USE OF E-COMMERCE APPLICATIONS IN NORTH CYPRUS UNIVERSITIES

A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF APPLIED SCIENCES

OF

NEAR EAST UNIVERSITY

By

FAYROUZ ALHASHMI BELHAJ

In Partial Fulfillment of the Requirements for

The Degree of Master of Science

in

Computer Information Systems

NICOSIA, 2016

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name:

Signature:

Date:

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My profound gratitude goes sincerely to Assist. Prof. Dr. Seren Başaran, for her guiding me, understanding, being patience, and very specifically her supervision in writing of my graduate thesis at Near East University. Her supervision was very crucial in giving expertise advice and contribution and consistent with my long-term career goals. She has been an encouragement in the aspect of not only being a researcher but rather grow into being an instructor and thinking independently.

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I dedicate this thesis to my husband and my beloved family with sincere thanks and heartfelt love, which they trust and believed in me and sustain and kept me throughout my life. I would like to thank my husband for his unlimited and unconditional love, and to my parents who support me in everything all the time.

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To my beloved children..

ABSTRACT

The use of internet applications cut across every field and sector and its use has brought about a positive impact. Its use in higher education has grown past just learning, it has become a way of life that is gradually becoming an order of the day. This study targets to inspect the use of e-commerce in our universities. The study was conducted in North Cyprus universities in a cross sectional manner. Total of six universities were involved in data collection with sample size of 1132 students. The causal comparative design were employed to analyze gender, age, faculty differences among student use of e-commerce and correlational research design was used to identify the nature of association between the level of confidence in use of e-commerce applications. The data collected was analyzed with SPSS using different statistical models like frequencies, percentages, independent t-test, ANOVA and Pearson correlation techniques were employed. Confidence in use of e-commerce applications implies that students' views are changing between not confident and do not know. The use of e-commerce in HEI are changing between seldom to sometimes. Males are slightly more positive in the use of e-commerce services in HEI than females. Students with ages 24 and above were significantly higher than students with age range 18-20 and also from students with age range 21-23 in the views on availability of e-commerce applications. In HEI the students of medicine are less positive about the use of e-commerce applications than engineering and than business administration students. There exists a weak, positive linear correlation implying that increasing the confidence in the general use of e-commerce will result in increase in the use of e-commerce applications in higher education.

***Keywords*:** E-commerce; e-learning; higher education institutions; north cyprus universities;student services

ÖZET

İnternet uygulamalarının kullanımı her alanda ve sektörde kesişmektedir ve kullanımı olumlu bir etki getirmiştir. Yükseköğrenimdeki kullanımı sadece öğrenme aşamasını geçmiş ve giderek gündelik hayatın bir parçası olması şekline gelmektedir. Bu çalışma e-ticaretin Üniversitelerimizdeki kullanımını araştırmayı hedefler. Çalışma Kuzey Kıbrıs üniversitelerinde kesitsel bir şekilde gerçekleştirilmiştir. Veri toplama sürecine toplam altı üniversite dahil olmuş ve örneklem 1132 öğrenciden oluşmuştur. E-ticaret kullanan öğrenciler arasındaki cinsiyet, yaş ve fakülte farklılıklarını analiz etmek için nedensel karşılaştırmalı tasarım kullanılmış ve e-ticaret uygulamalarını kullanmada güven seviyeleri arasındaki ilişkinin doğasını tanımlamak için ilişkisel araştırma tasarımı kullanıldı. Toplanan veriler, frekanslar, yüzdeler, bağımsız t-testi, tek yönlü varyans analizi (ANOVA) ve Pearson korelasyon teknikleri gibi farklı istatistik modelleri kullanarak SPSS ile analiz edilmiştir. E-ticaret uygulamalarındaki güven öğrencilerin görüşlerinin emin olmamakla bilmemek arasında değiştiğini ima etmektedir. E-ticaretin yükseköğretim kurumlarında kullanımı nadir ile zaman zaman arasında değişmektedir. Erkek öğrenciler yükseköğretim kurumlarında e-ticaretin kullanımı konusunda kız öğrencilerden biraz daha olumludur. 24 yaş ve üzerindeki öğrenciler, e-ticaret uygulamalarının mevcudiyeti konusundaki görüşlerinde 18-20 yaş ve 21-23 yaş aralığındaki öğrencilerden anlamlı olarak sayı olarak daha fazlaydı. Yükseköğretim kurumlarında tıp öğrencileri e-ticaret uygulamalarının kullanımı konusunda mühendislik ve iş yönetimi öğrencilerinden daha olumsuz düşünmekteydi. Var olan güçsüz ve olumlu doğrusal korelasyon e-ticaretin genel kullanımında artan güven seviyesinin e-ticaret uygulamalarının yüksek öğretimde kullanımının artmasıyla sonuçlanacağı anlamına gelmektedir.

***Anahtar Kelimeler*:** E-öğrenme; e-ticaret; kuzey kıbrıs üniversiteleri; öğrenci hizmetleri; yüksek öğrenim kurumları

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LIST OF ABBREVIATIONS

ANOVA:	Analysis of Variance
SD:	Standard Deviation
IT:	Information Technology
APP:	Application
HEL:	Higher Education Institutions
IDC:	International Data Corporation
CMS:	Course Management Systems
NGDC:	New generation digital campus
CRM:	Customer relationship management
DOE:	Department of education
CHEA:	Council of higher education accreditation
RFID:	Radio Frequency Identification
PC:	Personal Computer
ICT:	Information and communication technology
SME:	Small to medium enterprise
SIS:	Secret intelligence service
B2C:	Business-to-consumer
B2B:	Business-to-business
SSL:	Secure sockets layer

CHAPTER 1
INTRODUCTION

The Internet has made life an interesting one. It made a revolution in communication world and increased our network from local to international. Humanity started to use internet in almost everything they do. Ordering food, buying a television, sharing a memory with a friend or showing our pictures and more (Nie and Erbring, 2000). Before the inception of internet, if someone wants to learn about news, they had to buy a newspaper, open TV or radio. But today, public are allowed to reach news and all other information any time via internet and because of improved mobile technology, they can access to information from anywhere (Mok & Wellman, 2007).

Since it's invention, internet had too much changes till today. At the beginning, internet was just a static network with small freight of bytes capacity and was transferring just short texts between two persons or parts; it was a store of data where content was initiated and kept only by advanced programmers (Allman, Kruse & Ostermann, 2000). Today, however, immeasurable quantities of information is uploading and downloading in a minute over this electronic environment, and important amount of content is from us so for now we are all commentators, publishers, and creators (Corcoran, 2016).

During 1980 's and 1990 's, Internet networks extended to surround the educational institutes and research laboratories. Recently public entities, institutions, and private companies all over the world entered to the internet community. The Internet still has an unstoppable and limitless growth; internet is not a project managed by the government any more, but it is the largest global computer network penetrating the world (Kleinrock, 2010).

In 1970's, Electronic Commerce (e-commerce) was indicated as data transfer between companies and clients where they send formal business documents such as purchase orders and invoices. In the beginning of the second millennium, there was a necessity of a new method of conducting business worldwide that satisfies the needs of local and international markets (Brunn & Leinbach, 2001).

The modern life of global business witnessed a dramatic change of business transactions where technology has played a major role to utilities world trade and economy (Mahadevan, 2000). The ubiquitous spread of the online and websites has dramatically make differences in aspect of trade and commerce in the recent years. It became more and more popular for users and even consumers stop buying any good without checking it from internet and e-commerce sites (Turban et al., 2016). Soon after, and due to the development of industry and economy, electronic business is referred to offering products and serves customers via the internet.

This fast evolution into a knowledge based society brought many requisites to nearly all areas of world market. Today, organizations from different sectors need to provide some online opportunities to their companies and also they have to learn how to be effective in the digital world to survive. Organizations which could not get familiar with internet and new economy trends became smaller or disappeared.

E-commerce defined as the process of buying and selling by using the internet and increasingly and has become very popular today because it serves the needs of merchants and customers and it can be done electronically without the need of using cash currency or physical merchandise. Due to the enormous benefits of electronic commerce, it has set the impetus for the revolution of information technology and communication (Gudigantala et al., 2016).

The term Electronic Commerce (e-commerce) refer mainly to business exchanges, including both associations and people, is mainly on holding and transferring electronic information like data, audio, video and always opening of website and switching off computers (AOL) which has access into free and accessible network (OECD, 1997).

Since their foundations, academic institutions are proud of their selectivity. Always it is more difficult it is to be admitted to more prestigious the schools. Also students have to demonstrate academic ability, test skills, inventiveness and perseverance. Results are supporting the choosing method that encompasses the operation on investigation, interuse, essays and selection panel. A complete digitalized infra-structure is a necessity to accept a process, applications, course selection, registration and advising. Admission results may continue for

weeks or months according to how institutions reuse applications of prospective students to select the ones who meet the acceptance requirements (Duderstadt et al., 2002).

With advantages of online education, all admission process has changed. The harnesses to access also have consequently changed. The main aim of higher education constitutions is providing widely available high level education in national and international aspects at with little charge. Instead of attracting only local students, higher education institutes are now more interested also in marketing and attracting students from the world wide (Nelson, 2008).

Because geographic distance is not a barrier to education, students who never went to campus physically can register for online courses. Students are choosing online schools mainly based on the reputation of their programs. In some situations, the selection is based on the attendance flexibility in addition to suitability with their lives and support possibilities provided online. All services about choosing courses and paying fees must be as easy as shopping on internet. Selecting course of study, interacting with consultant to pick the required program with student, submitting applications, admission process and fees payments should be done very easily and quickly (Allen and Seaman, 2003)

After these steps, students will need access to their courses with continuous support in case of problems. To offer such kind of service need a thinking of all possible service structure and interfacing model for each individual institute (Mason, 1998).

E-commerce applications in higher educational institution are crucial for the robust functioning of this educational systems, therefore e-commerce is crucial in indicationg and pointing our which aspect or the level commerce to customer e-commerce applications are available or reachable to university students. Series of studies has been conducted by some scholars on the effect of gender, age and faculty in the use of e-commerce, the study by Sharma (2013) discussed the impact of age on the attitude towards the use of e-commerce, some other related study (Abedalaziz et al., 2013; Suri et al., 2014) showed that female students uses e-commerce applications than male (Genis-gruber and Gonul, 2012; Odell et al., 2010), he suggested that the faculties of science and engineering students are more computer and internet application users, in the same vain, Anderson (2010) argued that faculties experience differences based on the utilization of PC and online applications. So therefore

identifying how confident today's university students are in using e-commerce applications for educational purposes cannot be undermined due to the robustness of the present educational institution.

1.1 The Problem

Since the foundation of internet networks (web), the Internet has become as a strong, useful and efficient research means and an easy way of information broadcasting. With middle of 1990s, a lot of instructors, lecturers and professors started to contact with their students and colleagues by e-mail. They also included materials and subjects collected from internet into their course materials (Jagboro, 2007)

With the beginning of 21st century, internet has become a main learning component by instructors and administration staff. Private universities and institutes in general wait the development of wide commercial internet networks to start a revolution in the education and create an important source of income (Gulbahar, 2008).

Even the economic problems during early 2000's affected the online education industry and many electronic learning activities stopped definitively, International Data Corporation (IDC) explained 33% growth in the United States (US) electronic learning market with about $12 billion between 1999 and 2004. Every year US spends around $600 billion on educational activities. This put the education in the second class after health care sector as the largest industry. Web based and online education is one of the fastest developing trends in higher education. In 2000, about three quarters of the 4,000 US colleges and universities presented online courses. The percentage was about 48% in the year 1998, according to Market Retrieval Service (Howard, Schenk and Discenza, 2004).

With an increasing prominence on an information based global marketing, higher education sector was considered as more and more vital for the population of the world. Those supporters of e-education claim that its unlimited nature geographically offers a professional and low cost medium for providing education to anyone with internet access. They view e-learning as a strong alternative to conventional teacher to student method of education and hail it as the great democratize of higher education. On the other side, critics warned that an

increasing motivation to electronic subject and education brings increasing questions that has to do with knowledge content rights, academic freedom, and the major vision of higher education. It is actually said that online education opens ways to They claimed that cyber-education exposed to eradicate the request of issue for human teachers and to convert higher education to ”Webucation” (Natriello, 2005).

The effect of internet has been felt in different fields of higher education. Communications and research activities have become very easy. Portal companies and courseware that provide university services to students and faculties were spawned by internet. With the emergence of fully online schools offering all kind of certificates, it has become the school itself (Pittinsky, 2003). By 2002, over two million students were expected to enroll in online courses. After this number were about 710000 in the year 1998, the department of education statistics in the United States survey shows that half of the college students was made up of 25 years old adults and above, this set of students majorly can gain from the fluctuating and availability of online higher education courses.

Because competition directs universities into shifting to user interface applications is important to keep students and other working professionals who interest in their organization or program. Because level of computer experience of students may be different and students who have lower experience does not feel confident enough to use digital campus opportunities.

Schools which accepts this change and prefers to modify their strategy, areas of reasoning and strategies to attract the internet undergraduates and the recurring qualified faced with success. The approach which the complete and service focused model is designed determines whether institutions is successful or not in the new circumstances. On the other hand, prospect students must adopt this new internet opportunity e-commerce and its application in the educational sector, it is paramount to see and study how age, gender, faculty affects its usage in higher education (Abedalaziz et al., 2013; Suri et al., 2014).

1.2 The Aim of the Study

This study intended to highlight the extent of the usage of e-commerce by students who study in North Cyprus universities. Moreover, this research proved that online use for educational and academic reasons is indispensable and can be directly affected their academic progress. The research is also interested in the amount electronic commerce in universities and educational institutes are moving to offer their services in the internet environment. Most commonly used and least used e-commerce applications were intended be identified.

1.3 Research Questions

1. What are the university students' use on e-commerce applications in higher education?
2. Is there gender based difference among university students' use on e-commerce applications in higher education?
3. Is there age based difference among university students' use on e-commerce applications in higher education?
4. Is there faculty based difference among university students' use on e-commerce applications in higher education?
5. Is there any relation between students' confidence in using e-commerce applications in general and using in education related e-commerce applications in higher education?

1.4 The Significance of the Study

Just as IT has entered into most part of educational materials, e-commerce which is an important component of IT has become the one of the most important part of institutional operations at Higher Education. Bring of IT and e-commerce has created more flexible business operations, which covers course delivery with e-Learning (Chnapko, 2002; Djoleto, 2008a; Djoleto; 2008b), like distance education and Course Management Systems (CMS), electronic admissions and electronic registration. This fast and effective development in IT puts very increased growth in CMS is needed for adequate and improved distance learning which is a unit of e-commerce. The need for software and fresh skilled software developers for

HEI improves the demand for e-commerce solutions (Djoleto, 2009; Gil-Garcia & Pardo, 2006; Olsen, 2000 & 2002). Considering the level of HEI and many institutions which are yet to accept e-commerce happens to remain efficient in competing with other institutions around the world market. A lot of HEI made investments on e-commerce and they are basically and tactically using online course of study and e-commerce depending mainly of educational duties or activities to bring students for admission and thereby develop students educational performance towards giving good education and putting the students tactically above other universities or educational institutions competing to have them in their schools (Djoleto-Okunbor, 2009; Armstrong, 2002).

This study spotted the light on examining the attitudes of university students who use these websites for academic purposes among North Cyprus universities. Because it is one of its own kind studies, it will be as a reference for online business producers to take into account the future problems of electronic commerce and strike for change and development in North Cyprus. The e-commerce application in higher education institutions are crucial for the robust functioning of these institutions. Therefore it is essential to identify to what extent business to customer e-commerce applications are available to university students, North Cyprus has become a sure destination for educational pursuit for over 60,000 students from 120 countries of the world, according to the higher educational council (YÖDAK) in 2014, investigating the use of e-commerce is essential, it can be adopted by universities in North Cyprus for an effective and efficient service delivery to the students.

1.5 E-Commerce in Higher educational Institutions

Electronic commerce in this study is the use of devices to share information and also render services to the students like payment of fees or electronic transfer of materials, completing course registration, checking of results and accessing of course materials which may bring quality delivery of services to the students in the institution.

E-commerce otherwise known as e-trade is basically the utilization of information or data which are capable of being shared or data exchanging facilities or devices just for trade and commerce (Kemal 1998, p. 850). As per the WTO definition of e-commerce is seen to mean

the making, delivery and “e-business” is comprehended to mean the creation, dissemination, sponsoring sales and carrying of goods and services by , sale or conveyance of products and services by automated way (WTO, 1998). The AGB actually pointed e-commerce more extensively as encompassing every interested trade including transfer of information or data, goods, services or payment by means of using automated device. It entails using electronic information as a way of marketing through which goods and services of the uniqueness of electronic standard for planning, publicizing, listing, obtaining and carrying” (Monterio, 2001). E-commerce significantly decreases the financial separation amongst producers and purchasers by wiping out the parts of conventional retailers, wholesalers, and sometimes merchants. The customers gain from enhanced information, lower exchange expenses, and in this manner lower costs. They also gain bigger decisions like customized items and instant conveyance for impalpable administrations and items in computerized structure. For dealers, e-trade present numerous favorable circumstances e.g., access to the worldwide commercial center without stress. Stock framework can be overseen all the more productively, with extensive work cost investment funds, and so on. Be that as it may, the same manner it brings a new business opening which will also bring about competing in the marketing system. E-commerce is an IT motivated strategy which brings speed to the Internet method of trading. The quickest developing technology seen by man is the change in IT. In comparing the fast growing IT with other technology like electricity which was previously introduced in 1873 and it takes 46 years for it to be out in use, the use of phone was introduced in 1876 it took 35 years in order for the masses to use, TV came up in 1926 and uses 26 years to be fully accepted and use while computer was introduced in 1976 and with 16 years it was fully accepted and used by individuals, the use of cell phone came up in 1983 and took 13 years for massive use while web only took for years to be used by the masses as it at when it was introduced in 1994 indicating the fastest technology accepted and used by the masses. This research considers the use of the business-to-consumer model for academic institutions particularly universities in a way that it is the conveyer of the web portal online e-commerce services which students could carry out most basic business functions.

1.6 The Limitations of the Study

- The temporal scope of this study will be initial ly in the academic semester Fall-Spring 2015-2016.
- Questionnaire was restricted to only 6 purposefully selected universities where half of these are private and the other half are state universities in North. These universities are Near East University (NEU), Cyprus International University (CIU), Eastern Mediterranean University (EMU), Lefke European University (LEU), Middle East Technical University (METU) and Girne American University (GAU).
- Questionnaire was used to collect data.
- Non-random convenience sampling technique (data collection from population members who are conveniently available to ease of access in study) was used to select sample and this includes 1132 students from 6 Universities in Turkish Republic of North Cyprus which are: Cyprus International University, Eastern Mediterranean University, Near East University, Girne American University, Lefke European University and Middle East Technical University.

1.7 Overview of the Thesis

Chapter 1 gives general explanations about e-commerce and the problem description, the importance of the study, the search for of such a research, the limitations of this system and most important problems of this research.

Chapter 2 presents previously related researches and study works.

Chapter 3 introduces the theoretical framework whereby various aspects of e-commerce systems were discussed.

Chapter 4 explains the research methodology of this work and which research methodology was used, research parameters, the members of the study, information collection and data analysis.

Chapter 5 presents the results and discussions of the study.

Chapter 6 talks about termination and conclusion of the research, suggestions of the thesis author in addition to the recommendations for possible future researches.

