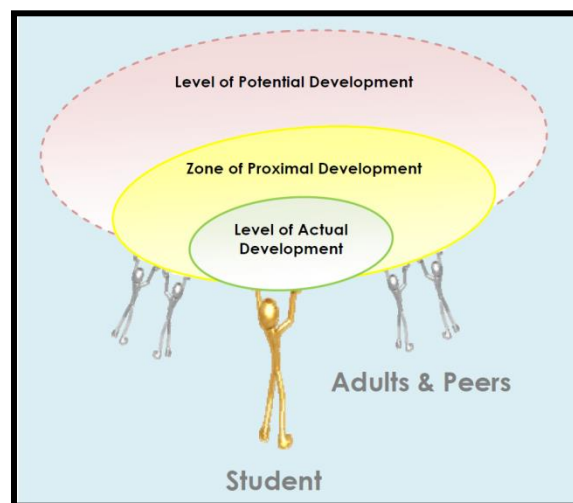
Figure 2: Locating the ZPD
(Adapted from Lui 2012: 3)

Roosevelt (2008) suggests the main idea from Vygotsky perceptive is to keep learners in the ZPD as often as possible through giving interesting and significant learning and problem solving tasks which are more difficult than what the learner does alone to lead the students to work together either in pairs or with the teacher to finish tasks.

Furthermore, Vygotsky's zone of proximal development is one of many theories that focus on the learning process through cooperative learning strategy. According to

Vygotsky (1978), individual cognitive growth is first developed on the lower level such as perceptions and associative learning, and then on the upper level such as language, logic and problem solving skills through social interaction with others. The zone of proximal development is used to provide a theoretical base to understand cooperative learning in which student's work together in a social setting to finish their tasks. Educational studies by variety of theorists suggest that participation and interaction in groups are based on the cooperative learning strategy to play essential role in learning (Cooper et al, 1993; Felder and Brent, 2001; Feichtner and David, 1984; Johnson, Johnson, Smith, 1998; Kagan, 1988; Millis, 1990; Michaelsen, 1997-98). The table (1) below shows different components which are considered important in cooperative learning:

Johnson, et al, 1984	Rottier & Ogan, 1991	Ormrod, 1995	Sharan, 1990
positive interdependence	group cohesion	interdependence of group members	positive interdependence
face-to-face interaction	face-to-face interaction		face-to-face interaction
individual accountability	individual accountability	individual accountability	individual accountability
small group & interpersonal skills	social skills development		small group & interpersonal skills
	group accountability		
	teacher monitoring	teacher monitoring	
	group self-evaluation	group self-evaluation	group self-evaluation
		clear group goal	
		small group size	

Table (1): components and attributes of cooperative learning according to various theorists and authors

(Adapted from Doolittle 1995:8)

From the table, it can be seen that the five factors are:

- **Positive Interdependence**

  Positive interdependence requires that every group values the work of other members and they need to feel that they need each other to finish their tasks. Generally, to get high positive interdependence and effective group interaction, all group members have to participate in face to face interaction and be accountable for their overall tasks (Irby et al 2013). The result of successful positive interdependence is that the students will be more motivated to work cooperatively together in a group and there will be more interaction with other students as Vygotsky's theory expresses about students' development. Moreover, each student has a particular zone of proximal development for each social context and their development is based on activities that stimulate them within their zone of proximal development (Doolittle 1997).

- **Face-to-Face Interaction**

  Face-to-face interaction works in the combination with positive interdependence when all group members encourage each other to complete their tasks to achieve their goals (Johnson & Johnson 2009). Johnson & Johnson (1991) explain face-to-face interaction is where students provide help to each other and exchange resources, assistance and offer feedback. Pantiz (1999) and Orlich et al (2001) agree that this factor helps students to learn because they are helping, sharing, explaining, exchanging their efforts to learn and assisting each other with learning tasks to come up with common understanding. This face-to-face interaction by working in groups develops every among the students feels of caring and respect for each other in order to keep the motivation of the group to finish their tasks on time (Johnson & Johnson 2009).

- **Individual Accountability**

  The third important factor of cooperative learning is individual accountability. This is means that each member accountable to complete their allotted of tasks

(Orlich et al 2001). Moreover, Johnson et al (1998) add that when students learn and work together as a group, they perform better individually. According to Vygotsky's theory, each member in the group within the individual accountability, he/she is responsible to develop their unique zone of proximal development (Doolittle 1997).

- **Small Group and Interpersonal Skills**

    The fourth factor of cooperative learning is to involve the students in learning process. This teaches the students how to use small groups and to use the interpersonal skills such as; communication skills, decision making, problem solving and conflict resolution (Orlichet al 2001) to deal with others. This process does not function efficiently if the student does not use the required social skills (Pantiz 1999). In the theory of ZPD, provides Vygotsky toa framework to understand how individuals learn and improve the signs and tools of sociocultural (Doolittle 1997).

- **Group Self-Evaluation**

    Group self-evaluation allows all group members to achieve their goals. This process involves group members deciding which actions have been beneficial and which actions need to change. For Vygotsky, it is important to observe the development of student within their zone of proximal development (Doolittle 1997). The advantages of this process is that all students and members in the group have to be active and engage in the learning process to observe how the current instruction is affecting each students' zone of proximal development (Vygotsky 1978).

These five factors of cooperative learning are related to the theoretical framework of Vygotsky's zone of proximal development as is shown in the below figure (3).
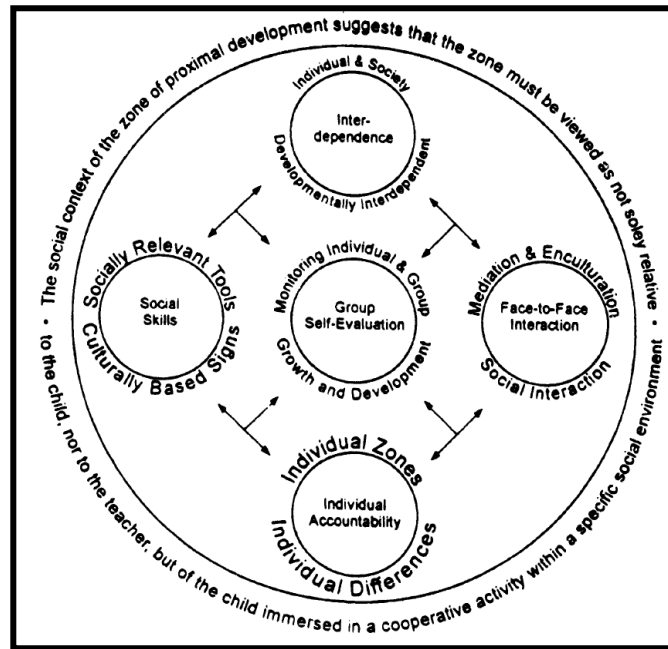
Figure (3): Relationship between Vygotsky's ZPD and the basic component of CL
(Adapted from Doolittle 1995:14)

Furthermore, Johnson et al (1984) differentiates the primary differences between the five factors of cooperative learning groups and traditional learning groups. Some of these differences are:

1. Cooperative learning groups are based on positive interdependence between group members while a traditional learning group is only based on task completion.
2. Leadership in cooperative learning groups is shared while in traditional learning groups, a leader stays leader throughout the group activity.
3. In cooperative learning groups, members share responsibility while in traditional learning groups, members rarely hold each other accountable.
4. In cooperative learning groups, the teacher acts as a mediator to complete the tasks and functions of the groups, while in the traditional learning groups, the teacher only mediates the completion of group tasks.
5. In cooperative learning groups, individual accountability is stressed that each members of the group is held responsible to finish tasks, while in traditional

learning groups, individual is often allowed a "free ride" where other members of the group complete the assigned task.

6. In cooperative learning groups, membership is based on heterogeneous, while traditional learning groups are homogeneous in their membership.

7. In cooperative learning groups, group self-evaluation is an essential part of the overall group experience, while traditional learning groups, it is not a priority of group function.

Cooperative learning is an influential approach to help the students to learn and gain knowledge. There has been a lot of recent literature which supports the use of cooperative learning and demonstrates the benefits of this strategy in classroom. For example, some studies have been shown that students participated more and were more willing to listen to their teachers and classmates (Slavin 1995). Tay and Brady (2010) examine that the relationship between the students who worked in cooperative groups and the potential impact on their academic achievement. In addition, they found that the students who worked in cooperative groups, they scored higher on the test in their academic achievement. Orlich et al (2011) added that the benefits of cooperative learning are; (a) improving student decision making, (b) producing active learning environment, (c) improving the academic level of the students, and (d) enhancing the self-esteem and self-efficacy of students.

This study attempt to find out if the cooperative learning has effectiveness in the learning process or not.

CHAPTER THREE: PRESENT STUDY

This study aims to investigate the impact of cooperative learning in the learning process in higher education from students' perspective. This chapter will discuss thecontext, the research sample and ethical issues. Then methodology will be discussed through using mixed methods (quantitative and qualitative). Later, there will be a section about the research design which describes the procedures used to conduct this study.

3.1 Context

This study has beenconducted in one of the Higher College of Technology campuses, Ras Al Khaimah Women's College (RKWC). This college has been chosen because it is the workplace of the researcher, so she can directly access the participants and easily get the approval to conduct this research without losing time for data collection. Moreover, the researcher chose this college because it follows the technique of learning by doing.This technique enhances students' knowledge and skills through using different kinds of teaching methods in their learning process such as cooperative learning strategy.

3.2 Participants & Sample

The participants are Emirati female students from different programs. The sample size for the questionnaire technique is two hundred and twenty-four students were randomly selected from different programs and the sample size of interview technique is twelve students, two students randomly selected from each program. The total size of the sample for this study is two hundred and thirty-six where participants were volunteering in this study (Table 2).

Major	Participants of Questionnaire	Participants for Interview
Foundation	42	2
Education	40	2
Applied Communication	16	2
Information Technology	63	2
Engineering	42	2
Business	21	2
Total	224	12

Table 2: Participants' Sample

The researcher used simple random sampling. In this type of sample, each member of the population has an equal chance of being selected (Cohen et al 2007) and the researcher wanted to get information to answer the question of the study from different aspect of needs from different programs. The researcher used handoutsfor the questionnaire and visited different classes of different programs because the researcher wanted to guarantee all participants would answer the questionnaire without missing any questions. In addition, the researcher used handouts to make it easier for participants to answer questions.