CHAPTER 2
LITERATURE REVIEW

2.1 E-Commerce Applications in Higher Educational Institution

Electronic commerce simply consists of buying and selling over an electronic system such as the internet, the product and services are conducted over the internet. According to (WTO, 2005) e-commerce was defined by the world trade organization as the method of producing a product, circulating and selling of the products and rendering services electronically. The definition of e-commerce has gone through an evolution over the past 30 years, in the 1970's electronic commerce originally meant the expedition of commercial transactions that involves trade organizations and individuals that is concerned with the processing and transfer of digital data over an internet enabled network. The use of e-commerce in education become a trend in the early 1990's, a study and publication by Norris and Olson (1999). Predicted that in next few years that the emergence of e-commerce application will cause a drastic change and bring about a transformation in how universities and colleges conduct their business activities, they further suggested that it will bring about reduction in expenses, increase service delivery and customer satisfaction and out-sourcing of non-core businesses. Burrell (2002) described the success experienced by Plymouth state college with the design of a web portal that took care of student's online services and how the college effectively and efficiently runs its college with a vendor-developed infrastructure. The e-commerce processes in higher institution today includes selling publication, payment of fees, payment of alumni dues, supplying advice and information, sales of tickets for concerts, printing and photocopying charges. These systems are usually run by web staff, finance department, academic departments are also involved. In recent times the impact of gender, age, type of faculty, and the confidence of higher educational student use towards the use of e-commerce has become an integral part of the process, (Abedalaziz et al., 2013; Suri et al., 2014) has investigated this demographic factors on the use of e-commerce in higher education. There have been trends also in investigating the relationship between the confidence of students in higher education towards the general use of e-commerce and their readiness and e-commerce applications. Over the years the confidence of students in the use of e-commerce has drawn attraction from university administrators,

some problems identified by students in the use of e-commerce applications in higher education are: concerns about organizational refund policy, concerns about safety of payment, no enough product information provided, concerns about scams, concern about privacy etc. the serious improvement and student new experiences in recent times has changed students use of the use of e-commerce. Some other opportunities as pointed out by Norris (1999) are, by electronic commerce, for university teaching and administration, which includes distributed learning system, new options of payment, new course materials, academic tools for support, administrative support, and new forms of publishing. Author also pointed that e-commerce initiatives for colleges and universities are suggested.

In 2000, Green reported on his Questionnaire that IT implementations at higher education institutes gives importance generally to getting of computer components and software used in its application and then to transform IT and telephone communication facility aspects of the university like offices, residence halls, classrooms and calling ability in all departments and faculties, staff and students based on e-commerce services.

In 2000, Green reported on his Questionnaire that IT implementations at higher education institutes gives importance generally to acquisitions of computer hardware and software, also to the development of IT and telecommunication service units of the university like offices, residence halls, classrooms and campus dial-up capacities for faculty, staff and students based on e-commerce services.

In 2000, Katz and Oblinger published a book which addresses themes relevant to information technology's influence on higher education. The book explores how the digital revolution affected higher education and how higher education can be the part of anticipated changes in ways that strengthen the best of what universities have accrued over time. Also, authors explained emergence of electronic and network based services blocked new channels through the traditional systems of education and explored which ways of higher education must change and how fast it has to happen.

In 2000, Volery and Lord pointed that internet is the most important technological advancement to reshape society and universities worldwide. So universities have to capitalize

on the internet for teaching by developing an option for online delivery methods. The paper also explains that findings of a Questionnaire which provided information pertaining to student which registered for an online management course of study at an Australian university. Authors explained that the research shows three most important ways of succeeding in online delivery based on innovation, the teacher and students who has already gotten idea on the use of technology. In 2004, Slaughter and Rhoades revealed that insistent commitment of US higher education centers in the knowledge based economy. They analyzed and expected the works of universities to grow in market, and sell research products.

In 2006, Green pointed again that 51.2% of college classrooms uses a network that is wireless during that year and it was 42.7% in 2005 which varied with that of 2004 having 31.1%. And the campuses that join the Green's research in 2006 were more that 68.8% of campuses which suggested that they have arrangement to introduce wireless by fall 2006.

Guodong pointed in 2007 that, with globalization and revolutions of information, digital campus became important form which pushes universities forward. The research discusses the complicated relationship among digital campus, academic culture, knowledge organization and model of IT use from many aspects. Also analyses of factors which probably effects the construction of digital campus. Results revealed that academic culture; organization administration and application model is an important factor which determines the effect of digital campus. Also the paper brought some suggestions about the digital campus strategy.

Jiang and friends published a paper in 2007 which aims to create a new generation digital campus (NGDC) for higher education information system in the information integration stage now. The system analyses the needs to bring out the idea of the NGDC. The system approach also describes the specialty, aim and construction about creation of the NGDC. The system programs the aim and included contents for next stage of informational revolution of Tsinghua University. Authors worked for past two years to create top layer design, process analysis, information resource planning, etc. On the other hand, the study also explained opinions about these NGDC and points out the growth way of digital campus in the information integration stage.

In 2009 Russel took time to summarize the methodology which connects the processes depending on different university teaching technique, the final types of teaching duties and teaching technologies is made used of profoundly or in an effective manner depending on the stipulations of the institutional methods of the universities. Researcher pointed out that systematic development of university's teaching and learning technique needs well fashioned or formed arranged differences between duties which have been coordinated differently in university campuses. Inadequacies in managing, proffers strategies of coordinating learning and teaching which will build themselves as help to staff and teachers who look to increase their own duties locally. The proposed methodologies give crucial ways for revealing the total advantage of new ways of teaching technologically in other university campuses. Chang and friends published a study in 2013 which proposed an innovative or different analytic level model for helping administrators to explain the precarious danger issues affecting the initiation of digital campus system and study the danger of introducing a digital campus system. In the serious dangerous factors and probable ways of danger grades increased, reduced minimum and none were studied by utilizing fuzzy preferences relations. The associated different weights are received at the same time with fundamental weighting method. Doubling the important of dangerous ways, the likelihood of dangerous grades and associated priority weights of destroying, the collection danger degree of applying an electronic campus system.

Seeman and O'Hara carried out a research which really looks at client relationship management in HEI system which shows that the advantages of using client relationship management in HEI has to do with majorly student focus, improvement in terms of how to manage the customers information and the process in takes in managing the information, it increases the student loyalty, keeps the students in the system and also give the students satisfaction in services rendered.

In 2013, Dennis pointed that academic management and administrative processes related with technology directly in business offices, virtual laboratories, digital libraries, and etc. This addressed the subject with perspective appropriate to managers. An important concept which covered in the book is that the new advantages in information technology provided a significant change in social institutions, which will provide better and easier access to

knowledge and education.

2.2 Faculty/Department Specific Differences in E-Commerce Applications

As per Nielsen worldwide overview in 2014, he found out that age between (21-34) is majorly needed demographic for marketing in any company for trade and e-commerce which thereby make it essential for e-commerce. This age section has experienced childhood in the advanced period, so this shocks no one. Be that as it may, the result contains 55% respondents that plan to buy things online again in each item in this study, more established eras speak to a sizeable 40% offer, as well. Of course, the more seasoned the age level that is when their interest in internet shopping begins to go down. Comprehensively, Generation X (age 35-49) respondents contain around 28% of those eager to make a buy online and Baby Boomers (age 50-64) make up around 10%. The Silent Generation (age 65+) contributes approximately 2%. The most youthful age bunch, Generation Z (under age 20), speaks to around 7% of the individuals who mean to buy on the web. Strangely, the blend of age gatherings is predictable when you take a gander at the buy conduct for each class in the study. While general buy expectation rates are higher and lower in some classification, the generational blend is generally the same paying little mind to the classification. This proposes once an online customer, dependably an online customer. For instance, Millennials make up a higher-than normal rate of respondents willing to purchase basic needs online (56%), however Generation X still includes 26% and Baby Boomers make up 9%, which is not a long way from the worldwide midpoints for these age portions over all classifications. "While the generational blend of online customers as of now skew more youthful, regard for the requirements of all sections ought to be considered when creating effort arranges," said Burbank. "Tomorrow's most noteworthy buy power customers are ones who skew much higher for computerized shopping. As the populace ages, more noteworthy rates of shoppers will be associated and online noticeable quality will keep on growing. Building trust at the onset is the establishment for supporting lifetime faithfulness in clients to management relationship.

According to a documentation it is seen that our attribute towards internet use is more influenced by some perceptions or views towards computers than internet (Yang and Lester,

2003), in this way it may be that assessing the computer was a way of life by comparing it in terms of gender is a major way of classifying internet use in our generation today. It is a known fact that the use of computer from childhood till old age it is the males that uses computer the most and it brings more positive effect than from female (Morahan-Martins, 1998). According to a research it has been established that mostly youths and males has more experience in using computer, its applications and they use it meaningful more than the way female use it (Lockheed, 1985; Wilder et al., 1985; Modianos and Hartman, 1990; Morahan-Martin et al., 1992).

The differences in the use of internet by considering gender differs by countries and as stipulated by Singh (2001) countries like USA, Australia the gender of men and women who use internet is in square with degrees. Recently in USA between November/December 2000 it was studies that men made up 58% internet customers while women is 54% (Pew Internet, 2001) and in Australia (November 2000) the adults that uses internet as customers were men which is 53% (Australian Bureau of Statistics: ABS, 2001). Notwithstanding, countries like Japan in July 2000 still align with the fact that male are the higher internet customers with 62% (Nikkei AsiaBixTech, 2000), while in China (January 2000) as reported by (CommerceNet, 2000) men still dominated as internet customers with 80%. Similarly, USA assessment by (CommerceNet/Nelsen, 1997; CyberAtlas, 1996; GVU, 1997; NUA, 1997) it showed males to constitute 66% of customers with the same male making 77% of the total time they go online which signify that males go online frequently and they are more regular online as maybe expected. Mostly studies indicates that in USA gender use of internet revolves around youths and later Current Population Report, Newburger (2001) reported in August 2000 that among every 3 to 17 years old that those that has access to computers at home has males to be 65.0% and females 64.8% while those who use internet at home constitutes the percentage of males at 30.2% and females 30.6% and in assessing the adults to see how it varies males dominated with 56.8% and females 54.1% of those who has access to computer at home meanwhile for those with access to internet at home Among adults 18 years and more than, 56.8% of males and 54.1% of females had PC access at home comprises of 38.5 % male and 36.2% females this slight differences between males and females is a straight

result of the impact of the speed on how social media spreads to the web among American youths (Miller et al., 2001).

The utilization of internet and reasons behind its use is shown in gender allotment which according to (Jackson et al., 2001) the use of email is found to be dominated by female while the males surf the web than females and women only use internet to keep them busy while men use it purposely to get relevant information.

Odell et al. (2000) also reported that the major area that female focuses is for emailing and for school research compared to the males which their focus is for explore, buy, look the news, play beguilements, and listen to or download music. Weiser's (2000) finding shows that males use their internet for entertainment while female use it for informative findings which contrast with the findings of (Jackson et al., 2001 and Odell et al., 2000). Additionally Singh (2001) research indicates that women majorly use internet as a tool for email and communication which corresponds with the findings of (Jackson et al., 2001 and Odell et al., 2000) rather than play or as a development to be aced.

The male transcendence in the exploit of the Internet can be associated with the way that men may use PCs dynamically and have more uplifting airs toward PCs and, in this way, the Internet (Morahan-Martin, 1998; Sherman et al., 2000). Men watch that getting some answers concerning PCs is all the more captivating and more worth putting vitality in than do women. Men similarly surmise that its more pleasant to comprehend how PCs work and to get some answers concerning equipment and programming (Qureshi and Hoppel, 1995). Moreover, it is shown by studies that women do not have more interest and trust in their computers than men (Krendl et al., 1989; Teo and Lim, 2000), and the males feel more relax without doubt in terms of computer development than females (Comber et al., 1997; Fletcher-Flinn and Suddendorf, 1996).

As showed by Singh (2001), the main reason for female weakness with development is because of maleness of development. Advancement has shown those things connected with masculinity: it is viable, remote, unlimited, uncouth, and investigative and high cost (Faulkner and Arnold, 1985,). It has been noted also that development is shown as a good activity for

males. Additionally, considering with science development the main language of development has to do with masculine (Wajcman, 1991). Also, the progression of the computer takes after the speculations in advancement in that the olden day's systems were made by male, electronic and computer masters for other male experts or engineers (Hadden, 1999). Without a doubt, also in the business segment for delineating and making computer components, women's involvement in building and manufacturing is for the most part low (Webster, 1999). In this way, the consequent 'masculinization of PC development' (Hesse-Biber and Gilbert, 1994) may make some people to see the Internet as specifically made for the males or meant for the males (Morahan-Martin, 1998).

The earliest days customers of the internet were majorly men which they have been the critical force in embellishment Internet society (Rheingold, 1993; Turkle, 1995). As showed by Morahan-Martin (1998), the specific standards essential Internet correspondence, was made by these early customers which are males. In a substance examination of netiquette principles, Herring (1996) saw that netiquette bears bursting, which insinuates uncensored debilitating vibe on the web.

For internet shopping in particular research shows that clients go online first to find out the price and information regarding the product they intent to buy before making up their mind to buy (Yang and Lester, 2002). Differentiated and non-clients, Internet clients has shown to be fast and has not though about the risk involved and all they do is search for solace, different items and more divergent to be brand and cost perceptive than non-clients (Donthu and Garcia, 1999). The reinforcement of clients identity accepting sections in web shopping is a very important theory as indicated by various studies, for example, in a study of data set for 12 countries with regards to site quality, trust and being positive towards the site were the most important factors considered in expecting customers buying options and reliability of visitors to the web page (Lynch et al., 2001). This finding corresponds with other studies which indicated that the importance of mental components in choosing customers behavior online and differentiating from the internet are feelings, slants and perspectives furthermore behavioral characteristics (Bettman et al., 1998), mental points of view (Oliver et al., 1997),

the a portion of relying solely online (Jupiter, 2000; Choi et al., 1997) and the fun or pleasure and interest experience obtain online (Korgaonkar and Wolin, 1999).

The hugeness of mental components in online shopping have been enacted by several researches (Yang and Lester, 2002a, 2003c; Yang et al., 2003). For instance remembering some things that has to do with money and disillusionment with down sales in bookshop of the school were seen to be linked with buying of materials online (Yang et al., 2003), and taking over the top and impact mindsets regarding money and good impact with feeling and scholarly manners toward charge cards were seen to be linked with trading of stock online (Yang and Lester, 2003). Now that a good gender difference has been shown in terms of the use of internet, it is pertinent that continuous examination of gender contrast in buying or purchasing of stuffs online although researchers had already pointed out that there is not contras but Donthu and Garcia (1999) reported that gender overview point out any aspect dominance in the Internet shopping. Regardless of what a previous research has shown, gender orientation contrast in online purchases. For instance, females getting books online was linked with strain about computer while that of male getting books on internet was linked with having PC/Internet aptitudes (Yang and Lester, 2003).

2.3 Relationship between Confidence/Readiness and E-Commerce Applications

Existing writing uncovers a critical surge in the interest in Electronic Commerce (ecommerce) arrangements at Higher Educational Institutions worldwide. Be that as it may, there is next to zero examination concerning triumphs and disappointments and numerous HEI are keen on accomplishing a reasonable knowledge of the gains made in their businesses or investment (Djoleto, 2008). The HEI have utilized different methods of e-commerce to be specific e-Procurement, e-Registration, e-learning, e-administrator, e-Payment etc. A report by United Nations Conference on Trade and Development (2004) distinguished that the present use of e-commerce for internet advanced education business sector is remains little, divided and is greatly settled in creating nations where a solid instruction, focused business sector and ICT base are set up than in creating nations.

Chnapko (2002) cited Cisco Systems CEO, areas which e-learning will act as one of the that "eLearning will serve as one of greatest equalizers is that it will improve the way we work daily, live our lifes, play and also the way we learn. Chnapko went further to express that the reason we have not achieved great about e-learning is because there is little doubt if actually the e-learning has created itself as power to be seen as a pivot within advanced education. The emergence of e-commerce has brought about an increase and flexibility in how the business is handle and controlled by HEI which has to do with course conveyance, regarding eLearning (Chnapko, 2002, Djoleto, 2008a, Djoleto, 2008b), and in addition far off teaching and Course Management Systems (CMS), eAdmissions and eRegistration.

In HEI, clients are students and along these lines, students' fulfillment measures significance and reasonableness of the academic work at the beginning (Armstrong, 2002). Students' fulfillment may depend on upon their devotion establishment opposite their longing to go to that organization. This may likewise be affected by the way that the students trust that when they graduate, they will get valuable work (Goral, 2003; Rivard, 2002).

Rivard (2002) suggests that University operational work are generally expected to enhance students' admission, the form registration and the stream of students through the foundation Reputation is amazingly crucial to HEI establishments and it is diversely delineated by the way of institutional base, if it is scholarly undertakings, understudy issues or authoritative issues (Rivard, 2002). Understudies' fulfillment might be somewhat credited to notoriety of the foundation and the reception of fitting e-Commerce arrangements may add to this notoriety (Rivard, 2002).

CHAPTER 3
CONCEPTUAL FRAMEWORK

According to Klopot (2013), in her research, she said according to the Financial Times that United Kingdom leads the rest of the world in e-commerce, she argued that the digital economy of UK is growing at 10% per annum and there are no signs of any slowdown in its growth, students has found the use of e-commerce to be convenient, easy and intuitive, it has become more easier than ever to find what you need and be able to buy it on the internet. So also the expectation of consumers (students) has increase more than ever, as you can receive your order in a couple of hours and return it without necessarily need to explain to them the reason of refund and refunds are made within 48 hours. Some of the services rendered now with the use of e-commerce are completion of university admission application form, for placing order for transcript, check results and grades, search directory online for faculty members and higher educational services, check academic catalog online, appraise educational performance online, buy and borrow text books online, paying of tuition fees, make reservations for accommodation, check financial status, get a parking permit etc. e-commerce has made services much more accessible with no down time.

During the 50s and 60s of the 20th century, scientific researches started to be based mainly on computers in universities and research centers. Computer technologies became very well known for administrative goals. Universities and research centers built huge computer centers with very costly and efficient machines to provide their various services to different sciences. However, it was not until the revolution in the production of personal computers in the 80's of the century where individual computers were provided to faculties of departments and the use of PC's became very familiar. Since then, computers became extensively integrated into human sciences and art teaching.

The invention of Internet has created an explosion in the amount and types of information available in all fields of life and science. Computer and Internet became used to even remote small campuses. Library works in universities particularly early benefits from the possibilities offered by technology of Internet. The thing that allowed the automation of all steps involved

in the acquirement and building catalog of library materials. Electronic catalogs offered the capability to search different universities resources online easily.

Courses delivered by web created a new expansion in distance learning. They sustained an educational style from 19th century, the first time mail based courses offered access to higher education. In the 20th century, new technologies were introduced into the distance education. In 1921, the first educational radio station was established, while the first educational TV station was established in 1945.

The expansion in the online education happened in the 1990s due to the explosion in the internet technology. In the beginning, schools using internet as a teaching mean developed their own software for course delivery. Ready products weren't commercially available in that time for use of universities. By the year 2000, different software packages were developed and delivered to the online teaching market. These products allowed instructors to produce their own online courses according to their needs. These applications also were more and more developed to offer an electronic grade delivery and course review options.

Universities and colleges experimented with different types of online education. Some schools hired even resident students to accomplish a portion of their online works. Other schools created consortia of several schools, making their shared courses available through online sites. The first university allowing all of its courses to be offered online was UCLA.

There is no centralized accrediting agency of higher education in the United States. And small portion of the accreditation agencies are accredited by the American department of education DOE or the council of higher education accreditation CHEA. The distance education program was allowed officially by the department of education by the year 2000. This program was established to find the methods to adapt financial aid requirements to accommodate online education and students. A special two year assessment of 15 schools was established to find out whether e-learning programs are qualified for aid. Related statistics on the student retention and achievement rates were not ready by the end of the 2001. However, they were guessed to be lower than those of traditional education.

The style in school organization is the use of information technologies to produce an endorsement in competitiveness. Different universities began to adapt the Radio Frequency Identification (RFID) systems to digitize school data. This way, the time and area of the university expanded to offer the essential information transmission for the different services of the campus. Such automated campus can afford updated support for the education in a school, for research activities, administrative processes, activities of the students, and managerial effectiveness. Many researchers believe that the RFID technology is a master technology in the actual century due to its potential to improve the quality and value in education in addition to increasing the effectiveness (Chao, Yang and Jen, 2007).

The RFID technology started to be subject of attention in different areas of researches based on the technology itself. It is useful for libraries as it finds time saving procedure management (Howard and Anderson, 2006). The RFID technology is also used for monitoring and automating, with advantage of well-situated operation (Ribeiro et al., 2009).

It is widely implemented for management of supply, library quality tracking, university safety, biomedical technologies, vehicle routing actions of RFID including school linked systems, supervision and inspection of campus assets, personality of attendance supervision and supervision of students' presence, it also includes dormitory access control, laboratory access supervision, control of vehicles and buildings gates, control of library actions like materials borrowing, materials returning, and shelves arrangement, electronic wallet for the staff and learners in the restaurants and shops, printing, copying, and for the use of all other university grounds needs (Ferrer, Dew and Apte, 2010). RFID is a fully powerful automatic system; it can function with the least human resources. It has the ability to access different data at the same moment. The use of RFID system ameliorate speed and effectiveness of handling, it also reduce the faults and man power requirements. It economizes in time and efforts. Additionally, such a system facilitates competitiveness, integration value and strategic analysis by reducing the data labeling requirements and data management efforts. The main disadvantages of RFID systems reside in raising the worries about human rights, autonomy, safety of data, and health effects of electromagnetic radiations. As a safety measure, a simple system of priorities and risk assessment is needed prior the implementation of RFID systems. This measure helps

managing strategies and introducing references and basis successfully (Barlow, 2009).

3.1 E-Commerce

E-commerce, customarily formed as e-exchange or e-trade, is the commerce or aid of commerce things or associations using computer technologies, for instance, the Internet. Electronic business brings on development, for instance, adaptable exchange, electronic resources trade, creation system organization, Internet showcasing, online trade get ready, electronic data trade, stock organization structures, and computerized data gathering systems.

3.1.1 The Timeline of E-Commerce

A timetable for the change of electronic commerce:

- 1971-1972: The ARPANET is employed to coordinate a cannabis bargain between university students of Stanford Laboratory and the MIT Institute of Technology, which was later shown as the the major advert of e-business in John Markoff's book What the Dormouse Said (Power, 2013).

- 1979: Michael Aldrich demonstrates the key web shopping structure (Tkacz and Adrian, 2009).• 1981: Thomson Holidays UK is first business-to-business internet shopping framework to be introduced (Palmer, 1988).

- 1982: Minitel was presented across the nation in France by France Télécomand utilized for web requesting.

- 1983: California State Assembly has its initial research presented on "electronic exchange" in Volcano, California. Confirming are CPUC, MCI Mail, Prodigy, CompuServe, Volcano Telephone, and Pacific Telesis. (Not permitted to insist is Quantum Technology, later to twist up AOL)

- 1984: Gateshead SIS/Tesco is first B2C web shopping structure and Mrs Snowball, 72, is the main online home client (Aldrich, 2012).

- 1984: In April 1984, CompuServe dispatches the Electronic Mall in the USA and Canada. It is the foremost broad electronic business organization (Berners-Lee, 2012).

- 1990: Tim Berners-Lee creates the fundamental web program, World Wide Web, using a NeXT PC.

- 1993: Paget Press releases form No. 3 of the central application store, The Electronic AppWrapper.

- 1994: Netscape issued the navigation software in October under the commercial name Mozilla. Netscape 1.0 was initiated during the year 1994 with SSL encryption that made trades more safe and secure.

- 1994: Ipswitch IMail Server transforms into the primary programming open online accessible to be acquired and incite download by method for a relationship between Ipswitch, Inc. besides.

- 1994: "Ten Summoner's Tales" by Sting improves into a major safe online buying of goods through NetMarket.

- 1995: The US National Science Foundation lifts its past strict limitation of business undertaking on the Internet (Kevin, 2005).

- 1995: Thursday 27 April 1995, the purchase of a manuscript by Paul Stanfield, he was the Product Manager for CompuServe UK, from W H Smith's shop inside CompuServe's UK Shopping Center is the UK's first national web shopping organization secure trade. The shopping organization at dispatch highlighted W H Smith, Tesco, Virgin Megastores/Our Price, Great Universal Stores (GUS), Interflora, Dixons Retail, Past Times, PC World (retailer) and technology.

- 1995: Jeff Bezos dispatches Amazon.com and the important business free 24-hour, web simply radio stations, Radio HK and NetRadio start TV. eBay is built up by PC programming engineer Pierre Omidyar as AuctionWeb.

- 1996: IndiaMART B2B business focus set up in India.
- 1996: ECPlaza B2B business focus set up in Korea.
- 1998: Electronic postal stamps can be procured and downloaded for printing from the Web.
- 1999: Alibaba Group is set up in China. Business.com sold out at US $7.5 million to electronic organizations which was procured in 1997 for US $149,000. The mutual file sharing programming Napster launches. ATG Stores dispatches to offer lovely things for the home on the web.
- 2000: The site gain recognition all around the world.
- 2001: Alibaba.com gains from e-business in December 2001.
- 2002: eBay secures PayPal for $1.5 billion. Corner retail companiesWayfair and NetShops are built up with offering things through a couple concentrated on spaces, rather than a particular place.
- 2003: Amazon.com posts first yearly advantage.
- 2003: Bossgoo B2B business focus started in China.
- 2004: DHgate.com, becomes China’s number one online b2b trade stage, is set up, convincing other b2b districts to migrate far away from the "professional income" model (Wang, 2011).
- 2007: Business.com bought by R.H. Donnelley for $345 million (Donnelley, 2011).
- 2009: Zappos.com acquired by Amazon.com for $928 million. Retail Convergence, that manages private site RueLaLa.com, was later bought by GSI Commerce at the rate of $180 million, or more up to $170 million in get out portions in light of execution through 2012.

- 2010: Groupon as far as anyone knows rejects a $6 billion offer from Google. Or maybe, the social affair buying destinations continued with an IPO on 4 November 2011. It was the biggest IPO after Google.

- 2011: Quidsi.com, also known as watchman association of Diapers.com, picked up by Amazon.com for $500 million in exchange expansion to $45 million out commitment and distinctive duties. GSI Commerce, an association speak to significant power in making, making and running web shopping regions for piece and mortar associations, picked up by eBay at the rate of $2.4 billion.

- In 2014: Overstock.com shapes over $1 million in Bitcoin bargains. India's e-business industry is assessed to have grown more than 30% from 2012 to $12.6 billion in 2013. US e-trade and Online Retail bargains foreseen to reach $294 billion, a development of 12 percent more than 2013 and 9% of all retail bargains. Alibaba Group has the greatest Initial open offering ever,worth $25 billion.

- 2015: Amazon.com speaks to more than half of all e-business improvement, offering practically 500 Million SKU's in the US.

3.1.2 Impact of E-Commerce on Markets and Retailers

Budgetary specialists have guessed that e-business should incite strengthened cost rivalry, as it constructs purchasers' capacity to hoard data about things and costs. Research by four fiscal masters at the University of Chicago has found that the change of web shopping has additionally affected industry structure in two regions that have seen the preeminent progression in e-trade, bookshops and travel work environments. For the most part, more prominent firms can utilize economies of scale and offer lower costs. The single rejection to this case has been the amazingly most modest game plan of the book shop, shops with some spot around one and four authorities, which seem to have withstood the illustration. Subordinate upon the class, e-business may move the exchanging costs—procedural, social, and budgetary—experienced by clients (Khosrow-Pour, 2008).

Persons or business need in e-commerce whether consumers or transporters rely on an Internet-based development recollecting the last goal to fulfill their trades. E-trade is seen for its capability to allow business to go on and to packaging exchange at whatever time and wherever. Whether a person is in the country or outside, a business can be directed through the internet. The power of e-commerce gifts geophysical breaking points to vanish, making all buyers and relationship on earth possible consumers and dealers. Along these lines, exchanging cutoff points and exchanging expenses may move. E-Bay is a bearable example of e-trade operators and affiliations can post their things and offer them around the world (O'Brien and Marakas, 2011).

In e-business works out, stock system and logistics are two most noteworthy parts ought to be considered. Usually, cross-periphery logistics need a couple of weeks' chance round. Considering this low profitability of the stock system organization, buyer devotion will be colossally decreased (Zhu, 2004). Some researcher communicated that joining e-exchange wellness and IT setup could well enhance association's general business worth (Leung et al., 2000). Other expert communicated that e-exchange need to think about the founding of stockroom centers in outside countries, to make the high viability of the logistics structure, advance customers' fulfillment, and in addition can upgrade customers' resolve.

3.1.3 Impact of E-Commerce on Supply Chain Management

For quite a while, affiliations had been tormented by the parted between the purposes of interest which store framework headway has and the reactions for go on those good circumstances. Regardless, the change of e-trade has given a more sensible and proficient methodology for going on the upsides of the new creation framework types of progress (OECD, 1999).

E-trade can orchestrate all amongst affiliation and intra-affiliation limits, proposing that the three flows (physical flow, money related flow and data flow) of the stock framework could be in addition affected by e-business. The affections on physical streams redesigned the procedure for thing and stock change level for affiliations. For the data streams, e-trade redesigned the purpose of repression of data dealing with than affiliations used to have, and

for the financial streams, e-business gifts relationship to have more effective segment and settlement courses of action.

Moreover, business contains a more character boggling intensity of result on supply chains: Firstly, the finishing separated will be shed as affiliations can perceive openings between different amounts of supply chains by electronic procedure for arrangements; Secondly, as a consequent result of e-trade rise, new points of confinement such acknowledging ERP structures have helped relationship to direct operations with clients and suppliers. However, these new limits are still not completely manhandled. Thirdly, improvement affiliations would continue contributing on new e-business programming courses of action as they are expecting hypothesis return. Fourthly, e-trade would settle different parts of issues that affiliations may feel hard to acclimate to, for the case, political preventions or cross-country changes. At long last, e-business gives affiliations a more gainful and appropriate approach to managing bunch up with each other inside the store framework (Delia, 2008).

3.1.4 The Social Impact of E-Commerce

At the side of the e-business and its one of a kind demand that has looked bit by bit, virtual venture, virtual bank, system endorsing, web commerce, payment and broadcasting, like these recent terms that are unbelievable and now has become to be as well known to persons. This reflects the e-business has colossal effect on the financial system and culture from the other point of view (OECD, 1999). For example, B2B is a fast emerging business on the earth that costs small expense and encourages the monetary productivity furthermore get beside the improvement of work (Fazlollahi, 2002).

- To see how the e-business has influenced the general public and economy, this article will say three issues beneath:

- The e-business has affected the relative importance of time, yet as the stronghold of indicator of the country economic condition that the significance of time must not be neglicted.

- The e-business presents the purchaser or activity different data that is required, making data into combined honesty, will drive endeavor that can never utilize the method of space or notice to raise their aggressive edge (Schniederjans and Cao, 2002). Also, in principle, immaculate rivalry between the purchaser sway and industry will expand social welfare (Child, 1969).

- Actually, amid the financial movement previously, extensive undertaking habitually has favorable position of data asset, and hence to the detriment of purchasers. These days, the straightforward and constant data secures the privileges of purchasers, on the grounds that the buyers can utilize web to choose the portfolio to the regale of them. The aggressiveness of undertakings will be a great deal more evident than some time recently, thusly, social welfare would be enhanced by the improvement of the e-trade.

The new economical activities directed by the e-trade change the human soul also, nevertheless most likely, is the worker devotion (Qin et al., 2014). Because of the business sector with rivalry, the worker's ability of demonstrating skills changes to the crucial for large business in the specialty market. The events must pay attention to the most powerful way to improve the endeavor internal society and an agreement of smart tool and it is the prime issue for them. Moreover, however the method of e-business diminishes the data expense and exchange cost, be that as it may, its advancement likewise makes person are excessively PC proficient. In subsequently, underlined more humanistic disposition to work is another venture for big works to enhancement. Existence is the foundation of all and high improvement is merely an assistive device to encourage our personal happiness.

The e-trade is not a type of new business, but pretty it is creating another economic model. Most of people concur that the e-trade in reality to be imperative and vast for monetary society after, all things considered that is a handle of staggered mood toward the opening, this issue is precisely reveal the e-business is a kind of ethereal insurgency (Lamersdorf et al., 2005). By and large talking, as a kind of business dynamic technique, the e-trade is going to driving a phenomenal transformation on the planet, the impact of this model far surpassed the business issue itself (Laudon and Traver, 2014). But the specified above, in the range of law,

instruction, society furthermore arrangement, the e-trade will proceed with that ascent in effect. The e-trade is really to take individuals into the data society.

3.2 E-Commerce Applications in Higher Education Institutions

Pretty much as Information Technology (IT) has come to pervade pretty much all of institutional fabrics, e-Commerce/e-Business, a basic part of IT, lately has turned into the pith of everyday institutional operations at Higher Educational Institutions (HEIs). Furthermore, the sending of data innovation and e-Commerce has prompted expanded adaptability in business operations, including course conveyance, as far as e-Learning (Chnapko, 2002, Djoleto, 2008), and additionally inaccessible instruction and Course Management Systems (CMS), e-Admissions and e-Registration. This quick change in data innovation achieved galactic development in CMS required for compelling separation instruction, a segment of e-Commerce. The uplifted requirement for e-Commerce/e-Business arrangements means the popularity for programming such programming models (united/coordinated) designers for HEIs (Djoleto, 2009; Gil-Garcia and Pardo, 2006; Olsen, 2000 and 2002).

With this wave, higher instructive establishments and associations that have not yet grasped e-Business battle to contend in the focused worldwide business sector. Thusly, numerous HEIs have contributed altogether and have deliberately set out on online course offerings and e-Commerce-based scholarly exercises to support understudy enrolment and enhance understudy scholastic execution while giving quality training and setting them deliberately over their rivals (Djoleto-Okunbor, 2009; Armstrong, 2002). Green sets out and writes about his progressing study of IT usage at HEIs concentrating by and large on acquisitions of PC equipment and programming and the advancement of data innovation and telecom administration unit of the association. Case of these regions incorporate workplaces, classrooms, and living arrangement corridors, grounds dial-up limits for workforce, staff and understudies (Green, 2000). As per Green's (2006) review, 51.2% of school classrooms have remote systems, a jump from 42.7% in 2005 and 31.1% in 2004. More than 68.8% of grounds that took an interest in Green's yearly study have a vital arrangement to send remote by fall

2006 (Green, 2006). This base gives upgraded environment to the reception of e-Business (Green, 2000).

While E-Commerce arrangements advance client organization connections in industry settings that decipher into consumer loyalty, in advanced education establishments, clients are understudies and along these lines, understudies' fulfillment measures imperativeness and suitability of the scholastic projects at the foundation (Armstrong, 2002; (Devaraj, Fan and Kohli, 2002); Djoleto, 2008). Understudies' fulfillment may rely on upon their dedication to the organization versus their craving to go to that foundation. The electronic talk and texting are getting to be omnipresent applications in advanced education organizations. These two advancements, alongside electronic mail administration and video conferencing structure the bedrock of the e-Conferencing arrangement at foundations and are utilized consistently for struggle resolutions. (Warger, 2003).

The smoothness of information and data points out for imperative guaranteeing that these associations and establishments guarantee consistency, respectability, efficiency and adequacy in the utilization of e-Business arrangements (Djoleto-Okunbor, 2008; Kleiner and Maury, 2002; Kvavik, 2002; Robertson and Sarathy, 2003; Schneider, 2003).

3.2.1 Challenges Faced by University from E-Commerce

Mainstream thinking proposes that the conventional college is under gigantic weight from private partnerships (and some open foundations) that utilization e-business to begin new colleges in the realm of virtual space. Liberated by the requirement for classrooms, libraries, quarters, and football groups, and ready to select and utilize an alien and very focused workforce, these companies (now more than five hundred in number) probably have an upper hand in business sector reach and low overhead. Revenue driven training organizations, for example, the Apollo Group and DeVRY, Inc., concentrate on vocation arranged instruction in quickly developing fields, for example, business, gadgets, connected expressions, and human services. Their enlistments are developing to where they hold about 2 percent of the general piece of the overall industry and they are developing at more than 10 percent yearly (Blustain

et al., 1998). They have right now an anticipated stream of profit, interest for their projects is strong, and they are imaginative in the improvement of educational program and training conveyance that speaks to both understudies and bosses. Different players incorporate corporate colleges, for example, Motorola, GM, and McDonald's, which instruct their own particular workers, and super colleges, for example, the Open University, which benefit well more than 164,000 understudies in more than forty nations. Furthermore, as of late, Michael Saylor declared that he would utilize $100 million of his product benefits to make free online training gave by a great many instructors (New York Times, Mar. 2000).

Mainstream thinking, while frequently convincing, is regularly oversimplified and requires further examination on the off chance that we are to comprehend outer difficulties to the conventional college. All the more definitely, what is it about the customary college that spots it at danger in the e-business environment? Correspondingly, perceiving variables that put the college at danger, how does the college conform to and alleviate these dangers? It ought to be noted from the beginning that e-business is more than the virtual college. The utilization of the program and Internet can be connected as effortlessly to instructive procedures as it can to the facilitating of college managerial and business forms. Puryear and Melnicoff (1999) offer knowledge from the private area. They perceive five substances that influence the aggressiveness of customary organizations in the new business environment. I extend their contentions to the college and add to them.

3.3 E-Commerce and Demographic Factors

The difficulties of gender differences being utilized and point of view toward IT have gotten to be fundamental energy among academic experts. Most studies have uncovered that females has demerits in the utilization of IT working environments separated from their male counterparts. They have uneven acceptance, a low rate of usage among the females and show of negative mentalities toward IT are affirmation. Sherman et al., (2000) states that males utilized the Internet all the more much of the time and had more raising points of view than females. The inclination is seen much however both young women and energetic associates are similarly wonderful and show positive emotions toward the Internet. Jackson, et al., (2001)

reported that females have more PC weight, less PC self-adequacy, and less extraordinary PC points of view.

It is unavoidable to suit business areas individual and budgetary information, for event, a Visa number, telephone number, spot of home, and individual ID number, and so on. As people have encountered the guaranteed associations of various e-trade territories more an extraordinary part of the time than females, they are more OK with and trust the Internet all the more reliably. What's more, female purchasers emphasizd the social bit of shopping (Van Slyke, Comunale, and Belanger (2002). Ladies see a few sorts of shopping as to a more essential degree a social development than do men. In any case, some e-business destinations build up a slant gathering by allowing obliged cooperation among buyers, web shopping still remains a private change. If ladies tend to get advantage from the social parts of standard and logged off shopping, web shopping may be respected less firmly.

In irregularity to most particular revelations, the possible results as of late explore uncovered that clients demonstrated raising demeanors toward the Internet paying little respect to sex (e.g., Luan, Fung and Atan, 2008). The outcomes uncovered no sexual presentation refinement in Internet utilization; the female clients were found to contribute as much essentialness using the Internet as their male associates. Shaw and Gant (2002) reported that no sexual presentation contrasts are recognized in various online exercises. Fram and Grady (1997) found that web shopping plots for men and ladies were relative, regardless of the way that ladies tended to buy more blooms from online shippers and men gained more PC equipment. Likewise, Ono and Zabodny (2003) reported the sexual presentation parted is vanishing as female clients have risen to opportunity to encounter the Internet and get basic association from online exercises; however ladies were in a general sense more abnormal than men to utilize the Internet in the mid-1990s. It is said that sex incongruities in Internet get to and use are vanishing.

Web use besides may have specific case among various age packs. Regardless, distinctive studies suggest that the age crevice in Internet use transmits an impression of being closing after some time, the utilization continues on through that the hole for age, particularly with those more than 50, is not reducing (Dickinson et al., 2006; Kiel, 2005; Nayak et al., 2006). Much research announced that the inevitable result of age get-together errors inside Internet use was an immediate aftereffect of a less get to, furthermore to a nonattendance of nice social affair (Iyer and Eastman, 2006; Nayak et al., 2006; Reisenwitz et al., 2007). More arranged individuals have less opportunity to have entry the Internet and other IT. Thusly, they may not completely welcome the upsides of IT, and consequently, will search for after less e-business determination. On separation, the more youthful people has an improved probability of using the Internet and getting a charge out of shopping on the web. Properly, it is recognized that age sways Internet use, and besides e-trade determination furthermore.

Edifying status may in like way effect Internet use and e-business task. Developing levels of rule appear differently in relation to an improved probability of PC and Internet access. Those with less heading may have less opportunity to get to the Internet, thusly reducing their probability of totally regarding the upsides of IT, and thusly, they may not search for after e-business segment. Along these lines, it is recognized that rule sways Internet use and besides e-business parcel too.

Moreover, level may in like way effect Internet use and e-trade distributing. Amplifying levels of remuneration appear differently in relation to an upgraded probability of having PCs at home and Internet access. Those of a lower budgetary status have fewer assets for get a PC for home use, including Internet access. They may not completely welcome the benefits of IT, and thusly, they will search for after less e-trade choice. Individuals in a more raised measure of pay have the cash related preferences for case home PCs which can get to the Internet, allowing proprietors to recognize web shopping. Thusly, it is typical that remuneration sways Internet use and besides e-trade assignment also.