Furthermore, in the interview, the researcher used stratified sampling type which involves dividing the participants in groups according to their different majors. This type helped the researcher to find out what each participant needs according to different majors.

The researcher explained the reason of the study to the participants and what the researcher would get from it. Moreover, the researcher made it clear to the participants that it is voluntary to be part of this study and they have the right to refuse to participate as well asto withdraw from the study at any point. The participants filled a consent form that explain the study and their rights before participating in this study (Appendix A)

3.3 Ethical Issues

Ethics is considered to be an important issue that the researcher has to take to consideration throughout the study. The researcher followed the ethical process of the college by keeping the data private, confidential and keeping the identity of the respondents undisclosed. This makes the participants feel more relaxed about their rights. Furthermore, the researcher informed the participants that this data will be used for educational purposes and the anonymity of the participants will be secured and numbered (Creswell, 2012). All the questionnaire data and the interview transcript will be kept in a safe cabinetfor a period of time.

The researcher took permission before collecting the data for this study. Firstly, a permission letter was sent to the RKWC college director of the research site from the British University in Dubai (BUiD) to allow the researcher to conduct the research (Appendix B). Later, the researcher received the approval to conduct the researcher from Researcher Review Committee (RRC) from Central Services (CS) of HCT. The researcher got approval from the director to collect data for this study (Appendix C).

When the researcher started collecting data from the participants, the researcher explained the reason for this study and what the researcher wanted to get. In the questionnaire technique, the researcher clarified to the participants every question in the questionnaire and went through it with them. Also, the researcher informed them that their answers will be confidential.

In the interview, the researcher informed the participants that their answers will be confidential and they could feel free if they do not want to mention their name. Before each interview, the researcher identified to the participants the reason of this study and asked them to sign the consent form. The consent form included that the participation in this study is voluntary and participants could withdraw from the study with no cost and the interview will be recorded. During the interview, if the participant does not feel comfortable to answer any questions, she has the right to decline the question or end the interview. Moreover, the researcher will not identify the participants' names and they can

sign without mentioning their names and they will remain anonymous and the researcher will use coding numbers.

3.4 Methodology

The study attempted to find out the effectiveness of cooperative learning in students' learning process from student's perspective. To conduct this research, it useda mixed method approach, qualitative methodology which used interview and quantitative methodology which used questionnaire.This research will follow a single mixed method research design which is defined by Creswell (2012) as defines the mixed method research design as a "procedure for collecting, analyzing and "mixing" both quantitative and qualitative methods in a single study or series of studies to understand a research problem" (p 535). As this research has been a single study. Punch (2009) agrees that mixed methods research is "empirical research that involves the collection and analysis of both qualitative and quantitative data where they are mixed or combined in some way" (p 288). The reason for using this method is to help in providing a clear understanding of the research problem, while using one type sometimes is not enough to address the problem of the research or answer it (Creswell, 2012).

In this study, a mixed method approach has been used to explore the effectiveness of cooperative learning involving the collection of data. The qualitative approachhas been used to get information about phenomenon or individuals including the coding of the data, whereas, the quantitative approach, was employed to collect numerical data from a large sample size to explain and predict in order to get better understanding from the results (Creswell 2012; Gay 1996). Therefore, the research methods which will be conducted in this study are qualitative approach through interviews whereas the quantitative approach will be used for thequestionnaire.

To conduct this research, researcher has selected the quantitative approach through using questionnaire in order to measure the frequency of opinions and collect data. Then the researcher analyzed it to figure out the responses from the questions to test these results later, and to build a relationship between results and literature review (Creswell 2012).

In this study, the questionnaire approach will be used to find outthe effectiveness of cooperative learning in improving the learning process.The researcher wants to keep the questionnaire simple and short for the participants to ensure that they will answer all the questions without getting bored. There are different types of questionnaire to collect the data, in this study; the method that was used was hand-out questionnaire (Taylor & Hermann, 2000).

The use of qualitative research provides the chance to collect detailed information about phenomenon or individuals (Creswell 2012). Interviews conducted face-to-face and in depth to allow the researcher to control the questions and gave the chance to collect useful information and data from the participants.

Furthermore, the triangulation design as one of the mixed methods types is going to be followed in this study. Creswell (2012) defines triangulation as a "process of corroborating evidence from different individuals e.g, a student, type of data e.g, interviews in descriptions and themes in qualitative research" (p.259). It is considered as a powerful way to display simultaneous validity especially in qualitative research (Cohen el at, 2000).The purpose of this design is to collect the strengths of both methods; qualitative (in-depth, details, small sample size) and quantitative (trends, large sample) (Figure 4). Generally, this type of design is used when the researcher wants to compare and construct the results of quantitative statistical findings with qualitative results (Creswell, 2012). That means the researcher is likely to feel more confident when there is a data collectionwith more than one method. For instance; if the result from questionnaires technique match up with the finding of interviews technique of the same process, this will make the researcher feel confident about the outcomes and will strength the end results (Cohen el at, 2000).

Figure 4: Triangulation Design

Reliability and validity are two significant terms to consider in any investigating procedure (Johnson& Christensen, 2008). Creswell (2012) states that these two terms "are bound together in complex ways?. These two terms sometime overlap and at other times are mutually exclusive" (p.159). Jary & Jary (1995) define validity as "….the extent to which a measure, indicator or method of data collection possesses thequality of being sound or true as far as can be judged.…in the social sciences generally,the relationship between indicators and measures and the underlying concepts they aretaken to measure is often contested' (p 714). While Joppe (2000) defines reliability as "…the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable". In general, validity refers to the measure of an instrument while reliability refers to a measure of consistency (Creswell, 2012). These two terms are an important in the research and they were considered in this study.

In qualitative procedure, to ensure the validity in the interview technique, it has to be measured to compare it with another measure that is valid. At the same time, the most useful way to achieve validity is to minimize the amount of bias as much as possible which includes the attitude and opinions of the participants and the researcher to seek out the answers that are needed for the study (Cohen et al 2000). Reliability is important for each participant to understand the questions of the interview and receiving the same format of questions to have a highly structured interview (Cohen et al 2000; Scheurich 1995; Silverman 1993) where Oppenheim (1992) states that wording is a more important factor in the interview questions than factual questions

In the quantitative approach, participants complete the questionnaire accurately and honestly in order to ensure validity (Belson 1986). Hudson and Miller (1997) suggest that maximizing the responders' rate for the questionnaire will increase the reliability and that could be through different strategies. Some of these are; stress the benefit and the reason for this questionnaire and understand the nature of the sample in depth (Hudson & Miller 1997).

Generally, both of the interview questions and the questionnaire were checked by panel of different teachers and staff to find out if the questions are relevant to the topic of the research and well designed for the students' level.

3.5 Research Design

According to Best (1970), descriptive research is concerned with "conditions or relationship [s] that exist; practices that prevail; beliefs, points of views; or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. At times, descriptive research is concerned with how what is or what exists is related to some preceding event that has influenced or affected a present condition or event" (p 205).

In this study to find out the effectiveness of cooperative learning, descriptive research was used in order to provide useful information. This research collected data in order tofind out the college student's beliefs and opinions about the effectiveness of cooperative learning strategy to improve the learning process. Descriptive research is common with correctional research but it more directly focuses on learning about the sample and less about the variables as is the case with correctional research (Creswell 2008). There are two types of descriptive research, one is cross-sectional design which is used in this study to collect data about current attitudes, opinions and beliefs. It is worth mentioning that this type is commonly used in higher education level (Cohen et al 2007; Creswell 2008).The study will use random sampling because it is important to select as large a sample as possible to reduce any errors in sampling as Salant and Dillman (1994) suggested. Moreover, in the survey research, researcher typically collects data through using two methods which are used in this study, the handout questionnaires technique and structured interview technique which will be explained in more detail in the next section.

3.6 Data Collection

This study used mixed method approach as mentioned before to collect data which are; the quantitative approach (questionnaire) and the qualitative approach (interview) as will be described in more details below.

3.6.1 Questionnaire

The questionnaire technique is commonly used to collect data where the researcher uses a structured or semi-structured which are set of questions mostly closed-ended. The questionnaire helps the researcher to investigate their opinions and perspectives (Creswell 2012; Cohen et al 2007).The layout of the questionnaire is important to look easy and interesting and avoid unclear and boring questions. At the same time, the researcher has to include a brief purpose for doing this questionnaire, so the participants are aware about it and involvedin it (Cohen et al 2007).

This study attempts to understand the effectiveness of cooperative learning strategy to improve learning process in higher education from students' perspectives.Therefore to conduct this research, the researcher selected a questionnaire technique (Appendix D) in order to measure the frequency of opinions, collect data and to generalize the results from the sample (Creswell 2012).In this study, the researcher used close-ended questions which are highly structured (Oppenheim 1992), quick and straightforward to code (Bailey1994) and directly focus on the topic (Wilson & Mclean 1994). Furthermore, the researcher used rating scale questions which are widely used in research because they are more reliable. In this type of questions, the participants point out their opinions by selecting one selection from the scale (Cohen et al 2007). The rating scale category of this study are strongly disagree/disagree/ neutral/ agree/ strongly agree.

In this study, the questionnaire layout is divided into two parts. The first part is called demographic information which consists of two close-ended questions about the age of the participants and their major. The second part is about teaching methods and it consists of close-ended questions and rating scale questions. The researcher used a handout of the

questionnaire and visited different classes of different programs to guarantee all participants would answer the questionnaire without missing any questions and at the same time to help the participants to overcome any difficulties with questions (Cohen et al 2007). Before visiting classes, the researcher informed the teacher about the visit and took the permission from her/him to take around 15 minutes either at the beginning or the end of the class to ensure that the researcher would not disturb the class.In each visit, the researcher explained the purpose of this study tothe participants, what the researcher want to find out from this study and told them that their answers are private, confidential and kept the identity of the respondents undisclosed. The researcher tooka week to finish the questionnaire with all participants.