3.4 Higher Education Institutions and E-Commerce

Various higher education institutes have added e-learning programs into their schedule. Public school systems often shift to e-learning because it offers a cost-effective choice for expansion. They also considered it as a means to accommodate a planned 20% increase in participants by 2008. Generally, online courses are increasingly attracting more students in an era of shrinking traditional education budgets and its role in e-commerce. Public colleges expects e-learning to serve increasing numbers of first time and returning students who does all of the payment of fees via e-commerce. In the year 2000, about 50% of college students were older than 21 years of age. Elite and private schools are also considering the use of e-learning techniques as a cost-effective measure whereby associated fees will be paid via e-commerce. Their first experiments involved mainly online engineering experts and business programs targeted at professionals looking for extra training. Some universities offered non-credit online units to avoid problems of academic reputation. Also, Internet companies, museums, publishers, and universities such as UNext.com collaborated to offer e-learning programs. UNext.com counted Stanford, the University of Chicago, and the London school of Economics among its main contributors. These institutes' faculties developed online courses and delivered lectures through streaming media. However, part time teachers handled the grading and communication with students through e-mail. Some of these institutes provided free academic articles and lectures, in the hope of convincing online visitors to attend associated cyber-courses. Some of them also presented online bookshops. At least one esteemed university, MIT, placed all of its courses online; their classes are publicly accessible, though only those paying to enroll will be granted credit for them. The most controversial participants in the e-education field were for profit, certificate granting institutes existing only online. University of Phoenix had become the most famous and largest private higher education center in America in the year 2000. Another, Jones University, was the first exclusively online university that gained accreditation in 1999. Most of these schools offer standard courses offered by participant instructors. Two main educational field were well served by e-education; these are Corporate and U. S Military training. The education of employee cost American business around $60 billion a year. Online courses suit the time needs of working adult students. These

students have focused discipline approach to education more than ordinary university age students. Therefore, they can manage the less prepared environment of e-education. The American Military employed online education to help retain enlistees. In the year 2000 the Army suggested providing an educational portal that is able to allow duty personnel to pursue their online education from their service location on the expenses of the Military.

Apart from cyber classes, the internet effects have reached even the traditional education, face to face class room education system. Most of campus employees and personals are using e-mail to accomplish all communication processes between teachers and students, feed-back on assignments, arranging meetings, and all other type of communications. Educational software consisted in the beginning of student produced, course adopted web sites, and online lecture notes. However, these delivery platforms were developed in collaboration between elite professors from famous universities and e-education associations. Their online course schedules are licensed from the developer's universities. Some courses offered the possibility to set up chat rooms and course bulletin boards that offer interactive e-learning, post documents, provide links for different materials relevant to the course. Smart class rooms also were introduced to assist the online education and assess students learning. They offer online grading and diagnostic components to follow with student's learning. Audio and visual resources can also be included into the online lectures to support the purpose of course. Real time lecture also can be offered by professors from all over the world.

Observers expect that online versions of the most important general courses that are important for all higher education fields will replace individual written courses. These courses include generally, American history, psychology, calculus, physics, English composition, and other courses producing about half of the offered credits.

College portals also have emerged. They offer the possibility to apply online for many schools. They also allow filling out applications of financial aid, class registration, tuitions payment and many other services. Some portals were exclusively intended for administration elements and instructors. Using these portals, they can track student's enrollment, grades, and activities. They can also submit grades using an online system. In the beginning, a lot of these services

were freely provided for many schools and universities. The only fee is to allow these online service providers to publish advertisements on their websites alongside with the campus information. Cookies also were implemented to track users' habits.

3.5 E-learning as a Driving Force for E-Commerce in Higher Education

E-learning has become a driving force for e-commerce in recent years, hot discussions concerning the efficiency and suitability of e-commerce and internet have risen due to their increasing presence in higher education. Due to the lack of related studies on the subject; there are difficulties for governmental agencies and educators to formulate policy recommendations. Supporters argue that the internet and new technologies facilitate communications between students, faculties, and administration staff and e-commerce activities in the higher institution. Class lectures are supported by including new explanation methods like online graphics, audio materials, video displays, and animated presentations. Furthermore, learners benefit from internet access instantly of their lecture notes, readings, relevant sites, e-books, and many other sources of information online. They also benefits from interactive education between students and teachers, in addition to online assessment tools as all financial and economic activities of this e-learning institution are taken care off by e-commerce vendors which allows financial administrative activities to be properly segmented in such educational institution.

Online learning is flexible and accessible in an extra simple manner. This accessibility appeal to students, especially those adults who has their works and want to pursue additional education. It offers them the flexibility of courses and time, in addition to easy access to all required resources. Studies concerning the use of students about the value of e-learning were carried out. They show that most of them felt more interaction ability with teachers compared with traditional education. The students who were unsettled in traditional class rooms became more interactive and contributed more actively in online deliberations.

Supporters of e-learning consider it as "democratizer" of higher education. Geography can no longer prevent students from studying courses presented by leader universities around the world. it can also help many students who desire to continue their education, but job and family responsibilities prevent them from doing so in the traditional way. Hence, e-learning is

likely to happen at the student's conditions and environment. Internets role extends to cover other goals such as raising the commercialization of higher education. Supporters argue that traditional education centers are financially inefficient, with professors gaining large salaries for little effort in the classroom. They also criticize the wasted expenses in the university buildings and equipment. As they argue that online education offers high quality products customized to suit the desire of consumers. They believe that this education is offered with the minimum investment in labor or physical plants. In 1998, the Governor of the American capital Gary Locke pronounced that online education eventually could replace all public universities.

On the other side of the debate, critics fear that as online education is expanding, the administrative personals gain more control of the performance of faculties and contents of courses. The academic freedom will fall in danger as a result of the expanding control of administrators. They argue also the unproven track records. They believe that students have to be motivated and restricted, the thing which is absent in the e-learning systems due to the lack of supervision. They also claim about the interaction, encouragement, and direct contact those physically actual instructors and colleagues can offer in a class room.

The quality of online education fluctuates widely and course retention rates vary between 20 and 97%. The problem of accreditation for most of programs indicates that many online schools are no more than "degree mills." One of the most important concerns expressed by doubters of e-education is the lack of information about adequate standards of online education. Some responsible committees like AFT (American Federation of Teachers), they proposed the development of quality standards governing the distance education institutes and organizing their work.

As an answer for the argument that internet offer equal opportunities for higher education access, critics mention a college study concerning the "Virtual University and Educational Opportunity". This study claimed that the growing trend toward digital education can exaggerate the fears of unequal opportunities in education. The study indicated that low income students often lack computer skills and Web access. Over more, accredited online

universities mostly charge a little extra fee more than traditional similar universities.

Another issue critics are concerned about is the consequence of e-education on the liberty of education and on the independent of faculty. Also they worried about whether the online instructors own the intellectual property rights to their courses, and if the content of the course or the teaching method can be dictated by online institutes or universities. These concerns are considered very important in judging the online education. Actual official standards concerning fair use exclusions of copyright protection laws for educational purposes can be inefficient in the case of internet education. The licensing measures governing the acquisition and use of online teaching materials are also uncertain.

Last but not the least, the first sale rights of libraries that permit them to lend books and teaching materials to students, may be put in danger. A Questionnaire established by the AFT mentioned earlier showed that half of instructors claimed that they didn't receive any compensation for extra time spent developing their own online courses. 90 percent of the Questionnaire sample revealed that the online course preparation needs more time and effort than traditional courses. This Questionnaire shows that adjunct part timers in particular are facing vulnerable positions. Finally, critics declare that the e-learning trend has been promoted by administrators, course material vendors, and e-learning institutions, without participation of faculties and students. Government personals see a shift to online education as a chance of cost reduction by escalating the coverage of the educational systems.

3.6 E-learning and E-Commerce Worldwide

E-commerce and e-learning has spread all over the world nowadays, especially in the developing countries. The educational infra-structures in these countries are weak and cannot satisfy the demand for education. Such countries have relied on TV or radio distance education for decades. Many of these countries required online education to obtain the prestige of western higher education and at reduced costs which has in its own way led to increase in e-commerce activities. With online education, the western higher education could be brought to these countries citizens at acceptable expenses without the need of special infra structures. Over more, the online education offers the opportunity of being competitive to the less

developed nations in the global market system. This can be acquired by creating highly educated work forces equipped with the latest technologies; the thing that can be presented at low costs with the new online education revolution. Therefore, the demand for continuing education and skill expansion can be likely remain stable.

However, throughout many parts of Asia, Africa, and South America, an important obstacle to the development of online education was the absence of even elementary infrastructures, especially in rural areas. These areas also face lack of computer teachers and experts and even in some cases the lack of computer and internet. From another point of view, the concerns of distance education in the developed countries exist also in the developing countries, such as questions of the quality and efficiency of online education and intellectual property rights. However, extra problems concerning e-learning in the developing countries emerges, especially in the hot online market competition between famous institutes and local small universities. For example, if national universities' programs are successful, the fear of facing international competitors that enters the market. These international competitors can afford more expenses and offer stronger online programs regarding their staff and history in education. Some countries like Argentina and Chile force all online education offered locally come under the supervision of their national accreditation agencies. In India, All foreign universities seeking to offer courses have to register a file in the government. Brazil's education ministry refuses to recognize any degree earned from programs sponsored by foreign institutions. Some Middle East countries still worry about recognizing online obtained degrees even if these degrees are awarded by very famous institutes.

The European Commission adopted a $3.3 billion e-Learning Action Plan to empower online education in European colleges in 2001; the arrangement prompted socializing IT infrastructure, giving instructor advices, and associating all European colleges in a one single system.

The main potential effect of e-learning may be in reality felt in the countries of the developing areas. Their exploding population and lack of skilled workers due to different reasons, these countries suffers a pressing need to enlarge higher education access in a short time with the

minimum expenses. Such a goal can be achieved by recognizing the e-learning and encouraging national institutes to offer online courses. The UNESCO anticipated that exclusive three percent of adults in sub-Saharan Africa and seven percent in Asia got some post-auxiliary instruction, in modern nations this number is around 58% generally speaking and 81% in America, numerous creating nations are trying with local online foundations to be supported predominantly by the World Bank.

3.7 The Future of Cyber Education and E-Commerce

Concerning the cyber education, many basic questions are still without clear answers. Among these questions are: Who has the rights to courseware and other online educational materials? What are the circumstances governing the employment of teachers in an online institute? Are there any limitations on the online education? And if yes, what are these limitations? How governments can control the contents offered online by these institutes? How to protect the privacy and rights in an online system? What guidelines should govern research conducted online? In addition to many other concerns that can be presented by those fearing from the spread of online education. Actually, while the debate about the nature of e-learning is still violently occurring, universities are in rushing developing their own online education infrastructures which will in turn increase electronic commerce all over the globe. Higher education's are modifying its structure for a serious reduction of the number of employee and a down time reduction in time for such activities to be performed.

3.8 Factors Determining Need for Customer Service in Higher Education

When analyzing the student's practice in the superior education entrance procedure, enrollment support, obtaining practical aid to find course materials, three factors are basically moving the classic loom to another one that requires organizations to be inclusively service intellect, these are:

3.8.1. Student Expectations

People are more and more using the Internet to facilitate customer purchases, buying everything from their smart phones to their cars online. Early in 1995, the International Data

Corporation (IDC) revealed that a minor percentage of the world population was using the Internet; however in 2013, that number has jumped from 0.4% up to 38.8% percent of the world population, this explosion of access has created a marketplace that made $289 billion in online purchases in 2012.

Students imagine shifting from searching online their interests to enroll their preferred degree online the same way they can buy something from an online market. They search blogs, social media and other sources of information asking about everything related to their university. They also ask about the support provided by the institutes, the instructors, and online programs. They entirely wait for college web pages, the data and the experience of education to reflect the simplicity, sensitivity, and expediency of their preferred online shop sites.

3.8.2. Increasing Number of Professionals Going Back for Graduate Work

As education is becoming more and more reachable, universities now have to increase the challenge of offering services to new audience of young experts. These experts are looking for additional degrees and high level educational qualification because online courses became an accessible option even with a full-time job conditions. Recent Questionnaires reveal the main cause for attending an online program is the possibility to balance work, private life and school. This increases the duties of institutions to concentrate their efforts to being more open, accepting, responsive, and service minded.

These qualified students also expect to be able to find alternative degree programs online. Studies revealed the two most used research ways for those returning to education for an online degree were:

- Direct visits to the institutions' websites
- Internet search engines and social media

This attracts the attention of the university on producing a user experience that is creative and flexible to be used, similar to online shopping.

CHAPTER 4
METHODOLOGY

4.1 Research Model

This study tends to identify what types of e-commerce applications are available for students in North Cyprus universities and to detect students' mastery in using e-commerce applications for personal and educational use. This study is conducted in cross-sectional manner with causal comparative and correlational research design approaches.

For the causal comparative design part; the independent variables and causal comparative study includes three variables: gender, age, faculty. The dependent variable is use of e-commerce applications in North Cyprus Universities consist of general statements with 5-Likert type items which range from 1 to 18. The average score was calculated for these 18 items and was used as a complete score. The correlational design part has independent variable as level of confidence in using e-commerce which comprised of 3 Likert type questions and the dependent variable as use of e-commerce applications in North Cyprus universities. Average score of the 3 items (Items 15,16,17 at part 1) were used as independent variable.

The first four research problems and objectives of this study have been carried out in a scientific framework. A clear description of the model of the research in addition to the significances of the used words are given in Figure 4.1.

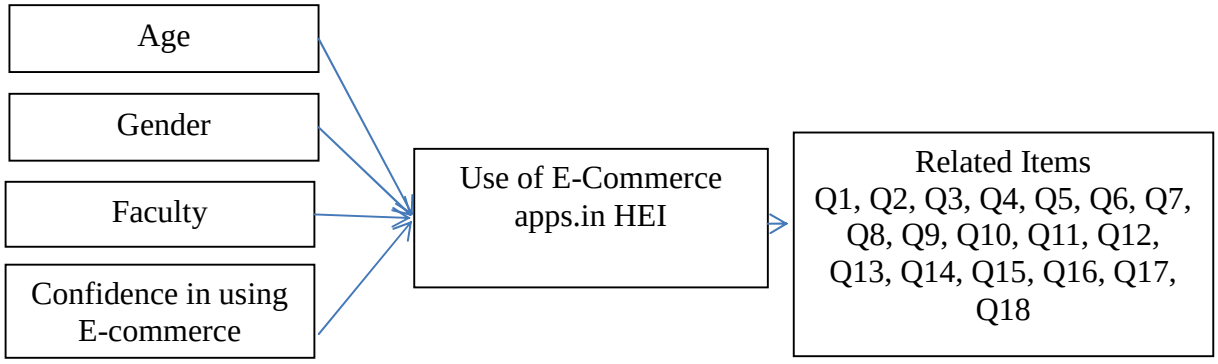

Figure 4.1: Research model of the study

4.2 Research Setting

The demographic questions were extracted from (AARP, 2000) of National Survey on Consumer Preparedness and E-commerce. The Liker type items in the questionnaire was adapted from Kleen and Shell (2006) used in this study to gather data from students. The questionnaire is divided into four sections, the demographic data of participants, and status on e-commerce, confidence in using e-commerce and e-commerce applications use in HEI. Studies have been carried out at universities given below in (Table 4.1).

Table 4.1: Universities and faculties

University	**Faculty**
Near East University	Faculty of Engineering Faculty of Medicine
Eastern Mediterranean University	Faculty of Economics and Administrative Sciences Faculty of Medicine
Cyprus International University	Faculty of Education Faculty of Architecture
Girne American University	Faculty of Architecture Faculty of Engineering
Middle East Technical University	Faculty of Education Faculty of Economics and Administrative Sciences
Lefke European University	Faculty of Engineering Faculty of Education

4.3 Participants

Totally 1200 students joined to questionnaire and 1132 students filled the out questionnaires properly. The Questionnaire was conducted in English. Participants of the Questionnaire are 60.4% male and 39.6% female. 37.7% of participants are from age group 21-23, 31.4% from age group 18-20 and 30.9% belongs to age group 24+. 77.6% of participants are undergraduate students. 22.4% are master and PhD student and 41.1% of participated students are from Turkey, 9.9% is Turkish Cypriot and 49% of students are from other countries. According to the faculties, 28.4% is studying in Faculty of Engineering, 20.7% is from Faculty of Economics and administrative sciences, 15.4% is from Faculty of Architecture, 18.3% studying in Faculty of Education and 17.2% of participated students is from Faculty of medicine (Table 4. 2).

Table 4.2: Demographic data of participants (N=1132)

Characteristics	Frequency	%
Gender		
Male	684	60.4
Female	448	39.6
Age		
18-20	355	31.4
21-23	427	37.7
24+	350	30.9
Nationality		
Cypriot	112	9.9
Turkish	465	41.1
Others	555	49
University		
NEU	226	20
CIU	176	15.5

Table 4.2: Continued...

EMU	224	19.8
GAU	204	18
METU	135	11.9
LEU	167	14.8
Faculty		
Engineering	322	28.4
Economics and Administrative Sciences	234	20.7
Architecture	174	15.4
Education	207	18.3
Medicine	195	17.2
Department		
Electric and Electronics Engineering	77	6.8
Civil Engineering	147	13
Computer Engineering	98	8.7
Business Administration	125	11
International Business	109	9.6
Architecture	174	15.4
English Language Teaching	207	18.3
Medicine	195	
Education Level		
Undergraduate	878	77.6
Masters & PhD	254	22.4

4.4 Procedures

These research on the use of e-commerce applications by university students in North Cyprus, the study made use of questionnaire for data collection, about 1200 questionnaires was distributed in 6 universities in North Cyprus (Near East University, Cyprus International University, Eastern Mediterranean University, Girne American University, Lefke European University and Middle East Technical University, 1132 was collected and used for this study and this lasted for over 45 days, the questionnaire was distributed in different locations during this time, the distribution was non-random convenience sample among the students each time the researcher visits each University, the research was conducted in spring of 2015-2016 semester. The study is quantitative, the data collected was subjected to series of analysis such frequency analysis, percentage, independent sample t-test, one way ANOVA and correlation in order to be able to answer the research questions and fulfill the aim and objectives of the study. The result gotten was discussed extensively, suggestions were made, conclusion was drawn and a recommendation was made from the result of the study.

4.5 Instrument

University Students' use of E-Commerce Applications in Higher Education Questionnaire named questionnaire was adapted by thesis supervisor and the researcher. The questionnaire consisted of 2 main parts. Part 1 aimed to collect demographic information and their approaches about e-commerce from the respondents with 17 questions. Part 2 of the questionnaire consisted of 18 questions again and it is focused on gathering information about how students uses internet in respect to e-commerce. The 18 5-Likert scale items has calculated Cronbach's alpha reliability (internal consistency) of 0.845 Cronbach's alpha value in the range of .80 to .89 is considered good (Cohen, 1988) which is an evidence that the Questionnaire is an highly reliable instrument to administer.

4.6 Computer and Internet Usage Behavior of Students

4.6.1 Hours Students Spent on the Internet Daily

From the Figure 4.2 the result shows that 382 which are 33.7% of the respondents spend 4-5 hours on the internet every day. 356 which are 31.4% respondents spent more than 6 hours on the internet per day. While 325 which are 28.7% spends 3 hours, only 69 which is 6.1% of participants spend 0-1 hours on internet in a day, from a population pull of 1132 students whom participated in the Questionnaire.

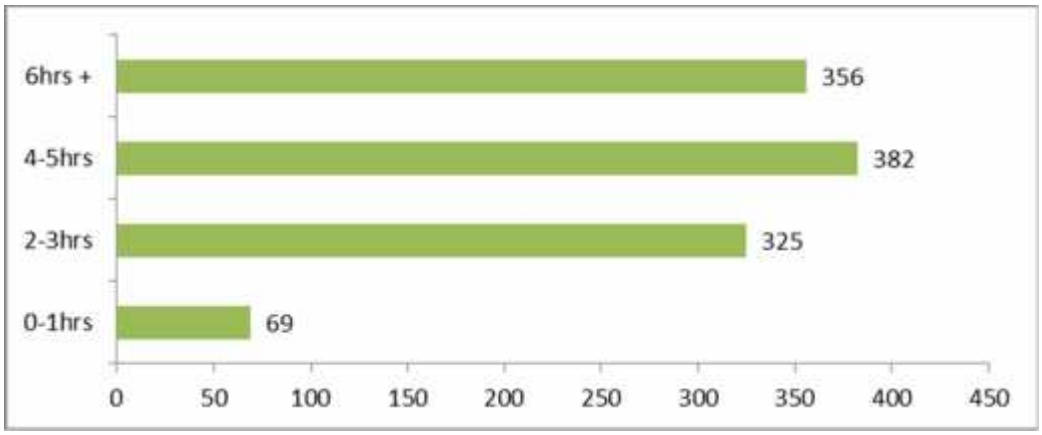

Figure 4.2: Hours students spent using the Internet

4.6.2 Students Level of Computer Experience

From the Figure 4.3, the result shows that 613 which are 54.2% of the respondents are experience with the computer, 364 which are 32.2% are experts and 154 which are 13.7% of the respondents are novice, from a population pull of 1132 students whom participated in the Questionnaire.

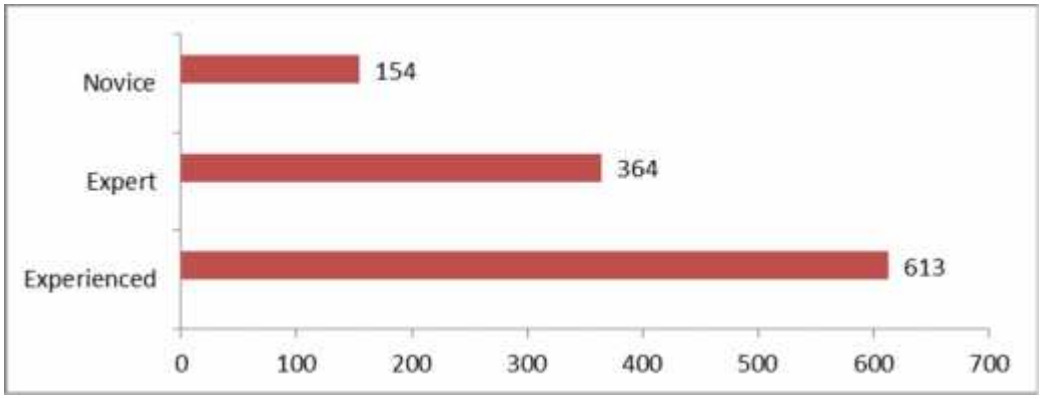

Figure 4.3: Students levels of computer experience

4.6.3 Students Use of the internet for E-Commerce

From the Figure 4.4, the result shows that 525 which are 46.4% of the respondents has made purchases less than 5 times, 319 which are 28.2% respondents indicated they have made purchases on the internet between 5-9 times, while 197 which are 17.4% respondents they have made purchases between 10-20 times in the past one year, finally 91 which are 8% of the respondents has made more than 20 purchases in the past one year, from a population pull of 1132 students whom participated in the Questionnaire.

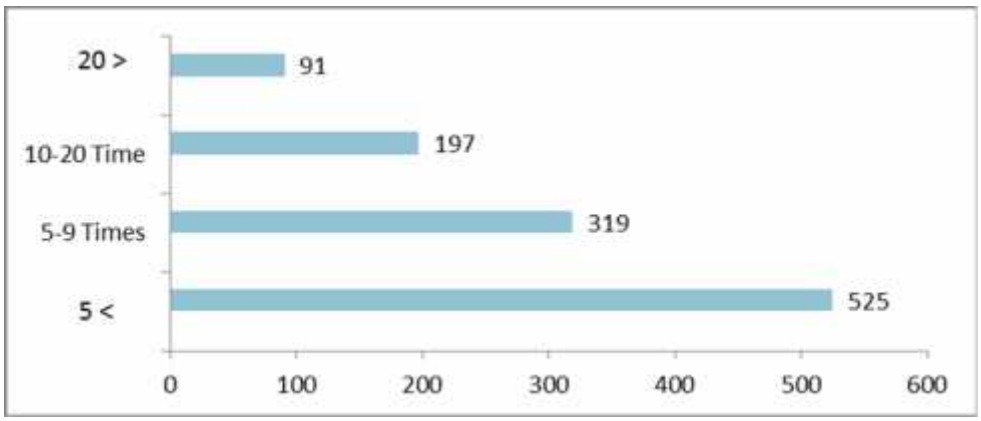

Figure 4.4: Students online shopping usage

4.6.4 Computer Programs Used by Students

From the Figure 4.5, explains most used programs by students. According to the findings, word processing is the most frequently used program with choice of 915 students and anti-virus programs come second with 751 students. Usage of education software is another most used program with 561 votes from students.

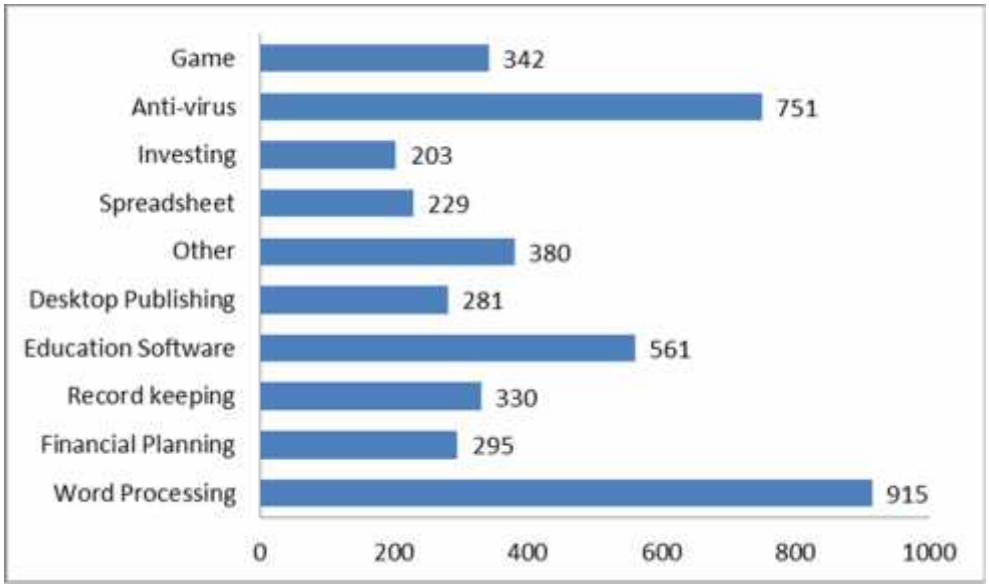

Figure 4.5: Most used programs by students

4.6.5 Reasons why Students use the Internet

From the Figure 4.6 shows internet usage reasons of students. Findings pointed that e-mail services are the most used internet option by students and education and training is second reason while chatting is the third. Newsgroups, travel and banking are other highly preferred options as a reason of internet usage.

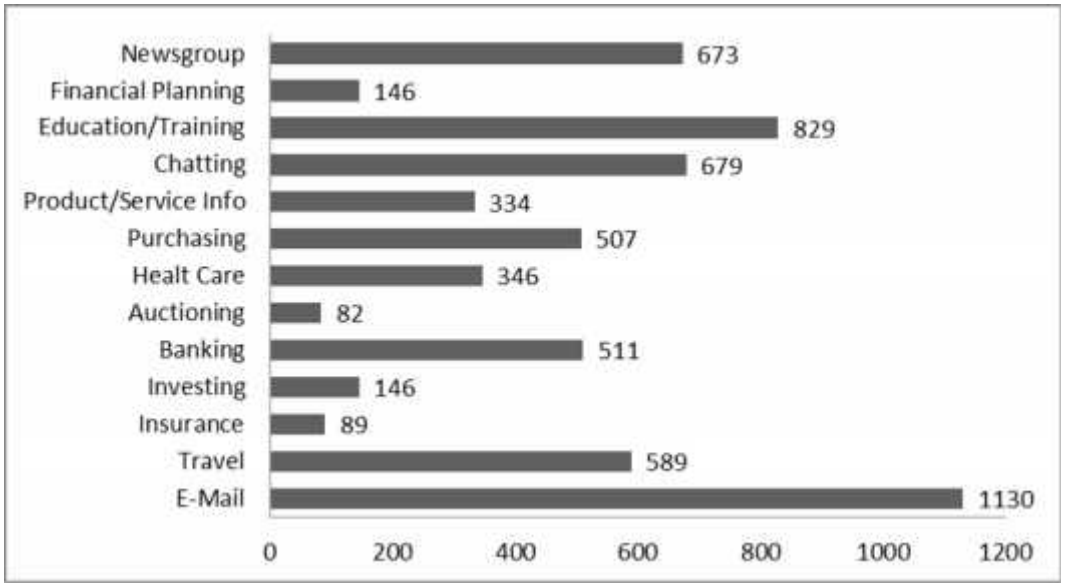

Figure 4.6: Internet usage reasons of students

4.6.6 How Do Students Usually Purchase Items

From the obtained results, it was seen as demonstrated in Figure 4.7a below, that just 20.3% of students don't usually purchased goods and services, 34.8% of students purchased goods and services from stores, 16% of students purchased goods and services by phone, 24.6% of students purchased goods and services on the internet and 4.2% of students purchased goods and services some other way from a population pull of 1132 students whom participated in the Questionnaire. And from that, Figure 4.7b below shows the students that purchase good and services from some other way. From Figure 4.7b below, a pool of 230 students who choose some other way of purchase goods and services, 65 students don't like to shop online, 2 students have concerns about privacy, 48 students prefer face-to-face shopping, 6 students are not interested in online shopping, 3 students says expensive, 33 students show concerns about scams, 25 students prefer to examine products before buying, 4 students says because of not enough product information provided, 42 students shows concern about safety of payment and 2 students shows concern about company/ refund policy.

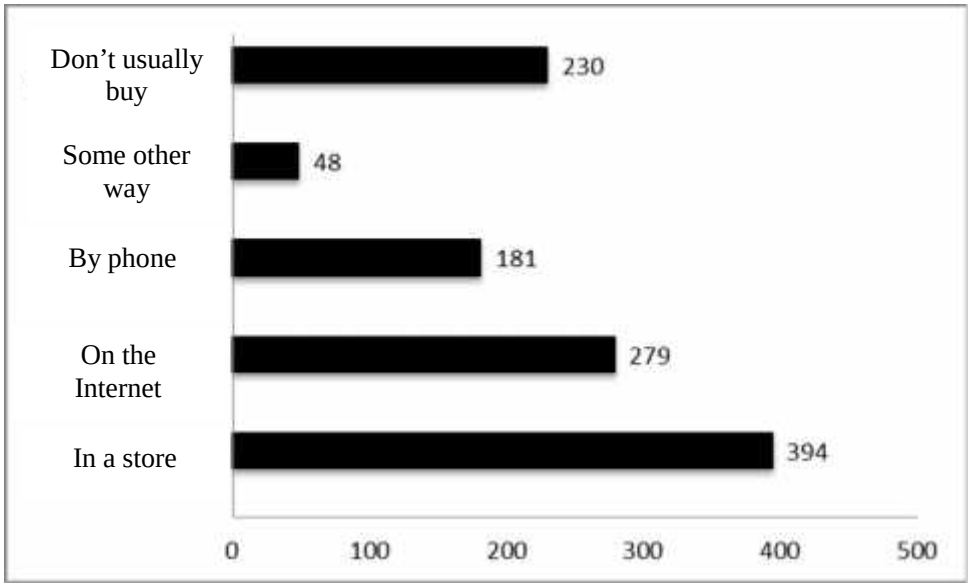

Figure 4.7a: Internet usage reasons of students

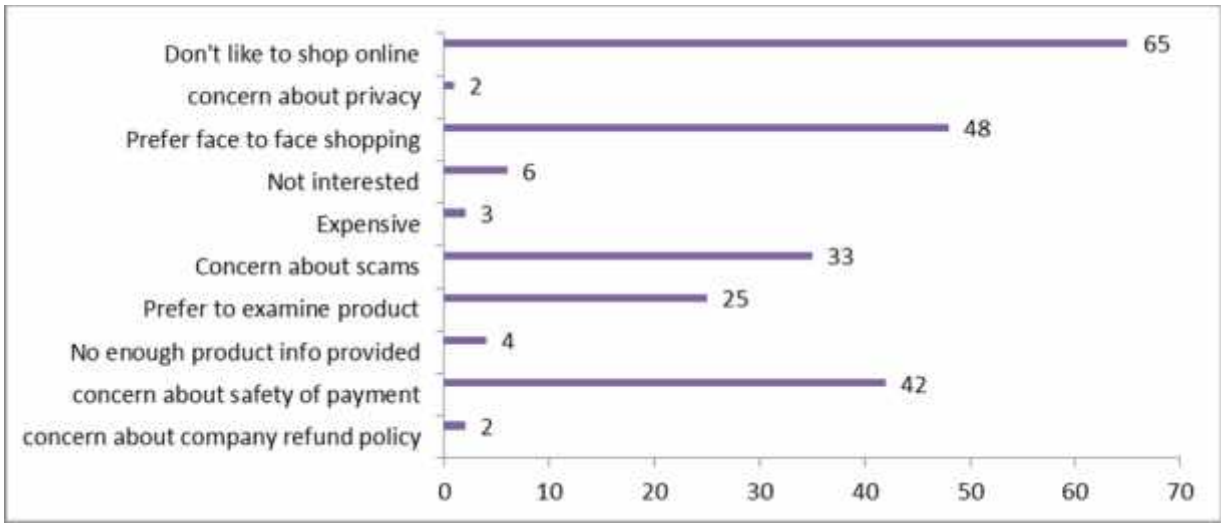

Figure 4.7b: Why have you not made any purchases over the Internet?

4.7 Data Analysis

The Excel Spreadsheet package was used in arranging data drawn from the administered questionnaires. This data was then transferred to the Statistical Package for Social Sciences (SPSS 20.0) for analysis. To answer first research question tables and frequencies with percentages were used. Firstly, descriptive statistics which included frequencies and

percentages were used to get a clearer understanding of all elements of the research work. Secondly, Independent sample t-test for research question 2, one-way ANOVA methods were used for answering research questions 3 and 4 and Pearson correlation analysis was used to answer research question 5.

4.7 Procedures

This research the use of e-commerce applications by university students in North Cyprus. The study made use of questionnaire for data collection, about 1200 questionnaires was distributed in 6 universities in North Cyprus (Near East University, Cyprus International University, Eastern Mediterranean University, Girne American University, Lefke European University and Middle East Technical University, 1132 was collected and used for this study and this lasted for over 45 days, the questionnaire was distributed in different locations during this time, the distribution was non-random convenience sample among the students each time the researcher visits each University, the research was conducted in spring of 2015-2016 semester. The study is quantitative, the data collected was subjected to series of analysis such frequency analysis, percentage, independent sample t-test, one way ANOVA and correlation in order to be able to answer the research questions and fulfill the aim and objectives of the study. The result gotten was discussed extensively, suggestions were made, conclusion was drawn and a recommendation was made from the result of the study.

CHAPTER 5
RESULTS AND DISCUSSION

5.1 Students' Use of E-Commerce Applications

For the researcher to understand and see the pattern of the response of the students on their view of their confidence of the general use of e-commerce and academically related use, descriptive statistics was employed to provide a basic knowledge on their opinion. The result of mean range and standard deviation of the research items are shown below in Table 5.1 where the mean indicates and average data from total respondents while standard deviation shows how far a particular value or data differs from the mean value. From the result, "how confident are you, about your activities on the Internet being monitored or tracked without permission" (M = 2.71; SD = 1.22) has the least mean value out of all the items used in this Questionnaire for confidence use of e-commerce application while the confident in students ability to use computer/internet in paying household bills, investing and shopping has the highest mean of 3.21 with SD =1.25 which was as a result of the responses from the respondents, from the usage of academically related e-commerce application the result indicates that "View final grades" has the highest mean value (M = 4.42; SD = 1.46). In general students use of e-commerce applications at HEI closer to (M= 3.72; SD= 1.62). In general students confidence about the use of e-commerce applications closer to (M= 2.93; SD= 1.22). The result showed that majority of the respondent have same use on the confidence use of e-commerce app., this implies that the use are between not confidence and don't know, The result showed that majority of the respondent have same result on the use of e-commerce in HEI, this implies that the use are changing between seldom to sometimes.

Table 5.1: Total standard deviation and mean of the question

Confidence Use of E-commerce App.	**Mean**	**SD**
15. How confident are you about your ability to use the Computer / Internet such as paying household bills, investing or shopping?	3.21	1.25
16. How confident are you, about the privacy of the information you provide when making Internet purchases?	2.86	1.18
17. How confident are you, about your activities on the Internet being monitored or tracked without permission?	2.71	1.22
Total Average score of 15-17	**2.93**	**1.22**
The usage of Academically Related E-commerce App		
1. Complete application for admission (school, job, etc.).	3.75	2.11
2. Order a transcript.	3.69	1.49
3. View final grades.	4.42	1.46
4. Register for classes.	4.13	1.51
5. Search an online directory of faculty.	3.73	1.60
6. Search an online directory of university services.	3.65	1.61
7. Search academic catalog online.	3.68	1.58
8. Audit academic performance online (courses, instructors, students etc.).	3.75	1.56
9. Purchase/ extend textbooks from library.	3.35	1.67
10. Pay tuition and fees.	3.56	1.64
11. Find accommodation online.	3.39	1.59
12. View financial status with university (fees, fines, etc..).	3.93	1.57
13. Receive online academic advice from instructors.	3.62	1.62
14. Schedule meetings such as tutoring, counseling, etc..	3.43	1.63

Table 5.1: Continued...

15. Take a complete web-based course.	3.35	1.64
16. Take web-based courses in a lecture.	3.41	1.68
17. Upload/ view projects/ assignments online.	4.05	1.53
18. Scan projects/ articles for plagiarism online.	3.88	1.68
Total Average Score of Q1 through Q18	**3.72**	**1.62**

5.2 Students' Use of E-Commerce Applications Based on Gender

For a better understanding on the students view on the use of e-commerce applications based on gender differences, independent samples t-test was also employed. The assumption of Levene's test for equality of variances showed that variances are different across gender (p=0.05). The results were shown below in Table 5.2, use on privacy is statistically significant difference between genders in the study (p<=.05)

Table 5.2: Difference across genders

	Gende	**N**	**Mean**	**SD**	**Mean Difference**	**t**	**p**
E-commerce	Male	684	3.765	0.8111	.104	1.965	**.05***
	Female	448	3.661	0.914			

Where; the dependent variable is e-commerce in HEI: Total sampled population (N); Standard Deviation (SD); p≤.05 (there is statistical significant difference)

From the result of the independent sample t-test shown in the table above, it can be seen that there existed statistical significance. From the study it can be seen that female and male in the study have different use on e-commerce in higher education. The mean values are 3.765 for male and 3.661 for females, use on the e-commerce applications in HEI, the closeness in the mean difference shows that the on usage of e-commerce application in higher education by students are seen to be very important which results in paying serious attention to it. The

research carried out by Sharma, (2013), shows that significant difference exist in gender and attitude towards e-commerce and e-learning, some other related study (Abedalaziz et al., 2013, Suri et al., 2014) showed that female students uses the computer than male. Genis-Gruber and Gonul, 2012) stated that there exist statistical difference between genders in shopping online (e-commerce).

5.3 Students' Use of E-Commerce Applications in HEI Based on Age Differences

For a better understanding on the students view on e-commerce applications in HEI, based on age difference one-way ANOVA was also employed. The assumption of Levene's test of homogeneity of variances showed that the variances are equal for ($p = 0.541$). There was a significant effect of age on students' use of e-commerce applications at $p<.05$ level ($F(2,1129) = 6.954$, $p = 0.001$) The results is shown below in Table 5.4, in this study, it is seen that there is statistical differences between all ages towards the use of e-commerce ($p<.05$)

Table 5.3: Difference between Ages

	Age	**N**	**Mean**	**SD**	**Mean Square**	**F**	**p**
E-commerce	18-20	355	3.622	.830	5.031	6.954	**.001***
	21-23	427	3.700	.836			
	24+	350	3.856	.887			

Where; Use the dependent variable is E-commerce in HDI; Total sampled population (N); Standard Deviation (SD), $p<0.05$ (there exist statistical significant difference).

In all the groups' age category, the result shows that 24+ had the mean in both cases, for use on e-commerce application in HEI and the result is significant at $p<.05$, the different from every other age group, the mean values are all close. The result shows that students in various ages are very concerned with e-commerce, the study carried out by Stephen et al., (2003) shows that there is a significant age based difference in relation to the various age groups in the use of e-commerce.