The researcher used Statistical Package for the Social Science program (SPSS) to analyze the collected data. In this study, two hundred and twenty four participants from different majors respondedto the questionnaire as Table (3) shows

Major	Participants of Questionnaire
Foundation	42
Education	40
Applied Communication	16
Information Technology	63
Engineering	42
Business	21
Total	224

Table 3: Number of participants in questionnaire by major

3.6.2 Interview

The interview is an important and flexible tool for data collection and useful way to understand others and to find out their perceptions (Punch 2009). In the interview technique, the researcher asked open-ended questions to allow the participants to express their opinions (Creswell 2008; Punch 2009). Interviews allow the research to get more sufficient data through giving the participants the space to express their opinions and

thought which cannot be getting through other tools. In this study, the researcher used one type of interview which is structured interview where all respondents received the same questions in the same order to allow frequency of related information and data (Creswell 2008). Accordingly, the interview had four questions and used simple words (Appendix E).

The researcher selected twelve participants, two from different programs to cover all programs needs from student's perspectives. In the first stage of the interviews, the researcher selected random participants from different programs and sent them an e-mail to set-up a meeting, and then in the meeting, the researcher gave a brief description of the study and the reason for conducting the interview and she told them that it was as voluntary. Later, after they agreed to do it, the researcher set-up a schedule for the interview with anappropriate time and chose the conference room so they feel more relaxed and without disturbingsince the interviews were held at the college campus.

At the beginning of the interview,, the researcher gave brief information about the reason for the study. Later, the researcher gave the consent form (Appendix A) to the participant that showed their right and allowance to withdraw from the study with no cost, and also informed the participants that the interview would be recorded. During the interview, if the participant did not feel comfortable to answer any questions, she had the right to decline the question or end the interview and they had the right to not mention their names. The participants werecoded using numbers from 1 to 12 as it shown in table (4). After the explanation, the participant signed the consent form and interview questions were given to the participants to read before starting the interview to have awareness and an idea of questions nature what would be asked which made them feel more relaxed and allow them to think about the questions. Moreover, as part of the consent form, all the interviews were recorded to guarantee that all the information would beavailable and later the interview will betranscript by the researcher.

Participants	Major
Student 1	Foundation
Student 2	Foundation
Student 3	Applied Communication
Student 4	Applied Communication
Student 5	Business
Student 6	Business
Student 7	Information Technology
Student 8	Information Technology
Student 9	Education
Student 10	Education
Student 11	Engineering
Student 12	Engineering

Table 4: Interview participants' per major

The next chapter will be about the data analysis of the finding from the questionnaire and the interview and there will be a discussion part based on these findings.

CHAPTER FOUR: FINDINGS AND DISCUSSION

This study examines the effectiveness of cooperative learning in improving the learning process. The findings in this section will help to give a good explanation to answer the research question which is:

1. What is the effectiveness of cooperative learning in improving the learning process as perceived by college students?

The data was collected through the use of mixed methods of research: a quantitative approach through receiving responses of the questionnaire and a qualitative approach through receiving responses of the open and close questions of the interview. In this chapter, the result of the both methods will be discussed individually and the discussion of the result will be included in this chapter.

4.1 Quantitative Results

To collect the data, the researcher chose a quantitative approach in order to measure the frequency of opinions, collect data and to generalize the results from the sample (Creswell 2012). Quantitative data analysis is a powerful research tool and it is often connected with large-scale research (Cohen et al 2000). The researcher entered the data into the SPSS program to analyze the data and to get statistical results.

4.1.1. Descriptive Analysis

The questionnaire was answered by female college students from different programs (*n*=224) and the participant's sample was selected randomly. The questionnaire is divided into two parts. The first part is the demographic data which includes the age and the major of the participants. The purpose of this is to find specific needs for each major.

Part two, is about the teaching methods that are used by teachers in the college. It includes seven methods and the questions were based on how much their teachers use these methods and how effective they are in improving their learning process. Also, this part includes the teacher-student interaction and it consists of eight questions. This

section focuses on analyzing the responses provided by participants to all questions of the survey.

A. Analyzing the first part of the questionnaire:

The participants were from various age groups as Table (5) shows. As can been seen in the table (5), the majority of the students were in the range from 17 to 20 (67.4%), while a small minority of the students are in the age range from 24 and above (8.9%). Most of the students above 24 are working and decided to come back to college and complete their studies.

Age Group	Number of Participants	Percent
17 - 20	151	67.4
21 - 23	53	23.7
24 and above	20	8.9
Total	224	100.0

Table 5: Participants' age Group

The second question from the first part of the questionnaire is to find out the student's major which allows us to know the needs of each program in relation to cooperative learning. In HCT, if the students meet the criteria to enroll in the college, they start at Foundation levels. Later after they finish the Foundation program, they can join any program they want. For this study, the researcher selected random participants from different programs as shown in table (6).

As can been seen in figure (5), the majority of the participants from different programs are in the range of 17-20 with 67.4% but only 8.9% of participants are 24 and above as they come back to complete their study after they stopped for a long time because of their job or medical/personal issues.

Major	Number of Participants	Percent
Foundation	42	18.8
Education	40	17.9
Applied Communication	16	7.1
Information Technology	63	28.1
Engineering	42	18.8
Business	21	9.4
Total	224	100.0

Table 6: Participants' Major Group

	Foundation	Education	Applied Communication	Information Technology	Engineering	Business
24 and above	1.3%	1.8%	0.4%	3.1%	0.4%	1.8%
21 - 23	0.4%	4.9%	2.7%	8.9%	3.6%	3.1%
17 - 20	17.0%	11.2%	4.0%	16.1%	14.7%	4.5%
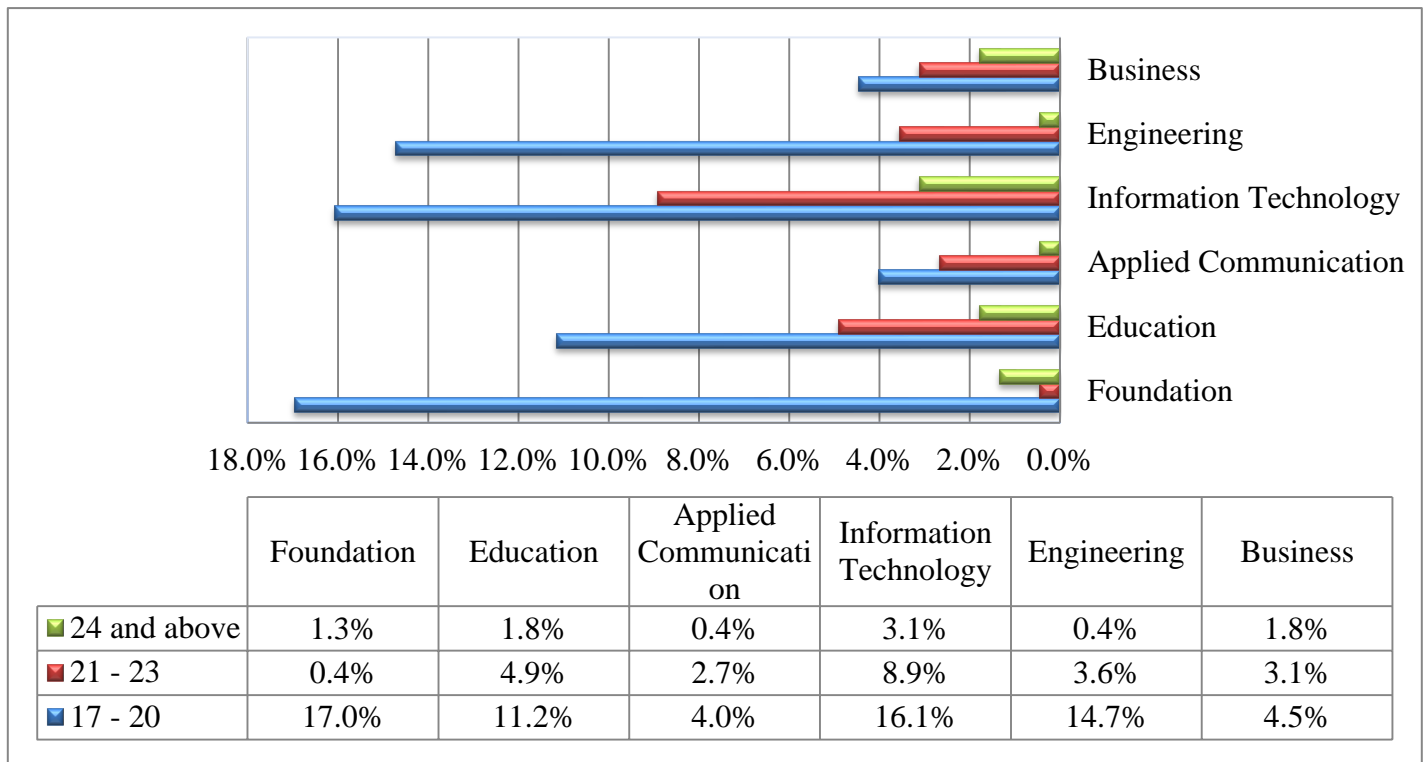
Figure 5: Participants'' Age range and Majors