Post hoc comparisons using Fisher's LSD test that is appropriate for three mean scores indicated that then mean score for students with ages 24+ and above (M= 3.8567,SD = 0.8877) were significantly higher than students with age range 18-20 (M = 3.6225, SD = 0.8302) and also from students with age range 21-23 (M = 2.700, SD = 0.836).

Table 5.4 shows the multiple comparisons of all the groups based on the ages of the respondents, the age groups are compared from one section to another based on the research variables which is use on e-commerce in HEI, the result shows that there is a significant difference in age group 24+ from other groups in the study, the difference between other groups is not significant (age group 18-20, 21-23) as seen from the result below (Table 5.4). From the Table 5.4 it is seen that there is statistical difference between age groups, the first group that is 18-20 with the 24+ age group shows that there is statistical difference.

Table 5.4: Multiple comparison of difference based on age

(I) age3	(J) age3	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-20	21-23	-.07744	.06109	.205	-.1973	.0424
	24+	**-.23413***	.06407	**.000**	-.3598	-.1084
21-23	18-20	.07744	.06109	.205	-.0424	.1973
	24+	**-.15669***	.06133	**.011**	-.2770	-.0364
24+	18-20	**.23413***	.06407	**.000**	.1084	.3598
	21-23	**.15669***	.06133	**.011**	.0364	.2770

*. The mean difference is significant at the 0.05 level.

5.4 Students Use on E-Commerce Applications Based on Faculty Difference

For a better understanding on the students view on the use of e-commerce applications in HEI based on faculty difference one way ANOVA was also employed. The assumption of Levene's test of homogeneity of variances showed that the variances are equal for ($p = 0.347$). There was a significant effect of type of faculty on students' use of e-commerce applications at $p<.05$ level ($F(4,1127) = 4.361$, $p = 0.002$)

Post hoc comparisons using Scheffé's test that is appropriate for unequal group sizes indicated that then mean score for students at Engineering faculty ($M = 3.7859$, $SD = 0.4852$) were significantly higher than students at faculty of Medicine ($M = 3.5114$, $SD = 0.83798$) and from students from Economics and Administrative Sciences ($M= 3.8269$, $SD = 0.88445$) have significantly higher mean scores than faculty of medicine students on the use of e-commerce applications at HEI.

The results is shown below in Table 5.5, in this study, it is seen that there is statistical significant differences between all faculties towards the use of e-commerce ($p<.05$).

Table 5.5: Difference between faculties

	Faculty	**N**	**Mean**	**SD**	**Mean Square**	**F**	**P**
E-commerce In HEI	Engineering	322	3.785	.870	3.151	4.361	**.002***
	Econs & Adm.	234	3.826	.884			
	Architecture	174	3.703	.804			
	Education	207	3.729	.825			
	Medical Sci.	195	3.511	.837			

Where; Total sampled population (N); Standard Deviation (SD) and * means $p<0.05$ (there exist statistical significant difference)

From the table above shows the result of the one way analysis of variance, there is significant mean difference ($p<0.05$) between the five faculty used in this study, they are engineering, economics and administration science, architecture, education, and medical sciences, the result of this study suggest that students in engineering, economics and administration science and other faculties pay much attention to e-commerce applications. The result of this study is in line with the result of Odell et al., (2010), he suggested that the faculties of science and engineering students are more computer and internet application users, in like manner, Anderson (2010) argued that there is a faculty based difference in the use of computer and its internet applications, the variation in result might be peculiar to the universities in North Cyprus.

Table 5.6: Multiple comparisons based on faculty difference

(I) Faculty	(J) Faculty	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Engineering	Economics and Administrative Sciences	-.04104	.07302	.989	-.2663	.1842
	Architecture	.08218	.07997	.901	-.1646	.3289
	Education	.05642	.07572	.968	-.1772	.2900
	Medicine	**.27449***	.07713	.013	.0365	.5125
Economics and Administrative Sciences	Engineering	.04104	.07302	.989	-.1842	.2663
	Architecture	.12322	.08509	.718	-.1393	.3857
	Education	.09745	.08110	.836	-.1528	.3477
	Medicine	**.31553***	.08242	.006	.0612	.5698

Table 5.6: Continued...

Architecture	Engineering	-.08218	.07997	.901	-.3289	.1646
	Economics and Administrative Sciences	-.12322	.08509	.718	-.3857	.1393
	Education	-.02576	.08742	.999	-.2955	.2440
	Medicine	.19231	.08864	.319	-.0812	.4658
Education	Engineering	-.05642	.07572	.968	-.2900	.1772
	Economics and Administrative Sciences	-.09745	.08110	.836	-.3477	.1528
	Architecture	.02576	.08742	.999	-.2440	.2955
	Medicine	.21807	.08482	.159	-.0436	.4798
Medicine	Engineering	**-.27449***	.07713	.013	-.5125	-.0365
	Economics and Administrative Sciences	**-.31553***	.08242	.006	-.5698	-.0612
	Architecture	-.19231	.08864	.319	-.4658	.0812
	Education	-.21807	.08482	.159	-.4798	.0436

*. The mean difference is significant at the 0.05 level.

Engineering and Economics and Business administration students have significantly higher mean scores than Medicine students on the use of e-commerce applications at HEI.

Table 5.6 shows the multiple comparisons of all faculties. This compares the faculties in each section within each group between the ages. In Engineering faculty, there is significant difference with medicnine faculty, but there is no significant difference with other faculties that partook in this study. In economics and administrative sciences faculty, there is significant difference with medicnine faculty, but there is no significant difference with other faculties that partook in this study. In architecture faculty, there is no significant difference with other faculties that partook in this study. In education faculty, there is no significant difference with other faculties that partook in this study. In medicine faculty, there is

significant difference with engineering and economics and administrative sciences faculties, but there is no significant difference with other faculties that partook in this study.

5.5 Relationship between Students level of Confidence in Using E-Commerce Application and Use of E-Commerce Applications in Higher Education

For a better understanding of the relationship between student's confidence in the general use of e-commerce application and e-commerce application in HEI, Pearson correlation analysis was also employed. The results shown below in Table 5.7, there is a positive relationship between confidence in the general use of e-commerce and the use of its application in higher education, the correlation coefficient is .205** and its significant at the 0.01 significant level.

There was a positive correlation between two variables, r = 0.205, n = 1132, p = 0.000. A scatter plot in Figure 5.1 below summarizes this finding:

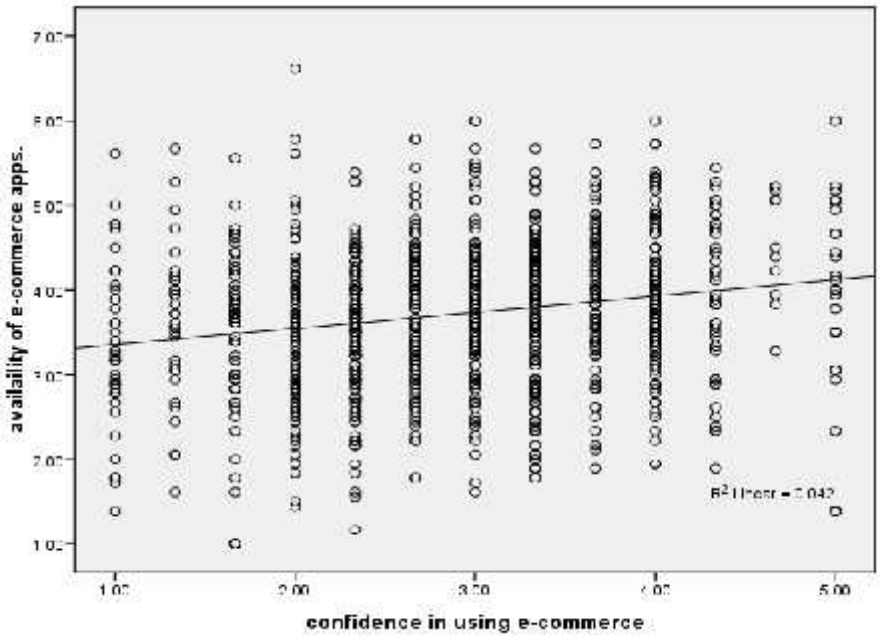

Figure 5.1: Scatter Plot

There exists a weak linear positive correlation between confidence in using e-commerce applications and about the use of e-commerce applications. This implies that increasing the confidence in the general use of e-commerce will result in increase in the use of e-commerce

application in higher education. The relationship between the confidence of general use of e-commerce and the use of e-commerce is on the increase, which can be seen that over time, e-commerce use will increase and confidence in using e-commerce will increase also.

Table 5.7: Relationship between student's confidences in the general use of e-commerce application and e-commerce application in higher education

		Confidence of use of e-commerce	**E-commerce in HEI**
Confidence of use of e-commerce	Pearson Correlation	1	.205**
	Sig. (2-tailed)		.000
	N	1132	1132
E-commerce In HEI	Pearson Correlation	.205**	1
	Sig. (2-tailed)	.000	
	N	1132	1132

**. Correlation is significant at the 0.01 level (2-tailed).

The Sig. 2-tailed level is .000 which shows that there is significance between confidence of use of e-commerce and e-commrece in HEI and the relationship is a positive 20.5%, which means that as one variable goes up or down so will the other one.

CHAPTER 6
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The use of e-commerce has become a daily routine in the life of an average higher educational student around the globe, yet the use of university students on the use of e-commerce applications in higher education is evolving and its level of acceptance is on the increase.

- The result of the study shows that a majority of the students that took part in the study spend 4-5 hours daily on the internet for various purposes,
- A great portion of the respondents rated themselves as experienced users of the computer systems.
- A majority of students has made purchases more than 5 times in the last one year, and some others have made purchases more than 20 times in the past one year.
- The students mostly use word processing computer programs and the main purpose student sometimes use internet as indicated in this research is for emailing, education and training.
- Sometimes students prefer making purchases of items directly from stores.
- There was impact of age which indincated that student of age between 21-23 uses e-commrece.
- Gender shows that majortiy of the students that participated were male.
- Faculty of Engineering has the highest participants.
- The confidence of the use of e-commrece applications in higher on university student's use on the application of e-commrece in higher education.
- The students are confident in their ability to use computer/internet in paying household bills, investing or shopping.

- In considering the relationship between the students level of confidence in using e-commerce application and its use in e-commerce in higher education there is a weak linear positive correlation between the two variables of using e-coming application and its use in Higher Education indicating that over time e-commerce use will increase and the confidence of students using e-commerce will also increase.

In conclusion the view of students in the university on the use of e-commerce for higher education is affected by demographically characteristics of the students, such as age, gender, and faculty and there exists an association between confidence in general and academic use of e-commerce applications.

From the result of this study it can deduced that students, university management should incorporate e-commerce is operational process so as to reduce the down time for some processes in the higher education. It will provide vital information on how demographic characteristics of students in a higher educational environment is affected by e-commerce applications. Possible problems and concern about the use of e-commerce can easily be identified and improvement made to make e-commerce incorporated strata in higher education.

This research is mostly beneficial to the Higher Educational Institutions as it indicates that the use of e-commerce gives better services rendered to student thereby being a convenient method of commerce operation to students.

6.2 Recommendations

The recommendations and the future research direction for this study are stated below:

It is very important to acknowledge the fact that as university student's confidences increase towards the use of e-commerce, the tendency of usage will increase, so factors that increases confidence of usage of e-commerce application in higher education in North Cyprus should be research into, so that the use and confidence of e-commerce application can be increased in higher education, thereby increasing the use of e-commerce in higher education administrative and financial operations. The design of e-commerce applications should put into consideration

issues that have to do with privacy of users, refund policy, scam and other important factors that discourages students in the use of e-commerce applications in higher education.

This study was carried out in quantitative manner; qualitative methods may be employed to obtain deeper insight about the matter of concern.

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APPENDIX

USE OF E-COMMERCE APPLICATIONS IN NORTH CYPRUS UNIVERSITIES

Dear Participant,

This NEU Computer Information systems MS thesis study investigates the current status and use of university students in North Cyprus towards e-commerce applications in higher education. The Questionnaire has 2 parts: first part is demographic information, the second part is about how students use e-commerce applications academically. Please read questions carefully and give your answers sincerely. Your response will be kept confidential, anonymous and only used for this research purposes.

I deeply appreciate your cooperation in this research.

Fairouz Alhashmi Belhaj (CIS graduate student)

Thesis supervisor: Assist. Prof. Dr. Seren Başaran

PART ONE: **Demographic Information**

1) **Gender:** A. Male B. Female
2) **Age:** A. 18_20 B. 21_23 C. 24+
3) **Nationality:** A. Cypriot B. Turkish C. Others.....
4) **Universality :**……
5) **Department**: (Please specify)**:** ……
6) **Faculty**: (Please specify)**:**…….....…….....
7) **Education level**: A. Undergraduate B. Masters & PhD
8) **How many hours do you spend on the internet?**

   A. 0-1 hrs. B. 2-3 hrs. C. 4-5 hrs. D. 6 + hrs.

9) **How would you rate your level of experience with a computer?**

A. Experienced. B. Expert. C. Novice.

10) During the past year, approximately how many times have you purchased goods or services on the Internet?

A. Fewer than 5. B. 5-9 . C. 10-20 . D. More than 20.

11) Which programs or do you use on the computer? (You can select more than one)

A. Word-processing. D. Education software. G. Spreadsheet. I. Anti-virus.

B. Financial planning. E. Desktop Publishing. H. Investing. J. Game.

C. Record Keeping F. Other (please specify:)…….

12) Select from the list on reasons of you're using internet. (You can select more than one)

A. E-mail. E. Banking. I. Product/ service info. M. Newsgroups.

B. Travel. F. Auctioning. J. Chatting interactively.

C. Insurance. G. Health care. K. Education/training.

D. Investing. H. Purchasing. L. Financial planning.

13) After comparison shopping on the Internet, how do you usually purchase the items?

A. In a store. C. By phone. E. Don't usually buy.

B. On the Internet. D. Some other way.

14) If your answer to question 12 is e) Why have you not made any purchases over the Internet?

A. Concern about company/refund policy. G. Expensive

B. Computer at work not for personal use.
C. Concerned about safety of payment.
D. Not enough product info. provided.
E. Prefer to examine products.
F. Concerned about scams.
H. Not interested.
I. Prefer face-to-face shopping.
J. Concerns about privacy.
K. Don't like to shop online.

Group question	**Not very confident**	**Not confident**	**Don't know**	**Confident**	**Very confident**
15) How confident are you about your ability to use the Computer / Internet such as paying household bills, investing or shopping?					
16) How confident are you, about the privacy of the information you provide when making Internet purchases?					
17) How confident are you, about your activities on the Internet being monitored or tracked without permission?					

PART TWO: General Statements

How often do you use the following? Answer by choosing the most appropriate response:

	Items	very rarely	almost never	seldom	sometimes	almost	often
1	Complete application for admission (school, job, etc.).						
2	Order a transcript.						
3	View final grades.						
4	Register for classes.						
5	Search an online directory of faculty.						
6	Search an online directory of university services.						
7	Search academic catalog online.						
8	Audit academic performance online (courses, instructors, students, etc..).						
9	Purchase/ extend textbooks from library.						
10	Pay tuition and fees.						
11	Find accommodation online.						
12	View financial status with university (fees, fines, etc..).						
13	Receive online academic advice from instructors.						
14	Schedule meetings such as tutoring,						

	counseling, etc..						
15	Take a complete web-based course.						
16	Take web-based courses in a lecture.						
17	Upload/ view projects/ assignments online.						
18	Scan projects/ articles for plagiarism online.						

Thank you very much for your participation

USE OF E-COMMERCE APPLICATIONS IN NORTH CYPRUS UNIVERSITIES

A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF APPLIED SCIENCES

OF

NEAR EAST UNIVERSITY

By

FAYROUZ ALHASHMI BELHAJ

In Partial Fulfillment of the Requirements for

The Degree of Master of Science

in

Computer Information Systems

NICOSIA, 2016

FAYROUZ BELHAJ ALHASHMI USE OF E-COMMERCE APPLICATIONS IN NORTH CYPRUS UNIVERSITIES NEU 2016

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name:

Signature:

Date:

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My profound gratitude goes sincerely to Assist. Prof. Dr. Seren Başaran, for her guiding me, understanding, being patience, and very specifically her supervision in writing of my graduate thesis at Near East University. Her supervision was very crucial in giving expertise advice and contribution and consistent with my long-term career goals. She has been an encouragement in the aspect of not only being a researcher but rather grow into being an instructor and thinking independently.

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I dedicate this thesis to my husband and my beloved family with sincere thanks and heartfelt love, which they trust and believed in me and sustain and kept me throughout my life. I would like to thank my husband for his unlimited and unconditional love, and to my parents who support me in everything all the time.

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To my beloved children..

ABSTRACT

The use of internet applications cut across every field and sector and its use has brought about a positive impact. Its use in higher education has grown past just learning, it has become a way of life that is gradually becoming an order of the day. This study targets to inspect the use of e-commerce in our universities. The study was conducted in North Cyprus universities in a cross sectional manner. Total of six universities were involved in data collection with sample size of 1132 students. The causal comparative design were employed to analyze gender, age, faculty differences among student use of e-commerce and correlational research design was used to identify the nature of association between the level of confidence in use of e-commerce applications. The data collected was analyzed with SPSS using different statistical models like frequencies, percentages, independent t-test, ANOVA and Pearson correlation techniques were employed. Confidence in use of e-commerce applications implies that students' views are changing between not confident and do not know. The use of e-commerce in HEI are changing between seldom to sometimes. Males are slightly more positive in the use of e-commerce services in HEI than females. Students with ages 24 and above were significantly higher than students with age range 18-20 and also from students with age range 21-23 in the views on availability of e-commerce applications. In HEI the students of medicine are less positive about the use of e-commerce applications than engineering and than business administration students. There exists a weak, positive linear correlation implying that increasing the confidence in the general use of e-commerce will result in increase in the use of e-commerce applications in higher education.

***Keywords*:** E-commerce; e-learning; higher education institutions; north cyprus universities;student services

ÖZET

İnternet uygulamalarının kullanımı her alanda ve sektörde kesişmektedir ve kullanımı olumlu bir etki getirmiştir. Yükseköğrenimdeki kullanımı sadece öğrenme aşamasını geçmiş ve giderek gündelik hayatın bir parçası olması şekline gelmektedir. Bu çalışma e-ticaretin Üniversitelerimizdeki kullanımını araştırmayı hedefler. Çalışma Kuzey Kıbrıs üniversitelerinde kesitsel bir şekilde gerçekleştirilmiştir. Veri toplama sürecine toplam altı üniversite dahil olmuş ve örneklem 1132 öğrenciden oluşmuştur. E-ticaret kullanan öğrenciler arasındaki cinsiyet, yaş ve fakülte farklılıklarını analiz etmek için nedensel karşılaştırmalı tasarım kullanılmış ve e-ticaret uygulamalarını kullanmada güven seviyeleri arasındaki ilişkinin doğasını tanımlamak için ilişkisel araştırma tasarımı kullanıldı. Toplanan veriler, frekanslar, yüzdeler, bağımsız t-testi, tek yönlü varyans analizi (ANOVA) ve Pearson korelasyon teknikleri gibi farklı istatistik modelleri kullanarak SPSS ile analiz edilmiştir. E-ticaret uygulamalarındaki güven öğrencilerin görüşlerinin emin olmamakla bilmemek arasında değiştiğini ima etmektedir. E-ticaretin yükseköğretim kurumlarında kullanımı nadir ile zaman zaman arasında değişmektedir. Erkek öğrenciler yükseköğretim kurumlarında e-ticaretin kullanımı konusunda kız öğrencilerden biraz daha olumludur. 24 yaş ve üzerindeki öğrenciler, e-ticaret uygulamalarının mevcudiyeti konusundaki görüşlerinde 18-20 yaş ve 21-23 yaş aralığındaki öğrencilerden anlamlı olarak sayı olarak daha fazlaydı. Yükseköğretim kurumlarında tıp öğrencileri e-ticaret uygulamalarının kullanımı konusunda mühendislik ve iş yönetimi öğrencilerinden daha olumsuz düşünmekteydi. Var olan güçsüz ve olumlu doğrusal korelasyon e-ticaretin genel kullanımında artan güven seviyesinin e-ticaret uygulamalarının yüksek öğretimde kullanımının artmasıyla sonuçlanacağı anlamına gelmektedir.

***Anahtar Kelimeler*:** E-öğrenme; e-ticaret; kuzey kıbrıs üniversiteleri; öğrenci hizmetleri; yüksek öğrenim kurumları

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LIST OF ABBREVIATIONS

ANOVA:	Analysis of Variance
SD:	Standard Deviation
IT:	Information Technology
APP:	Application
HEL:	Higher Education Institutions
IDC:	International Data Corporation
CMS:	Course Management Systems
NGDC:	New generation digital campus
CRM:	Customer relationship management
DOE:	Department of education
CHEA:	Council of higher education accreditation
RFID:	Radio Frequency Identification
PC:	Personal Computer
ICT:	Information and communication technology
SME:	Small to medium enterprise
SIS:	Secret intelligence service
B2C:	Business-to-consumer
B2B:	Business-to-business
SSL:	Secure sockets layer

CHAPTER 1
INTRODUCTION

The Internet has made life an interesting one. It made a revolution in communication world and increased our network from local to international. Humanity started to use internet in almost everything they do. Ordering food, buying a television, sharing a memory with a friend or showing our pictures and more (Nie and Erbring, 2000). Before the inception of internet, if someone wants to learn about news, they had to buy a newspaper, open TV or radio. But today, public are allowed to reach news and all other information any time via internet and because of improved mobile technology, they can access to information from anywhere (Mok & Wellman, 2007).

Since it's invention, internet had too much changes till today. At the beginning, internet was just a static network with small freight of bytes capacity and was transferring just short texts between two persons or parts; it was a store of data where content was initiated and kept only by advanced programmers (Allman, Kruse & Ostermann, 2000). Today, however, immeasurable quantities of information is uploading and downloading in a minute over this electronic environment, and important amount of content is from us so for now we are all commentators, publishers, and creators (Corcoran, 2016).

During 1980 's and 1990 's, Internet networks extended to surround the educational institutes and research laboratories. Recently public entities, institutions, and private companies all over the world entered to the internet community. The Internet still has an unstoppable and limitless growth; internet is not a project managed by the government any more, but it is the largest global computer network penetrating the world (Kleinrock, 2010).

In 1970's, Electronic Commerce (e-commerce) was indicated as data transfer between companies and clients where they send formal business documents such as purchase orders and invoices. In the beginning of the second millennium, there was a necessity of a new method of conducting business worldwide that satisfies the needs of local and international markets (Brunn & Leinbach, 2001).

The modern life of global business witnessed a dramatic change of business transactions where technology has played a major role to utilities world trade and economy (Mahadevan, 2000). The ubiquitous spread of the online and websites has dramatically make differences in aspect of trade and commerce in the recent years. It became more and more popular for users and even consumers stop buying any good without checking it from internet and e-commerce sites (Turban et al., 2016). Soon after, and due to the development of industry and economy, electronic business is referred to offering products and serves customers via the internet.

This fast evolution into a knowledge based society brought many requisites to nearly all areas of world market. Today, organizations from different sectors need to provide some online opportunities to their companies and also they have to learn how to be effective in the digital world to survive. Organizations which could not get familiar with internet and new economy trends became smaller or disappeared.

E-commerce defined as the process of buying and selling by using the internet and increasingly and has become very popular today because it serves the needs of merchants and customers and it can be done electronically without the need of using cash currency or physical merchandise. Due to the enormous benefits of electronic commerce, it has set the impetus for the revolution of information technology and communication (Gudigantala et al., 2016).

The term Electronic Commerce (e-commerce) refer mainly to business exchanges, including both associations and people, is mainly on holding and transferring electronic information like data, audio, video and always opening of website and switching off computers (AOL) which has access into free and accessible network (OECD, 1997).

Since their foundations, academic institutions are proud of their selectivity. Always it is more difficult it is to be admitted to more prestigious the schools. Also students have to demonstrate academic ability, test skills, inventiveness and perseverance. Results are supporting the choosing method that encompasses the operation on investigation, interuse, essays and selection panel. A complete digitalized infra-structure is a necessity to accept a process, applications, course selection, registration and advising. Admission results may continue for

weeks or months according to how institutions reuse applications of prospective students to select the ones who meet the acceptance requirements (Duderstadt et al., 2002).

With advantages of online education, all admission process has changed. The harnesses to access also have consequently changed. The main aim of higher education constitutions is providing widely available high level education in national and international aspects at with little charge. Instead of attracting only local students, higher education institutes are now more interested also in marketing and attracting students from the world wide (Nelson, 2008).

Because geographic distance is not a barrier to education, students who never went to campus physically can register for online courses. Students are choosing online schools mainly based on the reputation of their programs. In some situations, the selection is based on the attendance flexibility in addition to suitability with their lives and support possibilities provided online. All services about choosing courses and paying fees must be as easy as shopping on internet. Selecting course of study, interacting with consultant to pick the required program with student, submitting applications, admission process and fees payments should be done very easily and quickly (Allen and Seaman, 2003)

After these steps, students will need access to their courses with continuous support in case of problems. To offer such kind of service need a thinking of all possible service structure and interfacing model for each individual institute (Mason, 1998).

E-commerce applications in higher educational institution are crucial for the robust functioning of this educational systems, therefore e-commerce is crucial in indicationg and pointing our which aspect or the level commerce to customer e-commerce applications are available or reachable to university students. Series of studies has been conducted by some scholars on the effect of gender, age and faculty in the use of e-commerce, the study by Sharma (2013) discussed the impact of age on the attitude towards the use of e-commerce, some other related study (Abedalaziz et al., 2013; Suri et al., 2014) showed that female students uses e-commerce applications than male (Genis-gruber and Gonul, 2012; Odell et al., 2010), he suggested that the faculties of science and engineering students are more computer and internet application users, in the same vain, Anderson (2010) argued that faculties experience differences based on the utilization of PC and online applications. So therefore

identifying how confident today's university students are in using e-commerce applications for educational purposes cannot be undermined due to the robustness of the present educational institution.

1.1 The Problem

Since the foundation of internet networks (web), the Internet has become as a strong, useful and efficient research means and an easy way of information broadcasting. With middle of 1990s, a lot of instructors, lecturers and professors started to contact with their students and colleagues by e-mail. They also included materials and subjects collected from internet into their course materials (Jagboro, 2007)

With the beginning of 21st century, internet has become a main learning component by instructors and administration staff. Private universities and institutes in general wait the development of wide commercial internet networks to start a revolution in the education and create an important source of income (Gulbahar, 2008).

Even the economic problems during early 2000's affected the online education industry and many electronic learning activities stopped definitively, International Data Corporation (IDC) explained 33% growth in the United States (US) electronic learning market with about $12 billion between 1999 and 2004. Every year US spends around $600 billion on educational activities. This put the education in the second class after health care sector as the largest industry. Web based and online education is one of the fastest developing trends in higher education. In 2000, about three quarters of the 4,000 US colleges and universities presented online courses. The percentage was about 48% in the year 1998, according to Market Retrieval Service (Howard, Schenk and Discenza, 2004).

With an increasing prominence on an information based global marketing, higher education sector was considered as more and more vital for the population of the world. Those supporters of e-education claim that its unlimited nature geographically offers a professional and low cost medium for providing education to anyone with internet access. They view e-learning as a strong alternative to conventional teacher to student method of education and hail it as the great democratize of higher education. On the other side, critics warned that an

increasing motivation to electronic subject and education brings increasing questions that has to do with knowledge content rights, academic freedom, and the major vision of higher education. It is actually said that online education opens ways to They claimed that cyber-education exposed to eradicate the request of issue for human teachers and to convert higher education to “Webucation” (Natriello, 2005).

The effect of internet has been felt in different fields of higher education. Communications and research activities have become very easy. Portal companies and courseware that provide university services to students and faculties were spawned by internet. With the emergence of fully online schools offering all kind of certificates, it has become the school itself (Pittinsky, 2003). By 2002, over two million students were expected to enroll in online courses. After this number were about 710000 in the year 1998, the department of education statistics in the United States survey shows that half of the college students was made up of 25 years old adults and above, this set of students majorly can gain from the fluctuating and availability of online higher education courses.

Because competition directs universities into shifting to user interface applications is important to keep students and other working professionals who interest in their organization or program. Because level of computer experience of students may be different and students who have lower experience does not feel confident enough to use digital campus opportunities.

Schools which accepts this change and prefers to modify their strategy, areas of reasoning and strategies to attract the internet undergraduates and the recurring qualified faced with success. The approach which the complete and service focused model is designed determines whether institutions is successful or not in the new circumstances. On the other hand, prospect students must adopt this new internet opportunity e-commerce and its application in the educational sector, it is paramount to see and study how age, gender, faculty affects its usage in higher education (Abedalaziz et al., 2013; Suri et al., 2014).

1.2 The Aim of the Study

This study intended to highlight the extent of the usage of e-commerce by students who study in North Cyprus universities. Moreover, this research proved that online use for educational and academic reasons is indispensable and can be directly affected their academic progress. The research is also interested in the amount electronic commerce in universities and educational institutes are moving to offer their services in the internet environment. Most commonly used and least used e-commerce applications were intended be identified.

1.3 Research Questions

1. What are the university students' use on e-commerce applications in higher education?
2. Is there gender based difference among university students' use on e-commerce applications in higher education?
3. Is there age based difference among university students' use on e-commerce applications in higher education?
4. Is there faculty based difference among university students' use on e-commerce applications in higher education?
5. Is there any relation between students' confidence in using e-commerce applications in general and using in education related e-commerce applications in higher education?

1.4 The Significance of the Study

Just as IT has entered into most part of educational materials, e-commerce which is an important component of IT has become the one of the most important part of institutional operations at Higher Education. Bring of IT and e-commerce has created more flexible business operations, which covers course delivery with e-Learning (Chnapko, 2002; Djoleto, 2008a; Djoleto; 2008b), like distance education and Course Management Systems (CMS), electronic admissions and electronic registration. This fast and effective development in IT puts very increased growth in CMS is needed for adequate and improved distance learning which is a unit of e-commerce. The need for software and fresh skilled software developers for

HEI improves the demand for e-commerce solutions (Djoleto, 2009; Gil-Garcia & Pardo, 2006; Olsen, 2000 & 2002). Considering the level of HEI and many institutions which are yet to accept e-commerce happens to remain efficient in competing with other institutions around the world market. A lot of HEI made investments on e-commerce and they are basically and tactically using online course of study and e-commerce depending mainly of educational duties or activities to bring students for admission and thereby develop students educational performance towards giving good education and putting the students tactically above other universities or educational institutions competing to have them in their schools (Djoleto-Okunbor, 2009; Armstrong, 2002).

This study spotted the light on examining the attitudes of university students who use these websites for academic purposes among North Cyprus universities. Because it is one of its own kind studies, it will be as a reference for online business producers to take into account the future problems of electronic commerce and strike for change and development in North Cyprus. The e-commerce application in higher education institutions are crucial for the robust functioning of these institutions. Therefore it is essential to identify to what extent business to customer e-commerce applications are available to university students, North Cyprus has become a sure destination for educational pursuit for over 60,000 students from 120 countries of the world, according to the higher educational council (YÖDAK) in 2014, investigating the use of e-commerce is essential, it can be adopted by universities in North Cyprus for an effective and efficient service delivery to the students.

1.5 E-Commerce in Higher educational Institutions

Electronic commerce in this study is the use of devices to share information and also render services to the students like payment of fees or electronic transfer of materials, completing course registration, checking of results and accessing of course materials which may bring quality delivery of services to the students in the institution.

E-commerce otherwise known as e-trade is basically the utilization of information or data which are capable of being shared or data exchanging facilities or devices just for trade and commerce (Kemal 1998, p. 850). As per the WTO definition of e-commerce is seen to mean

the making, delivery and “e-business” is comprehended to mean the creation, dissemination, sponsoring sales and carrying of goods and services by , sale or conveyance of products and services by automated way (WTO, 1998). The AGB actually pointed e-commerce more extensively as encompassing every interested trade including transfer of information or data, goods, services or payment by means of using automated device. It entails using electronic information as a way of marketing through which goods and services of the uniqueness of electronic standard for planning, publicizing, listing, obtaining and carrying” (Monterio, 2001). E-commerce significantly decreases the financial separation amongst producers and purchasers by wiping out the parts of conventional retailers, wholesalers, and sometimes merchants. The customers gain from enhanced information, lower exchange expenses, and in this manner lower costs. They also gain bigger decisions like customized items and instant conveyance for impalpable administrations and items in computerized structure. For dealers, e-trade present numerous favorable circumstances e.g., access to the worldwide commercial center without stress. Stock framework can be overseen all the more productively, with extensive work cost investment funds, and so on. Be that as it may, the same manner it brings a new business opening which will also bring about competing in the marketing system. E-commerce is an IT motivated strategy which brings speed to the Internet method of trading. The quickest developing technology seen by man is the change in IT. In comparing the fast growing IT with other technology like electricity which was previously introduced in 1873 and it takes 46 years for it to be out in use, the use of phone was introduced in 1876 it took 35 years in order for the masses to use, TV came up in 1926 and uses 26 years to be fully accepted and use while computer was introduced in 1976 and with 16 years it was fully accepted and used by individuals, the use of cell phone came up in 1983 and took 13 years for massive use while web only took for years to be used by the masses as it at when it was introduced in 1994 indicating the fastest technology accepted and used by the masses. This research considers the use of the business-to-consumer model for academic institutions particularly universities in a way that it is the conveyer of the web portal online e-commerce services which students could carry out most basic business functions.

1.6 The Limitations of the Study

- The temporal scope of this study will be initial ly in the academic semester Fall-Spring 2015-2016.
- Questionnaire was restricted to only 6 purposefully selected universities where half of these are private and the other half are state universities in North. These universities are Near East University (NEU), Cyprus International University (CIU), Eastern Mediterranean University (EMU), Lefke European University (LEU), Middle East Technical University (METU) and Girne American University (GAU).
- Questionnaire was used to collect data.
- Non-random convenience sampling technique (data collection from population members who are conveniently available to ease of access in study) was used to select sample and this includes 1132 students from 6 Universities in Turkish Republic of North Cyprus which are: Cyprus International University, Eastern Mediterranean University, Near East University, Girne American University, Lefke European University and Middle East Technical University.

1.7 Overview of the Thesis

Chapter 1 gives general explanations about e-commerce and the problem description, the importance of the study, the search for of such a research, the limitations of this system and most important problems of this research.

Chapter 2 presents previously related researches and study works.

Chapter 3 introduces the theoretical framework whereby various aspects of e-commerce systems were discussed.

Chapter 4 explains the research methodology of this work and which research methodology was used, research parameters, the members of the study, information collection and data analysis.

Chapter 5 presents the results and discussions of the study.

Chapter 6 talks about termination and conclusion of the research, suggestions of the thesis author in addition to the recommendations for possible future researches.

CHAPTER 2
LITERATURE REVIEW

2.1 E-Commerce Applications in Higher Educational Institution

Electronic commerce simply consists of buying and selling over an electronic system such as the internet, the product and services are conducted over the internet. According to (WTO, 2005) e-commerce was defined by the world trade organization as the method of producing a product, circulating and selling of the products and rendering services electronically. The definition of e-commerce has gone through an evolution over the past 30 years, in the 1970's electronic commerce originally meant the expedition of commercial transactions that involves trade organizations and individuals that is concerned with the processing and transfer of digital data over an internet enabled network. The use of e-commerce in education become a trend in the early 1990's, a study and publication by Norris and Olson (1999). Predicted that in next few years that the emergence of e-commerce application will cause a drastic change and bring about a transformation in how universities and colleges conduct their business activities, they further suggested that it will bring about reduction in expenses, increase service delivery and customer satisfaction and out-sourcing of non-core businesses. Burrell (2002) described the success experienced by Plymouth state college with the design of a web portal that took care of student's online services and how the college effectively and efficiently runs its college with a vendor-developed infrastructure. The e-commerce processes in higher institution today includes selling publication, payment of fees, payment of alumni dues, supplying advice and information, sales of tickets for concerts, printing and photocopying charges. These systems are usually run by web staff, finance department, academic departments are also involved. In recent times the impact of gender, age, type of faculty, and the confidence of higher educational student use towards the use of e-commerce has become an integral part of the process, (Abedalaziz et al., 2013; Suri et al., 2014) has investigated this demographic factors on the use of e-commerce in higher education. There have been trends also in investigating the relationship between the confidence of students in higher education towards the general use of e-commerce and their readiness and e-commerce applications. Over the years the confidence of students in the use of e-commerce has drawn attraction from university administrators,

some problems identified by students in the use of e-commerce applications in higher education are: concerns about organizational refund policy, concerns about safety of payment, no enough product information provided, concerns about scams, concern about privacy etc. the serious improvement and student new experiences in recent times has changed students use of the use of e-commerce. Some other opportunities as pointed out by Norris (1999) are, by electronic commerce, for university teaching and administration, which includes distributed learning system, new options of payment, new course materials, academic tools for support, administrative support, and new forms of publishing. Author also pointed that e-commerce initiatives for colleges and universities are suggested.

In 2000, Green reported on his Questionnaire that IT implementations at higher education institutes gives importance generally to getting of computer components and software used in its application and then to transform IT and telephone communication facility aspects of the university like offices, residence halls, classrooms and calling ability in all departments and faculties, staff and students based on e-commerce services.

In 2000, Green reported on his Questionnaire that IT implementations at higher education institutes gives importance generally to acquisitions of computer hardware and software, also to the development of IT and telecommunication service units of the university like offices, residence halls, classrooms and campus dial-up capacities for faculty, staff and students based on e-commerce services.

In 2000, Katz and Oblinger published a book which addresses themes relevant to information technology's influence on higher education. The book explores how the digital revolution affected higher education and how higher education can be the part of anticipated changes in ways that strengthen the best of what universities have accrued over time. Also, authors explained emergence of electronic and network based services blocked new channels through the traditional systems of education and explored which ways of higher education must change and how fast it has to happen.

In 2000, Volery and Lord pointed that internet is the most important technological advancement to reshape society and universities worldwide. So universities have to capitalize

on the internet for teaching by developing an option for online delivery methods. The paper also explains that findings of a Questionnaire which provided information pertaining to student which registered for an online management course of study at an Australian university. Authors explained that the research shows three most important ways of succeeding in online delivery based on innovation, the teacher and students who has already gotten idea on the use of technology. In 2004, Slaughter and Rhoades revealed that insistent commitment of US higher education centers in the knowledge based economy. They analyzed and expected the works of universities to grow in market, and sell research products.

In 2006, Green pointed again that 51.2% of college classrooms uses a network that is wireless during that year and it was 42.7% in 2005 which varied with that of 2004 having 31.1%. And the campuses that join the Green's research in 2006 were more that 68.8% of campuses which suggested that they have arrangement to introduce wireless by fall 2006.

Guodong pointed in 2007 that, with globalization and revolutions of information, digital campus became important form which pushes universities forward. The research discusses the complicated relationship among digital campus, academic culture, knowledge organization and model of IT use from many aspects. Also analyses of factors which probably effects the construction of digital campus. Results revealed that academic culture; organization administration and application model is an important factor which determines the effect of digital campus. Also the paper brought some suggestions about the digital campus strategy.

Jiang and friends published a paper in 2007 which aims to create a new generation digital campus (NGDC) for higher education information system in the information integration stage now. The system analyses the needs to bring out the idea of the NGDC. The system approach also describes the specialty, aim and construction about creation of the NGDC. The system programs the aim and included contents for next stage of informational revolution of Tsinghua University. Authors worked for past two years to create top layer design, process analysis, information resource planning, etc. On the other hand, the study also explained opinions about these NGDC and points out the growth way of digital campus in the information integration stage.

In 2009 Russel took time to summarize the methodology which connects the processes depending on different university teaching technique, the final types of teaching duties and teaching technologies is made used of profoundly or in an effective manner depending on the stipulations of the institutional methods of the universities. Researcher pointed out that systematic development of university's teaching and learning technique needs well fashioned or formed arranged differences between duties which have been coordinated differently in university campuses. Inadequacies in managing, proffers strategies of coordinating learning and teaching which will build themselves as help to staff and teachers who look to increase their own duties locally. The proposed methodologies give crucial ways for revealing the total advantage of new ways of teaching technologically in other university campuses. Chang and friends published a study in 2013 which proposed an innovative or different analytic level model for helping administrators to explain the precarious danger issues affecting the initiation of digital campus system and study the danger of introducing a digital campus system. In the serious dangerous factors and probable ways of danger grades increased, reduced minimum and none were studied by utilizing fuzzy preferences relations. The associated different weights are received at the same time with fundamental weighting method. Doubling the important of dangerous ways, the likelihood of dangerous grades and associated priority weights of destroying, the collection danger degree of applying an electronic campus system.