B. Analyzing the second part of the questionnaire:

In figure (6) below, the bar chart illustrates participants' responses to questions on how much each technology method is used by their teachers inside and outside the classroom, where 1 is never and 5 is most. It seems that from students' responses, most of their teachers use email application (around 83%), presentation application (75%), blackboard inside the class (60%) and online assignment (around 50%) in their teaching. However, the rest of the technologies were less than 50% which means that their teachers do not use it a lot in their teaching. For example, 60% of participants mentioned that their teachers do not use e-portfolios in their learning process and 55% of participants said that their teachers did not use e-textbook.
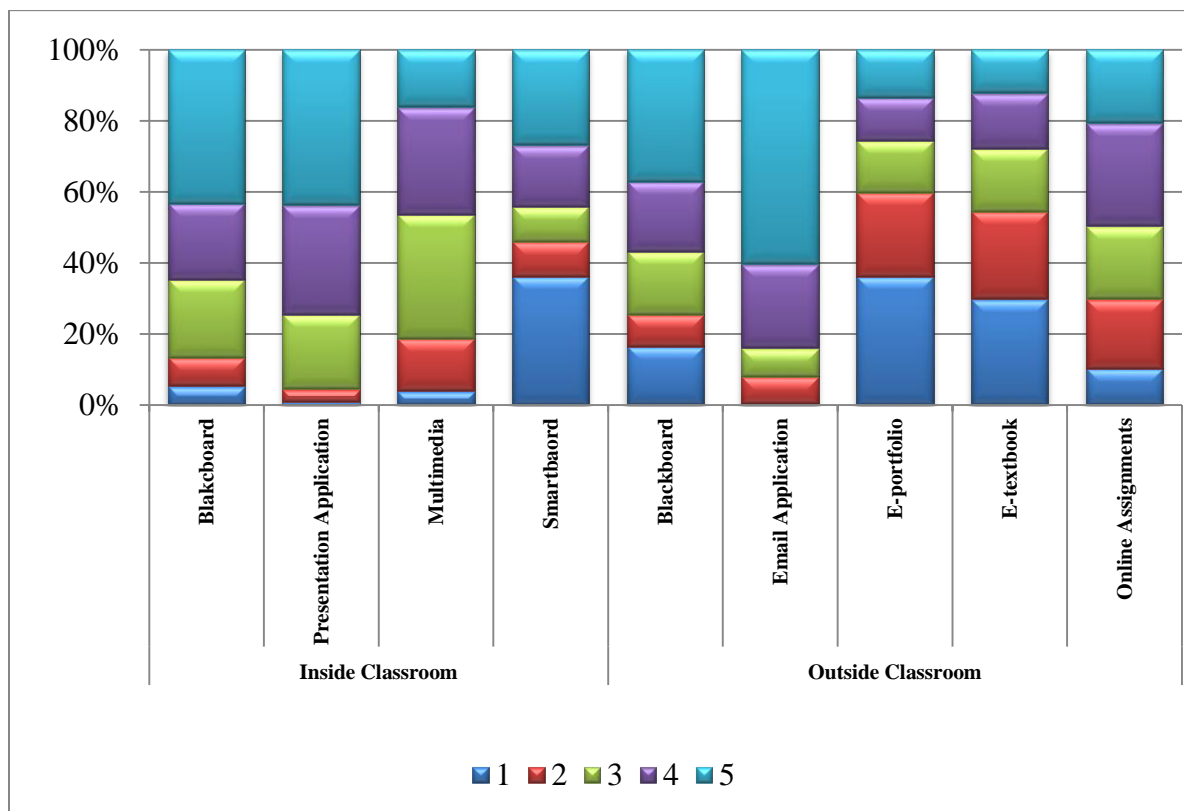
Figure 6: participants' responses to Technology used by teachers

Moreover, as is shown in figure (7) from students' responses to question on the effectiveness of each technology method in improving their learning process inside and outside the classroom, where 1 is not good and 5 is very good. Around 82% of participants' responses believe that email application is very good technology in their learning process and 80% of participants thought that presentation applications were effective. Many students believe that these technologies are an effective strategy to improve their learning process because they are able to communicate with their teachers easily either inside the classroom or even outside the classroom (Calkins, Cox, Light 2009). The chart also demonstrates that 70% of participants would like their teachers to use blackboard and multimedia to improve their learning process. However, this study found that some of these technologies might not effective in the learning process. 82% of participants thought that e-portfolio was not a good strategy and 86% thought the same about e-textbook.
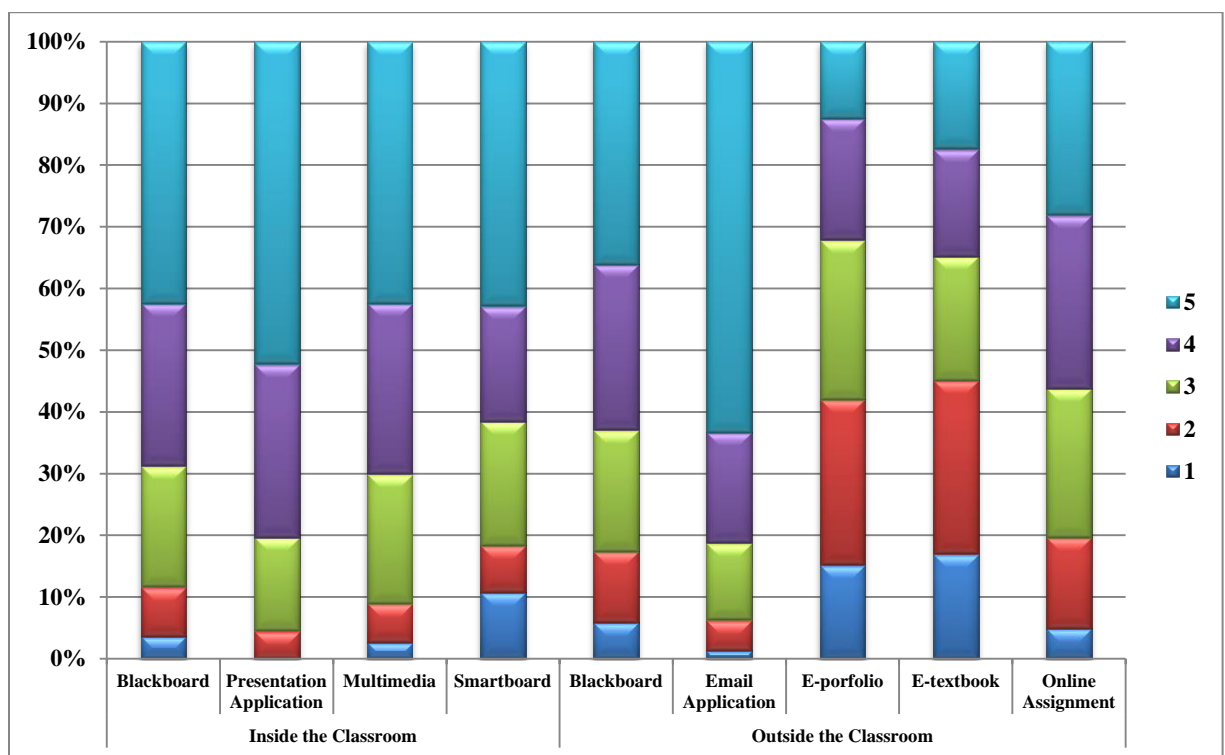
Figure 7: participants' responses to Technology effectiveness in learning process

The finding in table (7) supported the results above. It shows that the technology methods which are used by their teachers got a good range of the mean. For example; email application got (mean =4.4), presentation application (mean =4.1), blackboard (mean = 3.89) and online assignment (mean = 3.29) where E-portfolio had (mean = 2.42) and E-textbook (mean = 2.5). Moreover, table (8) shows that the technology methods which the participants think will be effective in developing their learning process, also support the results presented in figure (7). All of these mean were above 2.5 which shows that these technologies are significant and the students need them in their learning process. For example, email application got (mean =4.3), presentation application (mean =4.2), multimedia (mean = 4), e-portfolio has (mean = 2.8) and e-textbook (mean = 2.9).

	Inside the Classroom				Outside the Classroom				
	Blackboard	Presentation Application	Multimedia	Smart board	Blackboard	Email Application	E-portfolio	E-textbook	Online Assignment
Number of Participants	224	224	224	224	224	224	224	224	224
Mean	3.8929	4.1295	3.3973	2.8884	3.5179	4.3571	2.4286	2.5536	3.2991
Median	4.0000	4.0000	3.0000	3.0000	4.0000	5.0000	2.0000	2.0000	3.0000
Mode	5.00	5.00	3.00	1.00	5.00	5.00	1.00	1.00	4.00
Std. Deviation	1.20431	.92607	1.04953	1.67038	1.47312	.95040	1.42189	1.37459	1.27929
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Table 7: Statistical Analysis of participants' responses to Technology used by teachers

	Inside the Classroom				Outside the Classroom				
	Blackboard	Presentation Application	Multimedia	Smart board	Blackboard	Email Application	E-portfolio	E-textbook	Online Assignment
Number of Participants	224	224	224	224	224	224	224	224	224
Mean	3.9598	4.2813	4.0089	3.7545	3.7589	4.3705	2.8750	2.9018	3.5982
Median	4.0000	5.0000	4.0000	4.0000	4.0000	5.0000	3.0000	3.0000	4.0000
Mode	5.00	5.00	5.00	5.00	5.00	5.00	2.00	2.00	4.00a
Std. Deviation	1.12580	.88150	1.06300	1.35841	1.22196	.97098	1.25011	1.35236	1.18253
Minimum	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Table 8: Statistical Analysis of participants' responses to Technology effectiveness in learning process

Furthermore, for the remaining teaching methods as is shown in the figure (8) below, the bar chart illustrates participants' responses to questions of how much these teaching methods are used by their teacher, where 1 is never and 5 is most. Around 78% of participants said that teachers use group projects in their teaching. 75% of teachers used handouts, 70% of teachers use worksheets, 65% of teachers use questioning and 62% of teachers use homework and lecture. While around 45% of participants said that their teachers did not use large group and case study that much in their teaching and only 40% of teachers did not use whole class strategy in the class.
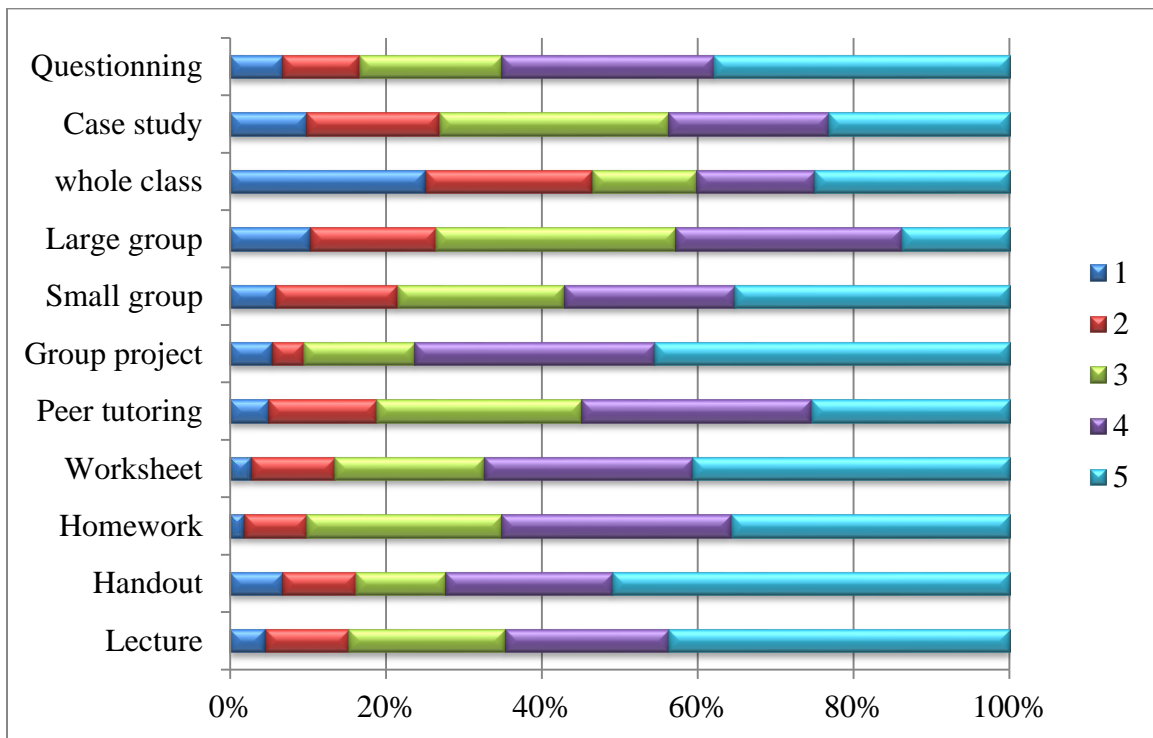
Figure 8: participants' responses to other teaching methods used by teachers

The result in figure (9) shows the effectiveness of each method in improving students' learning process. The bar chart illustrates participants' responses to questions of how effective are these methods to develop the students' learning process, where 1 is never and 5 is most. 78% of participants thought that handouts are a good strategy used in their learning process and 75% believe that group projects were effectiveness in the learning process. Moreover, around 70% for lecture method

and around 65% for worksheet and small group methods where participants think that these methods help in developing their learning process. However, it was found that 50% of the participants did not agree that large group discussions are a good strategy to improve their learning process and around 45% thought the same for whole class discussions strategy.
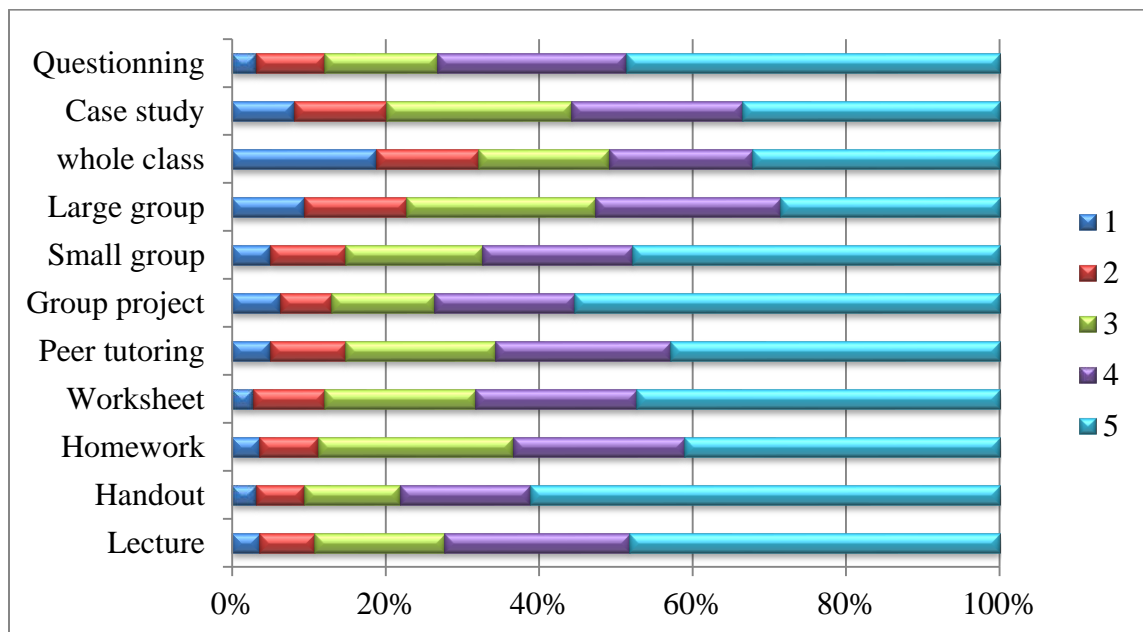
Figure 9: participants' responses to other teaching methods effectiveness in learning process

Table (9) below also supports these results. It shows that these methods which are used by teachers in class are in a good range and no method scored mean below 2.5. For example, handout and group project got 4, worksheet has 3.91, homework (mean = 3.89), lecture (mean = 3.88). Furthermore, the finding in table (10) supported the results shown in figure (9). It shows that all these methods are in a good average of the mean which means that the students support and need these methods to apply in their learning process. For instance, group project, lecture, handout, worksheet and questioning (mean = 4).

	Lecture	Handout	Homework	Worksheet	Peer tutoring	Group project	Small group	Large group	Whole class	Case study	Questioning
Number of Participants	224	224	224	224	224	224	224	224	224	224	224
Mean	3.8884	4.0045	3.8929	3.9196	3.5670	4.0714	3.6518	3.2009	2.9375	3.3036	3.7991
Median	4.0000	5.0000	4.0000	4.0000	4.0000	4.0000	4.0000	3.0000	3.0000	3.0000	4.0000
Mode	5.00	5.00	5.00	5.00	4.00	5.00	5.00	3.00	1.00a	3.00	5.00
Std. Deviation	1.20947	1.26880	1.04050	1.12564	1.15404	1.11423	1.26498	1.17515	1.54038	1.26944	1.23470
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Table 9: Statistical Analysis of participants' responses to other teaching methods used by teachers

	Lecture	Handout	Home work	Worksheet	Peer tutoring	Group project	Small group	Large group	Whole class	Case study	Questioning
Number of Participants	224	224	224	224	224	224	224	224	224	224	224
Mean	4.0625	4.2679	3.8973	4.0089	3.8884	4.0982	3.9554	3.4911	3.3214	3.6116	4.0670
Median	4.0000	5.0000	4.0000	4.0000	4.0000	5.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Mode	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Std. Deviation	1.12279	1.09612	1.13374	1.13640	1.20576	1.23084	1.22301	1.28807	1.50464	1.27973	1.12850
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

**Table 10: Statistical Analysis of participants' responses to other teaching methods effectiveness in learning process**

These findings are in line with most of literature in this topic. Overall, the above results show that most of the participants prefer to use group projects in their learning process which is considered to be a cooperative learning strategy. As has been mentioned in the literature review, educational studies by variety of theorists suggest that participation and interaction in groups are aspect of cooperative learning strategy which play essential role in learning (Cooper et al, 1993; Felder and Brent, 2001; Feichtner and David, 1984; Johnson, Johnson, Smith, 1998; Kagan, 1988; Millis, 1990; Michaelsen, 1997-98). Moreover, in group project work, students might need to ex-change information or ask questions of their teachers. To do this, students can use email application technology and students seems to prefer this based on the findings from the questionnaire. The students can use this technology either inside or outside the class when they need help from their teachers.

Moreover, as explained in the literature review section, group project discussions have some advantages for students. For example; they can encourage the students to be more creative, criticize others' views and change their attitudes and they help the students to exchange their ideas in either teacher-student interaction or student-student interaction (Orlich el at, 2011, Reece and Walker 2007). Additionally, students tend to learn more content through group project activities where they interact with their classmates to achieve the learning goals of the subject (Neo 2005). It is very important to indicate that the needs of the group project as one of the cooperative learning types are different in from program to another. The results also showed that the majority of students from different programs strongly agree and agree in using the cooperative learning in their learning process as is shown in figure (10) where more than 90% of participants from the Information Technology program prefer to have this method in the study comparing to 50% - 70% participants from Applied Communication, Engineering, Business and Education programs.

Peer tutoring is another type of cooperative learning that has been explained in the literature review. The benefit of peer-tutoring approach in higher education is that it allows "interaction among students on learning tasks will lead in itself to improved student achievement. Students will learn from one another because in their discussion of the content, cognitive conflicts will arise, inadequate reasoning will be exposed, and higher-quality understanding will emerge" (Salvin 1995, p 18). Therefore, in figure (11), the result shows that 80% of participants from

Foundation program strongly agree and agree to have this method to be used by their teachers in the class and 60% from Education program thought the same. Additionally, 55% from Information Technology program and 52% from Business program would prefer to have the peer tutoring as well as 50% from Engineering program and Applied Communication program.
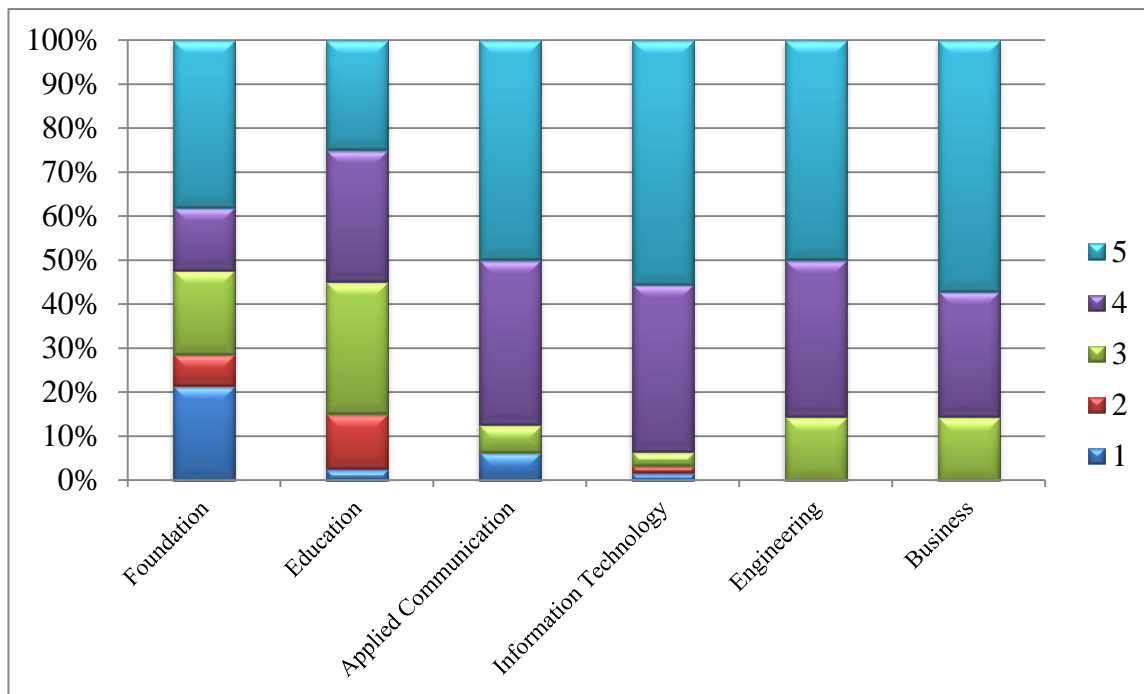
Figure 10: participants' responses on using cooperative learning per programs
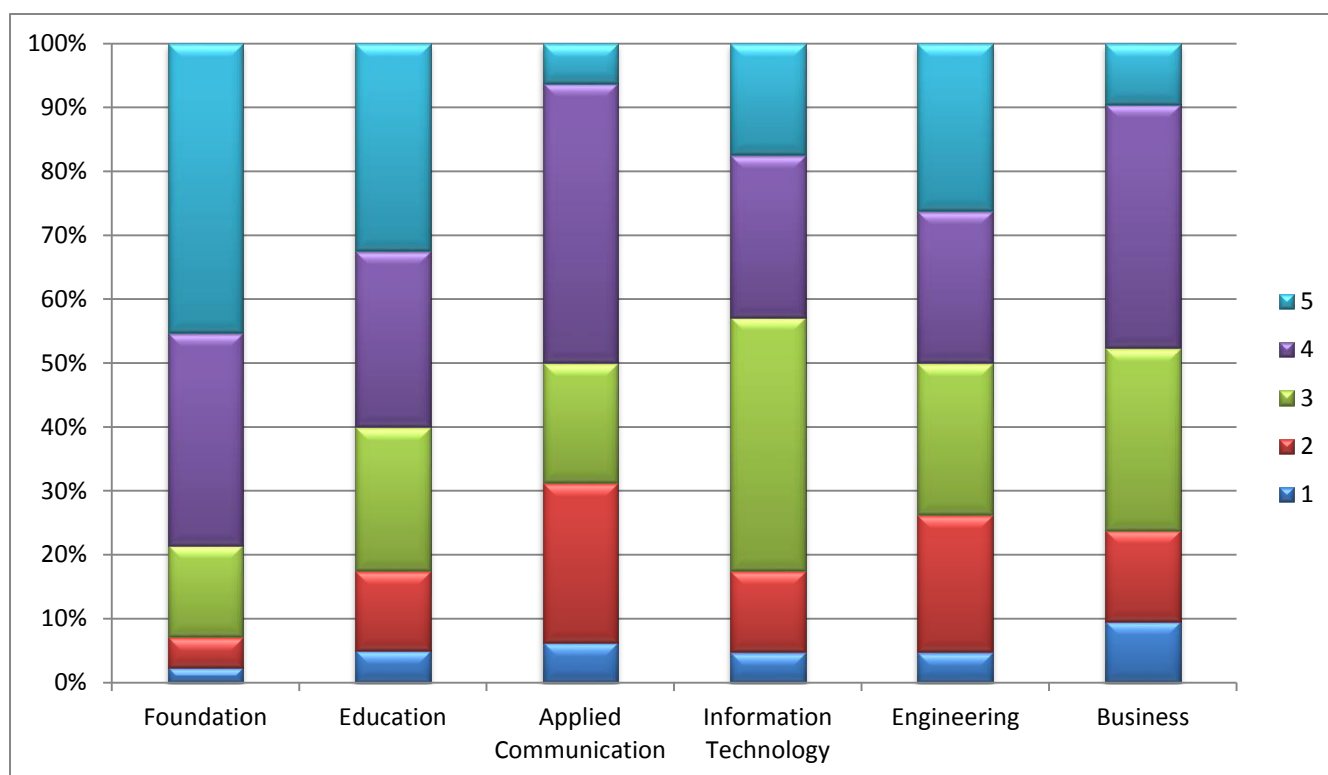
Figure 11: participants' responses on using peer tutoring per programs

Table (11) summarizes the result of the seven statements using the rating scale and it also consists of the mean and standard deviation for each statement. The highest mean was (3.98) with (.99) of standard deviation was for the fourth statement which said that - students get more motivated to learn if there is more interaction with their teachers - and it had the majority of strongly agree from the participants with 38.4% and only 1.8% of the participants strongly disagree. Moreover, the majority of students strongly agree (37.5%) that they think that their teachers help them to build skills for their self-learning in statement two. This skill will help students to be more confident which helps to improve their learning process. However, only 2.7% of students strongly disagree with this statement with mean of (3.89).

In the third statement, 34.4% of students strongly agree that their teachers gave them opportunity to discuss the subject in class which encourages more interaction between the students and their teachers through discussion. As it shown in figure (12), the programs have different level of interaction. This figure shows that 78% of participants from Business students strongly agree and agree about giving them opportunity to be involved in the discussion and 75% of Education and

Foundation students thought the same comparing with other program, 62% from Information Technology students,55% from Engineering students and 50% from applied communication students.
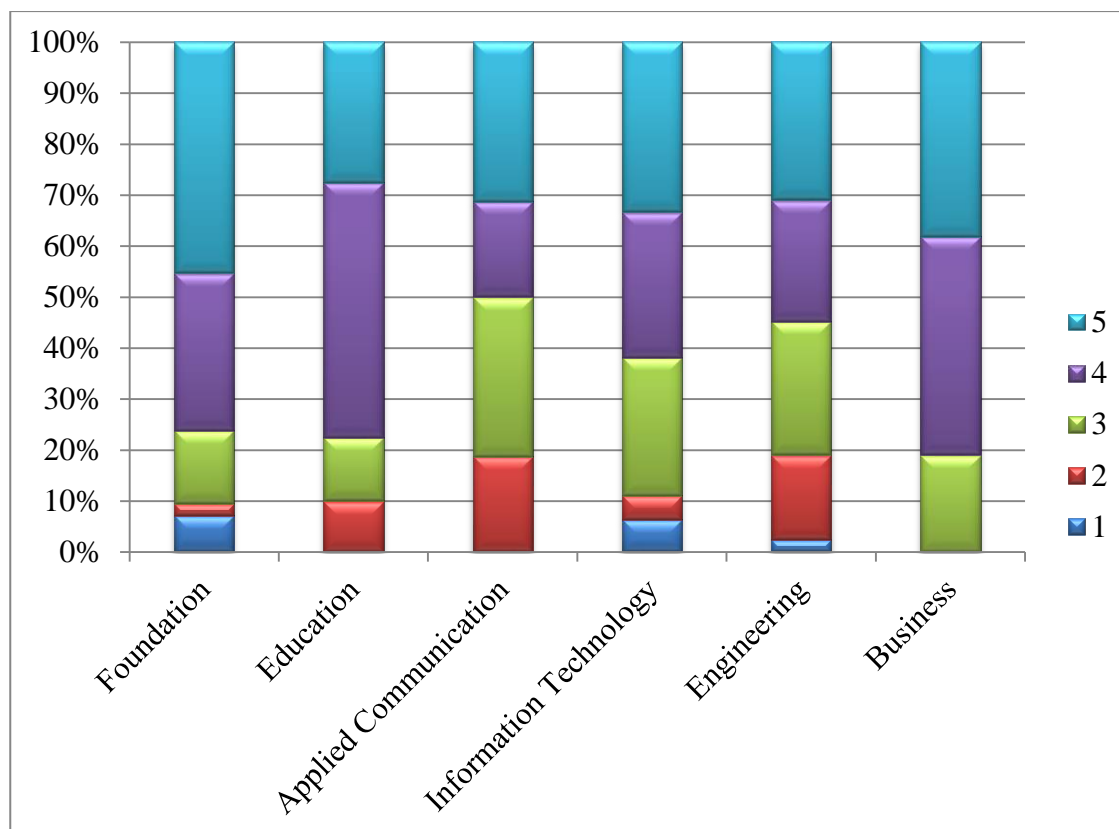
Figure 12: participants' responses to be given opportunity for discussion in class per programs

Statement Responses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
My teachers are able to communicate clearly	0.0%	4.5%	30.8%	36.2%	28.6%	3.8884	.87365
I think that teachers help students to build skills for self-learning	2.7%	8.0%	23.7%	28.1%	37.5%	3.8973	1.08110
Teachers give opportunity to whole students in the class to be involve in the discussion of the subject	3.6%	8.0%	21.4%	32.6%	34.4%	3.8616	1.08951
I am more motivated to learn if there is more interaction with my teachers inside and outside the classroom	1.8%	4.5%	25.9%	29.5%	38.4%	3.9821	.99309
My teachers use teaching methods that enable me to learn new knowledge and understanding	2.2%	4.9%	25.0%	36.6%	31.3%	3.8973	.97649
My teachers use variety of teaching method that are relevant to industry	3.6%	14.7%	27.2%	37.9%	16.5%	3.4911	1.04599
My teachers provide continues feedback inside and outside the classroom	4.9%	11.6%	33.0%	33.5%	17.0%	3.4598	1.05804

Table 11: Statistical analysis of participants' responses to interaction statements

Additionally, figure (13) below demonstrates the participant's opinions about whether their instructors teaching strategy help them in their learning process. 90% of students from Education program gave very positively and positively and around 83% of responses from Engineering program. In Applied Communication program, these figures were around 74%, 60% in Information Technology program and around 45% in Business program. On the other hand, Foundation program, 54% of students were chose the neutral option and only less than 10% of responses from Foundation students selected negatively and from Engineering students selected very negatively.
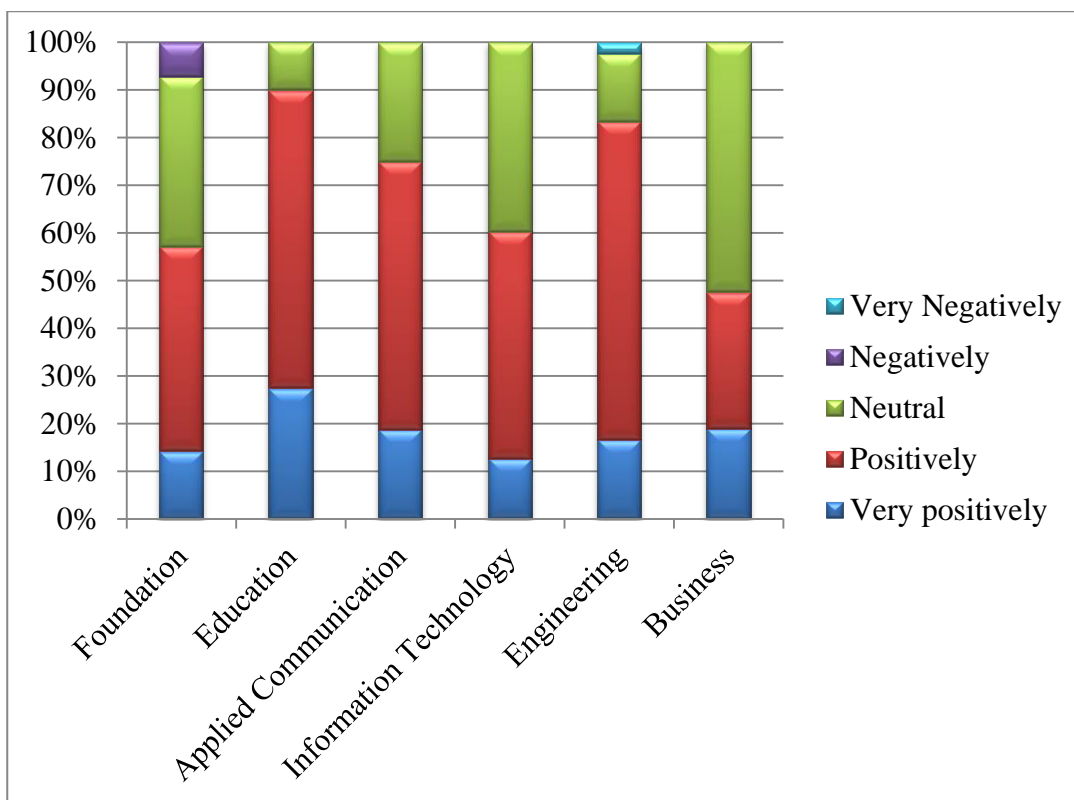
Figure 13: participants' responses to the effective of instructors teaching strategy on their learning process by programs

4.2 Qualitative Results

The purpose of this research is to find out the impact of cooperative learning on the learning process in higher education. The aim of this section is to analyze the findings of the data collected from the interview. As discussed in the methodology section, interviews were conducted in order to get more information about cooperative learning as what happened through conducting the questionnaire. In this study, the researcher used only a structured interview where all respondents received the same questions in the same (Appendix E). The twelve interviewees, two students each program and four questions were asked of participants.

Question 1: What are the teaching methods that your teachers use in the classroom?

According to students' answers, all of them mentioned that their teachers used technology in the classroom such as; presentations applications, the smart board, email applications and multimedia. In addition, they mentioned cooperative learning as their teachers put them in groups to work in projects and have discussions. Moreover, the participants from the Business program and Engineering program added that their teachers used case study. For the Business program, students need to find the main problem in the case study while inEngineering program, students use the case studies to solve practical problems and find out how to build a machine. For the Education program, besides the common methods used in all programs, student (10) pointed out that their teachers used traditional methods such as; note taking as well as the new methods and tools such as technology, self-learning, peer tutoring and games. Similarly in the Media program, teachers use group games and in the Foundation program, teachers use peer tutoring.

Question 2: In your opinion, which one of these methods is the most successful in your learning process?

From their answers, it was found that all participants had different answers regarding their program's needs but all of them stressed the importance of cooperative learning through discussion in group project work. In the Foundation

program, student (1) and student (2) prefer cooperative learning. Student (1) said that "if the student works individually on a project, maybe she will not know how to do it, but if group of students work together, they can help each other to understand the project and they can get a good mark". Student (2) agreed with student (1), when she said that "if we are going to discuss any topic with the teacher as a whole class, one or two of the students will talk but if we are working on group, each student will have the chance to talk and give her opinion". Students in Education program concur with the Foundation students. For instance; student (9) mentioned that "in group projects or peer tutoring, if l misunderstand a point, we can discuss it and the rest of the group can clarify it". She added that "in group project or in peer tutoring, we can exchange information, share our experiences, learn from each other and our thinking can become more critical where we can analyze, evaluate and come up with result for any problem that we face". Media students agreed with this opinion.

Additionally, in Engineering and Information Technology, students stated that they need to have group projects a lot as they have a lot of practical work. Student (8) said that "as I am IT student, we deal with a lot of programming software which needs group work for students to help each other and at the same time, there will be always interaction with our teachers and my colleagues", where engineering students support the IT students' statement by pointing out that "in our program, we deal with coding of machines, therefore, we prefer working in group project to learn from each other and exchange our ideas".

Furthermore, Business student said that "in our program, we need all teaching methods such as; technology, direct-instruction and cooperative learning, because we study a lot of theories which require from us to watch movie related to this theory, handout, presentation application to explain for us the theories and for sure the group project to discuss and keep reminding each other about these theories".

Question 3: Describe your cooperative learning experiences in the classroom?
Participants from different programs had similar experiences. When this question was asked, Education students answered that when they discuss group projects, their teacher sits with them to find out if they are on the right track and to see if they have

any questions. Student (10) said "we feel more secure when our teacher supports us when we are in groups". Student (5) from the Business program said that "l prefer having cooperative learning as a strategy in our learning process because when we are working in groups and we face problems or conflict in understanding some points in a specific theory, we can discuss with each other and our teacher can assist us and help us as well". Student (4) from Media program said that "if the student is absent from the class, she can follow up later with the group member as well as with their teachers and the day after the absence, in the class, the teacher ensures that I do not miss anything in a group and makes sure that I understand".

Question 4: In general, how was the cooperative learning in the classroom improving your learning process as a student?

Generally, all of participants mentioned that group project are important part of the learning process but they gave different reasons. Education student state that "when we work in group project, there will be more interaction either with other students of the group or with our teacher and this increases our self-esteem and develop our personality to be a good teacher for future". Information Technology student (8) said that "Practical work in group project helps us a lot in our exams because during our exam, we remember our discussion and how we solve the problem". Engineering students agreed with this opinion. The other information technology student (7) added that "cooperative learning is a good way to teach us how to interact and work with different personalities which help us to improve our self-esteem".

Moreover, student (3) stated that "as a media student, if our teachers use creative ideas through using different kinds of teaching methods such as cooperative learning, this will make us more active, motivated to learn and interact more with other students through our discussion in groups". Similarly, Business students said that "cooperative learning is a good way to improve our communication skills and help us feel more comfortable when we deal with our teachers and at the same time increase interaction with our peers so we can finish the tasks and submit them on time". Foundation students who are recent graduates from high school and might not have received a lot of instructions in English, thought that good communication with

their teachers and other students through working in group project will improve their English level as they learn.

4.3 Overall Results Summary

This section presents an overall summary of both qualitative and quantitative results and how they are connected. In general, the overall results show major preferences of using cooperative learning in class from the students' side for many different reasons. It seems that students from different programs would like to have a variety of teaching methods which has been supported by Orlich et al (2011) who indicated that the variety of teaching methods used in the class provide an active environment for students' engagement. However, the majority of students prefer to have cooperative learning in their learning process. They believe that cooperative learning encourages them to have more self-esteem, be more motivated to learn and improves their communication skill which has been presented in different studies (Cooper et al 1993, Orlich et al 2011, Reece and Walker 2007, Sullivan 1996). Through cooperative learning, students can interact more with each other and with their teachers to develop their personality. This improves their learning process because they feel more confident in the education environment. This has been reviewed in the literature by Fogarty (1999), Lui (2012) and Vyogtsky (1987) who indicated that social interaction within cooperative learning develop students' learning process. Additionally, as Marzano (2003) and Wenglinsky (2002) point out a number of studies have found that cooperative learning often has a positive impact on student achievements and on their motivation. It is also supported by Tay and Brady (2010) in the literature who found that students who worked in cooperative groups scored higher test in their academic achievement.

Furthermore, it seems that the majority of participants from different programs believe that cooperative learning is an effective teaching method. This may be because they thought that their personality developed and they became more interactive with their classmates and their teachers as it been reviewed in Cooper et al (1993) work as they found out that cooperative learning promote self-esteem and

develop their personality. They also learn from each other and exchange information, experiences and they work activelyand are motivated to finish their tasks on time. As presented in the literature review, Cooper el al (1993) found that cooperative learning is more effective than traditional strategies in promoting self-esteem, social behavior and critical thinking.

These responses suggested that when students work in group project, they tend to finish their tasks on time because they encourage, support and help each other as it has been pointed by Doolittle (1997), Johnson et al (1998) and Orlich et al (2001) who identified that students learn and perform better individually when working with others in group which develop their accountability and responsibility skills. Furthermore, Vygotsky's theory of ZPD (1978) presents a very relevant support to this point. He states that the zone of proximal development is used to provide a theoretical base to understand cooperative learning in which student's work together in a social setting to finish their tasks and submit on time.

Overall, it appears that cooperative learning has a beneficial effective on students' learning process. Working in groups helps learners to develop their personality, become more critical in their thinking and improve their skills in teamwork, problem solving and time management. Sullivan (1996) supports this finding by stating that cooperative learning strategy is used to improve critical thinking of students via group work and discussion and tends to improve their critical thinking skills, problem solving, teamwork and time management.

From the findings above and the literature review, it would appear that cooperative learning is effective in improving the learning process for students in higher education which has a positive impact on students' achievements.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The aim of this research was to ascertain the effectiveness of cooperative learning in improving the learning outcomes in higher education from students' perspective. An interview and questionnaire were conducted to find out students' opinions on the effectiveness of cooperative learning in their learning process. The participants were selected randomly from different programs.There were two hundred and twenty four participants for the questionnaire and twelve for the interview. The participants in the questionnaire were informed that their answers would be confidentialand the participants for the interview signed the consent form.

The findings from both quantitative and qualitative methods highlighted the importance of cooperative learning and the fact that participants want to have it in their learning process. The students liked to use cooperative learning during their class because they enjoy engaging with other classmates when they work on group projects. This strategy has a good positive impact on their study achievements and their personality. As they work on group projects or peer tutoring, they interact with each other more to learn the content of the projects and to finish tasks. This can improve students' achievement and they can learn more from each other in their discussions by exchanging information and knowledge. Furthermore, students can become more confident, increase their self-esteem, learn how to exchange ideas and respect other's opinions, and become more critical in their thinking and improve their communication skills.

Cooperative learning presents a number of benefits for students' achievement, personal development and performance. The researcher suggests that these benefits may improve the reputation of the college when the studentsgraduate and work in other organizations and show their ability to work effectively in teams. This research found that college students perceived that the teachers at HCT- Ras Al Khaimah Women's College used cooperative learning in their teaching in different programs. Through using this strategy,

college teachers prepare their students to progress in their study as well as to prepare them for future careers in which cooperation will be important. Furthermore, the results demonstrate that when the students work on group projects, they become more motivated, actively engageand work better in teams. In addition, they would seem to be better at solving problems, critical thinking, leadership skills and it increases self-esteem. This applies for the all students from different programs starting with information technology then applied communication followed by engineering, business, education and foundation programs.

To conclude with, cooperative learning presents a high positive effect on the learning process. Cooperative learning has a beneficial impact on the students within cooperative activities and the students seek outcomes that are beneficial for individual and for groups because they can practice, improve skills such as problem solve, communication, social competence, supportive, leadership skills and critical thinking skills. In addition, it increases achievements and productivity in the learning process.

5.2 Recommendation

Based on the outcomes of this study, some of the recommendations for future research are the following:

A. Theoretical recommendation:
- Since this research is based on a sample size of two hundred and twenty four participants, future research is recommended to use a larger sample size to achieve a greaterperspective and reliability.
- Future researchers might expand this study to a larger site through involving other HCT colleges and other public and private institutions.
- Future researcher should also include male students to investigate possible gender similarity and/or differences in relation to cooperative learning in improving the learning process.

B. Professional recommendation:

- The future research could explore the teachers' perspectives on the impact of using cooperative learning to improve students' achievements.
- Future research could also investigate different approaches to develop the use of cooperative learning in classroom.
- Teachers could investigate other types of cooperative learning in classroom such as; peer tutoring.
- Teacher could combine different teaching methods with cooperative learning in order to develop students' learning process.
- Teachers might apply practical learning to enhance the cooperative learning in classroom rather than only depending on instructional learning.
- Future research could study the importance of cooperative learning outside the classroom through involving students in college activities and events.

C. Practical recommendation:

- Since this study was based on four majors, future research could explore the use of cooperative learning in other majors such as Health Science programs, Law programs, other divisions within Engineering programs, Applied Communication programs and Information Technology programs.
- Future research could cover different level – new batch and senior levels – within each program which would help to get more students' perspective on the use of cooperative learning.
- Future research could further investigate the use of cooperative learning in the foundation years to enhance the students' achievement as they move to their future specialized programs.

5.3 Limitation

There have been a number of limitations during the study. These limitations are:

1. The researcher modified the initial topic of the study to get access approval from HCTResearch Committee to conduct the study at Ras Al Khaimah Women's campus.
2. For ethical reasons, the researcher redesigned the questionnaire and interview questions in order to match the HCT Research Committee ethical considerations and to get permission to conduct the research in the college.
3. The timing of the research was critical because the students were busy in final projects and exams which affected the sample size.
4. Participants were from a public higher education institution in RAK, but private and semi-public higher education institutions in other emirateswere not considered in this study, accordingly the result cannotbe generalized to other HCT campuses.
5. Undergraduates female Emirati students in RAK are the scope of this study, accordingly the result cannot be generalized to male students.
6. Time consuming was an important limitation because the researcher has to be present during the participant's responses on the questionnaire to clarify any misunderstanding.
7. The researcher needed to reschedule the data collection many times to fit the students' daily schedule especially during the assessment period.
8. The researcher was not able to collect data from all levels because the study was conducted during the assessment period.

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APPENDICES

Appendix A: Consent Form

Appendix B: BUiD Permission Letter

Appendix C: Approval Letter

Appendix D: Questionnaire Questions

Appendix E: Interview Questions

Appendix A: Consent Form

Consent for Participation in Interview Research

I volunteer to participate in a research project conducted by Ms. Sumayya Al Rasbi from British University in Dubai. I understand that the project is designed to gather information about the relationship between teaching methods and teacher-student interaction to improve the learning process. I will be one of approximately 12 people being interviewed for this research.

1. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty. If I decline to participate or withdraw from the study, no one on my campus will be told.

2. I understand that most interviewees in will find the discussion interesting and thought-provoking. If, however, I feel uncomfortable in any way during the interview session, I have the right to decline to answer any question or to end the interview.

3. Participation involves being interviewed by researcher. The interview will last approximately 30 minutes. An audio tape will make according to the committee conditions.

4. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

5. I understand that this research study has been reviewed and approved by the Research Review Committee (RRC) with the British University Board.

6. I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I have been given a copy of this consent form.

_____   _____
My Signature   Date

_____   _____
My Printed Name in the Study   Signature of the Investigator

Appendix B: BUiD Permission Letter

الجامعة البريطانية في دبي The British University *in* Dubai
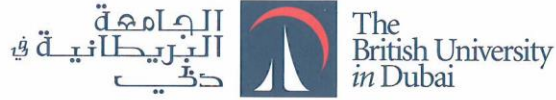
24 February 2014

Dr. Ali Al Mansoori
Ras Al Khaimah College Director
Higher Colleges of Technology

This is to certify that **Ms Sumayya Najem Alrasbi**– Student ID No. **110098 is** a registered part-time student on the **Master of Education** programme (following the pathway in **Management Leadership and Policy**) in <u>The British University in Dubai</u>, from January 2012.

Ms Alrasbi is currently working on her dissertation on the topic '**Emirati Undergraduate Students' Perceptions of Cooperative Learning**'. In this regard, she is required to collect data for her research through a case study survey or by conducting interviews.

We request you to assist Ms Alrasbi so that she can conduct her visit to the college for data collection as appropriate.

This letter is issued on Ms Alrasbi's request.

Yours sincerely,

Nandini Uchil
Head of Student Administration

Appendix C: Approval Letter

كلَيــات التقنية العليا
HIGHER COLLEGES OF TECHNOLOGY

Ras Al Khaimah Colleges

December 12, 2013

Dear Sumayya Najem Al Rasbi
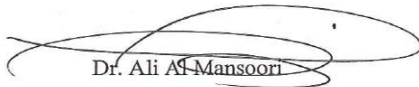
This letter to inform you that Higher Colleges of Technology has reviewed and supports your research study titled **"Emirati Undergraduate Students' Perceptions of Cooperative Learning"**. It is our understanding the project will begin on 15th July 2013.

We are very interested in your efforts that may help you improve our understanding of this relationship.

If you have any questions or need further assistance, please contact me at

07 – 2026600.

Sincerely,

Dr. Ali Al Mansoori

College Director

Ras Al Khaimah Colleges

Appendix D: Questionnaire Questions

A Study of Emirati Undergraduate Students' Perceptions of Cooperative Learning

This questionnaire has been designed to gather information about the effectiveness of using cooperative learning in higher education from Emirati undergraduate students' perspective to improve the learning process. It will take approximately 15 minutes of your time to complete.

Your participation in this project is completely voluntary and you are free to decline the invitation to participate, without consequence, at any time prior to or at any point during the activity. Any information you provide will be kept confidential and used only for the purposes of this study and will not be used in any way to reveal your identity. All questionnaire responses, notes, and records will be kept in a secured environment.

Part 1: Demographic Information

1. How old are you?
   - ☐ 17 – 20
   - ☐ 21 – 23
   - ☐ 24 and above

2. Which major are you studying?
   - ☐ Foundation
   - ☐ Education
   - ☐ Applied Communication
   - ☐ Information Technology
   - ☐ Engineering
   - ☐ Business

You have completed Part 1 of the questionnaire. Please continue to Part 2, remember to answer all questions.

Part 2: Teaching Methods and Interaction Statements

1. Please read the following statements carefully and tick the right box for each statement that best expresses your opinion.

Teaching Methods	How much of this method do your teachers use?					How effective are these strategies to achieve your learning process?				
	1 Never	**2**	**3**	**4**	**5** Most	**1** Not Good	**2**	**3**	**4**	**5** Very Good
1. Technology in the classroom ☐ Blackboard										
☐ Presentation application										
☐ Multimedia										
☐ Smartboard										

Teaching Methods	How much of this method do your teachers use?					How effective are these strategies to achieve your learning process?				
	1 Never	**2**	**3**	**4**	**5** Most	**1** Not Good	**2**	**3**	**4**	**5** Very Good
2. Technology outside the classroom										
☐ Blackboard										
☐ E-mail application										
☐ E-Portfolio										
☐ E-Text Book										
☐ Online Assignments										
3. Director-Instruction strategy										
☐ Lecture										
☐ Handout										

Teaching Methods	How much of this method do your teachers use?					How effective are these strategies to achieve your learning process?				
	1 Never	2	3	4	5 Most	1 Not Good	2	3	4	5 Very Good
4. Guided Discovery strategy										
☐ Homework										
☐ Worksheet										
5. Cooperative learning strategy										
☐ Peer tutoring										
☐ Group Project										
6. Discussion strategy										
☐ Small group										
☐ Large group										
☐ Whole class										

Teaching Methods	How much of this method do your teachers use?					How effective are these strategies to achieve your learning process?				
	1 Never	**2**	**3**	**4**	**5** Most	**1** Not Good	**2**	**3**	**4**	**5** Very Good
7. Problem-based learning strategy ☐ Case study										
☐ Questioning										

3. How are your teachers teaching involve your learning process?

☐ Very Positively

☐ Positively

☐ Neutral

☐ Negatively

☐ Very Negatively

4. Please read the following statements carefully and tick the right box for each statement that best expresses the degree to which you agree or disagree with the statements

Statements Responses	1 Strongly Disagree	2	3	4	5 Strongly Agree
A. My teachers are able to communicate clearly					
B. I think that teachers help students to build skills for self-learning					
C. Teachers give opportunity to whole students in the class to be involve in the discussion of the subject					
D. I am more motivated to learn if there is more interaction with my teachers inside and outside the classroom					
E. My teachers use teaching methods that enable me to learn new knowledge and understanding					
F. My teachers use variety of teaching methods that are relevant to industry					
G. My teachers provide continues feedback inside and outside the classroom					

Thanks for your cooperation

Appendix E: Interview Questions

A Study of Emirati Undergraduate Students' Perceptions of Cooperative Learning

Interview Questions:

1. What are the teaching methods that your teachers use in the classroom?

2. In your opinion, which one of these methods is the most successful in your learning process?

3. Describe your cooperative learning experiences you have had in the classroom?

4. In general, how has the cooperative learning in the classroom improve your learning process as a student?