Seeman and O'Hara carried out a research which really looks at client relationship management in HEI system which shows that the advantages of using client relationship management in HEI has to do with majorly student focus, improvement in terms of how to manage the customers information and the process in takes in managing the information, it increases the student loyalty, keeps the students in the system and also give the students satisfaction in services rendered.

In 2013, Dennis pointed that academic management and administrative processes related with technology directly in business offices, virtual laboratories, digital libraries, and etc. This addressed the subject with perspective appropriate to managers. An important concept which covered in the book is that the new advantages in information technology provided a significant change in social institutions, which will provide better and easier access to

knowledge and education.

2.2 Faculty/Department Specific Differences in E-Commerce Applications

As per Nielsen worldwide overview in 2014, he found out that age between (21-34) is majorly needed demographic for marketing in any company for trade and e-commerce which thereby make it essential for e-commerce. This age section has experienced childhood in the advanced period, so this shocks no one. Be that as it may, the result contains 55% respondents that plan to buy things online again in each item in this study, more established eras speak to a sizeable 40% offer, as well. Of course, the more seasoned the age level that is when their interest in internet shopping begins to go down. Comprehensively, Generation X (age 35-49) respondents contain around 28% of those eager to make a buy online and Baby Boomers (age 50-64) make up around 10%. The Silent Generation (age 65+) contributes approximately 2%. The most youthful age bunch, Generation Z (under age 20), speaks to around 7% of the individuals who mean to buy on the web. Strangely, the blend of age gatherings is predictable when you take a gander at the buy conduct for each class in the study. While general buy expectation rates are higher and lower in some classification, the generational blend is generally the same paying little mind to the classification. This proposes once an online customer, dependably an online customer. For instance, Millennials make up a higher-than normal rate of respondents willing to purchase basic needs online (56%), however Generation X still includes 26% and Baby Boomers make up 9%, which is not a long way from the worldwide midpoints for these age portions over all classifications. "While the generational blend of online customers as of now skew more youthful, regard for the requirements of all sections ought to be considered when creating effort arranges," said Burbank. "Tomorrow's most noteworthy buy power customers are ones who skew much higher for computerized shopping. As the populace ages, more noteworthy rates of shoppers will be associated and online noticeable quality will keep on growing. Building trust at the onset is the establishment for supporting lifetime faithfulness in clients to management relationship.

According to a documentation it is seen that our attribute towards internet use is more influenced by some perceptions or views towards computers than internet (Yang and Lester,

2003), in this way it may be that assessing the computer was a way of life by comparing it in terms of gender is a major way of classifying internet use in our generation today. It is a known fact that the use of computer from childhood till old age it is the males that uses computer the most and it brings more positive effect than from female (Morahan-Martins, 1998). According to a research it has been established that mostly youths and males has more experience in using computer, its applications and they use it meaningful more than the way female use it (Lockheed, 1985; Wilder et al., 1985; Modianos and Hartman, 1990; Morahan-Martin et al., 1992).

The differences in the use of internet by considering gender differs by countries and as stipulated by Singh (2001) countries like USA, Australia the gender of men and women who use internet is in square with degrees. Recently in USA between November/December 2000 it was studies that men made up 58% internet customers while women is 54% (Pew Internet, 2001) and in Australia (November 2000) the adults that uses internet as customers were men which is 53% (Australian Bureau of Statistics: ABS, 2001). Notwithstanding, countries like Japan in July 2000 still align with the fact that male are the higher internet customers with 62% (Nikkei AsiaBixTech, 2000), while in China (January 2000) as reported by (CommerceNet, 2000) men still dominated as internet customers with 80%. Similarly, USA assessment by (CommerceNet/Nelsen, 1997; CyberAtlas, 1996; GVU, 1997; NUA, 1997) it showed males to constitute 66% of customers with the same male making 77% of the total time they go online which signify that males go online frequently and they are more regular online as maybe expected. Mostly studies indicates that in USA gender use of internet revolves around youths and later Current Population Report, Newburger (2001) reported in August 2000 that among every 3 to 17 years old that those that has access to computers at home has males to be 65.0% and females 64.8% while those who use internet at home constitutes the percentage of males at 30.2% and females 30.6% and in assessing the adults to see how it varies males dominated with 56.8% and females 54.1% of those who has access to computer at home meanwhile for those with access to internet at home Among adults 18 years and more than, 56.8% of males and 54.1% of females had PC access at home comprises of 38.5 % male and 36.2% females this slight differences between males and females is a straight

result of the impact of the speed on how social media spreads to the web among American youths (Miller et al., 2001).

The utilization of internet and reasons behind its use is shown in gender allotment which according to (Jackson et al., 2001) the use of email is found to be dominated by female while the males surf the web than females and women only use internet to keep them busy while men use it purposely to get relevant information.

Odell et al. (2000) also reported that the major area that female focuses is for emailing and for school research compared to the males which their focus is for explore, buy, look the news, play beguilements, and listen to or download music. Weiser's (2000) finding shows that males use their internet for entertainment while female use it for informative findings which contrast with the findings of (Jackson et al., 2001 and Odell et al., 2000). Additionally Singh (2001) research indicates that women majorly use internet as a tool for email and communication which corresponds with the findings of (Jackson et al., 2001 and Odell et al., 2000) rather than play or as a development to be aced.

The male transcendence in the exploit of the Internet can be associated with the way that men may use PCs dynamically and have more uplifting airs toward PCs and, in this way, the Internet (Morahan-Martin, 1998; Sherman et al., 2000). Men watch that getting some answers concerning PCs is all the more captivating and more worth putting vitality in than do women. Men similarly surmise that its more pleasant to comprehend how PCs work and to get some answers concerning equipment and programming (Qureshi and Hoppel, 1995). Moreover, it is shown by studies that women do not have more interest and trust in their computers than men (Krendl et al., 1989; Teo and Lim, 2000), and the males feel more relax without doubt in terms of computer development than females (Comber et al., 1997; Fletcher-Flinn and Suddendorf, 1996).

As showed by Singh (2001), the main reason for female weakness with development is because of maleness of development. Advancement has shown those things connected with masculinity: it is viable, remote, unlimited, uncouth, and investigative and high cost (Faulkner and Arnold, 1985,). It has been noted also that development is shown as a good activity for

males. Additionally, considering with science development the main language of development has to do with masculine (Wajcman, 1991). Also, the progression of the computer takes after the speculations in advancement in that the olden day's systems were made by male, electronic and computer masters for other male experts or engineers (Hadden, 1999). Without a doubt, also in the business segment for delineating and making computer components, women's involvement in building and manufacturing is for the most part low (Webster, 1999). In this way, the consequent 'masculinization of PC development' (Hesse-Biber and Gilbert, 1994) may make some people to see the Internet as specifically made for the males or meant for the males (Morahan-Martin, 1998).

The earliest days customers of the internet were majorly men which they have been the critical force in embellishment Internet society (Rheingold, 1993; Turkle, 1995). As showed by Morahan-Martin (1998), the specific standards essential Internet correspondence, was made by these early customers which are males. In a substance examination of netiquette principles, Herring (1996) saw that netiquette bears bursting, which insinuates uncensored debilitating vibe on the web.

For internet shopping in particular research shows that clients go online first to find out the price and information regarding the product they intent to buy before making up their mind to buy (Yang and Lester, 2002). Differentiated and non-clients, Internet clients has shown to be fast and has not though about the risk involved and all they do is search for solace, different items and more divergent to be brand and cost perceptive than non-clients (Donthu and Garcia, 1999). The reinforcement of clients identity accepting sections in web shopping is a very important theory as indicated by various studies, for example, in a study of data set for 12 countries with regards to site quality, trust and being positive towards the site were the most important factors considered in expecting customers buying options and reliability of visitors to the web page (Lynch et al., 2001). This finding corresponds with other studies which indicated that the importance of mental components in choosing customers behavior online and differentiating from the internet are feelings, slants and perspectives furthermore behavioral characteristics (Bettman et al., 1998), mental points of view (Oliver et al., 1997),

the a portion of relying solely online (Jupiter, 2000; Choi et al., 1997) and the fun or pleasure and interest experience obtain online (Korgaonkar and Wolin, 1999).

The hugeness of mental components in online shopping have been enacted by several researches (Yang and Lester, 2002a, 2003c; Yang et al., 2003). For instance remembering some things that has to do with money and disillusionment with down sales in bookshop of the school were seen to be linked with buying of materials online (Yang et al., 2003), and taking over the top and impact mindsets regarding money and good impact with feeling and scholarly manners toward charge cards were seen to be linked with trading of stock online (Yang and Lester, 2003). Now that a good gender difference has been shown in terms of the use of internet, it is pertinent that continuous examination of gender contrast in buying or purchasing of stuffs online although researchers had already pointed out that there is not contras but Donthu and Garcia (1999) reported that gender overview point out any aspect dominance in the Internet shopping. Regardless of what a previous research has shown, gender orientation contrast in online purchases. For instance, females getting books online was linked with strain about computer while that of male getting books on internet was linked with having PC/Internet aptitudes (Yang and Lester, 2003).

2.3 Relationship between Confidence/Readiness and E-Commerce Applications

Existing writing uncovers a critical surge in the interest in Electronic Commerce (ecommerce) arrangements at Higher Educational Institutions worldwide. Be that as it may, there is next to zero examination concerning triumphs and disappointments and numerous HEI are keen on accomplishing a reasonable knowledge of the gains made in their businesses or investment (Djoleto, 2008). The HEI have utilized different methods of e-commerce to be specific e-Procurement, e-Registration, e-learning, e-administrator, e-Payment etc. A report by United Nations Conference on Trade and Development (2004) distinguished that the present use of e-commerce for internet advanced education business sector is remains little, divided and is greatly settled in creating nations where a solid instruction, focused business sector and ICT base are set up than in creating nations.

Chnapko (2002) cited Cisco Systems CEO, areas which e-learning will act as one of the that "eLearning will serve as one of greatest equalizers is that it will improve the way we work daily, live our lifes, play and also the way we learn. Chnapko went further to express that the reason we have not achieved great about e-learning is because there is little doubt if actually the e-learning has created itself as power to be seen as a pivot within advanced education. The emergence of e-commerce has brought about an increase and flexibility in how the business is handle and controlled by HEI which has to do with course conveyance, regarding eLearning (Chnapko, 2002, Djoleto, 2008a, Djoleto, 2008b), and in addition far off teaching and Course Management Systems (CMS), eAdmissions and eRegistration.

In HEI, clients are students and along these lines, students' fulfillment measures significance and reasonableness of the academic work at the beginning (Armstrong, 2002). Students' fulfillment may depend on upon their devotion establishment opposite their longing to go to that organization. This may likewise be affected by the way that the students trust that when they graduate, they will get valuable work (Goral, 2003; Rivard, 2002).

Rivard (2002) suggests that University operational work are generally expected to enhance students' admission, the form registration and the stream of students through the foundation Reputation is amazingly crucial to HEI establishments and it is diversely delineated by the way of institutional base, if it is scholarly undertakings, understudy issues or authoritative issues (Rivard, 2002). Understudies' fulfillment might be somewhat credited to notoriety of the foundation and the reception of fitting e-Commerce arrangements may add to this notoriety (Rivard, 2002).

CHAPTER 3
CONCEPTUAL FRAMEWORK

According to Klopot (2013), in her research, she said according to the Financial Times that United Kingdom leads the rest of the world in e-commerce, she argued that the digital economy of UK is growing at 10% per annum and there are no signs of any slowdown in its growth, students has found the use of e-commerce to be convenient, easy and intuitive, it has become more easier than ever to find what you need and be able to buy it on the internet. So also the expectation of consumers (students) has increase more than ever, as you can receive your order in a couple of hours and return it without necessarily need to explain to them the reason of refund and refunds are made within 48 hours. Some of the services rendered now with the use of e-commerce are completion of university admission application form, for placing order for transcript, check results and grades, search directory online for faculty members and higher educational services, check academic catalog online, appraise educational performance online, buy and borrow text books online, paying of tuition fees, make reservations for accommodation, check financial status, get a parking permit etc. e-commerce has made services much more accessible with no down time.

During the 50s and 60s of the 20th century, scientific researches started to be based mainly on computers in universities and research centers. Computer technologies became very well known for administrative goals. Universities and research centers built huge computer centers with very costly and efficient machines to provide their various services to different sciences. However, it was not until the revolution in the production of personal computers in the 80's of the century where individual computers were provided to faculties of departments and the use of PC's became very familiar. Since then, computers became extensively integrated into human sciences and art teaching.

The invention of Internet has created an explosion in the amount and types of information available in all fields of life and science. Computer and Internet became used to even remote small campuses. Library works in universities particularly early benefits from the possibilities offered by technology of Internet. The thing that allowed the automation of all steps involved

in the acquirement and building catalog of library materials. Electronic catalogs offered the capability to search different universities resources online easily.

Courses delivered by web created a new expansion in distance learning. They sustained an educational style from 19th century, the first time mail based courses offered access to higher education. In the 20th century, new technologies were introduced into the distance education. In 1921, the first educational radio station was established, while the first educational TV station was established in 1945.

The expansion in the online education happened in the 1990s due to the explosion in the internet technology. In the beginning, schools using internet as a teaching mean developed their own software for course delivery. Ready products weren't commercially available in that time for use of universities. By the year 2000, different software packages were developed and delivered to the online teaching market. These products allowed instructors to produce their own online courses according to their needs. These applications also were more and more developed to offer an electronic grade delivery and course review options.

Universities and colleges experimented with different types of online education. Some schools hired even resident students to accomplish a portion of their online works. Other schools created consortia of several schools, making their shared courses available through online sites. The first university allowing all of its courses to be offered online was UCLA.

There is no centralized accrediting agency of higher education in the United States. And small portion of the accreditation agencies are accredited by the American department of education DOE or the council of higher education accreditation CHEA. The distance education program was allowed officially by the department of education by the year 2000. This program was established to find the methods to adapt financial aid requirements to accommodate online education and students. A special two year assessment of 15 schools was established to find out whether e-learning programs are qualified for aid. Related statistics on the student retention and achievement rates were not ready by the end of the 2001. However, they were guessed to be lower than those of traditional education.

The style in school organization is the use of information technologies to produce an endorsement in competitiveness. Different universities began to adapt the Radio Frequency Identification (RFID) systems to digitize school data. This way, the time and area of the university expanded to offer the essential information transmission for the different services of the campus. Such automated campus can afford updated support for the education in a school, for research activities, administrative processes, activities of the students, and managerial effectiveness. Many researchers believe that the RFID technology is a master technology in the actual century due to its potential to improve the quality and value in education in addition to increasing the effectiveness (Chao, Yang and Jen, 2007).

The RFID technology started to be subject of attention in different areas of researches based on the technology itself. It is useful for libraries as it finds time saving procedure management (Howard and Anderson, 2006). The RFID technology is also used for monitoring and automating, with advantage of well-situated operation (Ribeiro et al., 2009).

It is widely implemented for management of supply, library quality tracking, university safety, biomedical technologies, vehicle routing actions of RFID including school linked systems, supervision and inspection of campus assets, personality of attendance supervision and supervision of students' presence, it also includes dormitory access control, laboratory access supervision, control of vehicles and buildings gates, control of library actions like materials borrowing, materials returning, and shelves arrangement, electronic wallet for the staff and learners in the restaurants and shops, printing, copying, and for the use of all other university grounds needs (Ferrer, Dew and Apte, 2010). RFID is a fully powerful automatic system; it can function with the least human resources. It has the ability to access different data at the same moment. The use of RFID system ameliorate speed and effectiveness of handling, it also reduce the faults and man power requirements. It economizes in time and efforts. Additionally, such a system facilitates competitiveness, integration value and strategic analysis by reducing the data labeling requirements and data management efforts. The main disadvantages of RFID systems reside in raising the worries about human rights, autonomy, safety of data, and health effects of electromagnetic radiations. As a safety measure, a simple system of priorities and risk assessment is needed prior the implementation of RFID systems. This measure helps

managing strategies and introducing references and basis successfully (Barlow, 2009).

3.1 E-Commerce

E-commerce, customarily formed as e-exchange or e-trade, is the commerce or aid of commerce things or associations using computer technologies, for instance, the Internet. Electronic business brings on development, for instance, adaptable exchange, electronic resources trade, creation system organization, Internet showcasing, online trade get ready, electronic data trade, stock organization structures, and computerized data gathering systems.

3.1.1 The Timeline of E-Commerce

A timetable for the change of electronic commerce:

- 1971-1972: The ARPANET is employed to coordinate a cannabis bargain between university students of Stanford Laboratory and the MIT Institute of Technology, which was later shown as the the major advert of e-business in John Markoff's book What the Dormouse Said (Power, 2013).

- 1979: Michael Aldrich demonstrates the key web shopping structure (Tkacz and Adrian, 2009).• 1981: Thomson Holidays UK is first business-to-business internet shopping framework to be introduced (Palmer, 1988).

- 1982: Minitel was presented across the nation in France by France Télécomand utilized for web requesting.

- 1983: California State Assembly has its initial research presented on “electronic exchange” in Volcano, California. Confirming are CPUC, MCI Mail, Prodigy, CompuServe, Volcano Telephone, and Pacific Telesis. (Not permitted to insist is Quantum Technology, later to twist up AOL)

- 1984: Gateshead SIS/Tesco is first B2C web shopping structure and Mrs Snowball, 72, is the main online home client (Aldrich, 2012).

- 1984: In April 1984, CompuServe dispatches the Electronic Mall in the USA and Canada. It is the foremost broad electronic business organization (Berners-Lee, 2012).

- 1990: Tim Berners-Lee creates the fundamental web program, World Wide Web, using a NeXT PC.

- 1993: Paget Press releases form No. 3 of the central application store, The Electronic AppWrapper.

- 1994: Netscape issued the navigation software in October under the commercial name Mozilla. Netscape 1.0 was initiated during the year 1994 with SSL encryption that made trades more safe and secure.

- 1994: Ipswitch IMail Server transforms into the primary programming open online accessible to be acquired and incite download by method for a relationship between Ipswitch, Inc. besides.

- 1994: "Ten Summoner's Tales" by Sting improves into a major safe online buying of goods through NetMarket.

- 1995: The US National Science Foundation lifts its past strict limitation of business undertaking on the Internet (Kevin, 2005).

- 1995: Thursday 27 April 1995, the purchase of a manuscript by Paul Stanfield, he was the Product Manager for CompuServe UK, from W H Smith's shop inside CompuServe's UK Shopping Center is the UK's first national web shopping organization secure trade. The shopping organization at dispatch highlighted W H Smith, Tesco, Virgin Megastores/Our Price, Great Universal Stores (GUS), Interflora, Dixons Retail, Past Times, PC World (retailer) and technology.

- 1995: Jeff Bezos dispatches Amazon.com and the important business free 24-hour, web simply radio stations, Radio HK and NetRadio start TV. eBay is built up by PC programming engineer Pierre Omidyar as AuctionWeb.

- 1996: IndiaMART B2B business focus set up in India.
- 1996: ECPlaza B2B business focus set up in Korea.
- 1998: Electronic postal stamps can be procured and downloaded for printing from the Web.
- 1999: Alibaba Group is set up in China. Business.com sold out at US $7.5 million to electronic organizations which was procured in 1997 for US $149,000. The mutual file sharing programming Napster launches. ATG Stores dispatches to offer lovely things for the home on the web.
- 2000: The site gain recognition all around the world.
- 2001: Alibaba.com gains from e-business in December 2001.
- 2002: eBay secures PayPal for $1.5 billion. Corner retail companiesWayfair and NetShops are built up with offering things through a couple concentrated on spaces, rather than a particular place.
- 2003: Amazon.com posts first yearly advantage.
- 2003: Bossgoo B2B business focus started in China.
- 2004: DHgate.com, becomes China's number one online b2b trade stage, is set up, convincing other b2b districts to migrate far away from the "professional income" model (Wang, 2011).
- 2007: Business.com bought by R.H. Donnelley for $345 million (Donnelley, 2011).
- 2009: Zappos.com acquired by Amazon.com for $928 million. Retail Convergence, that manages private site RueLaLa.com, was later bought by GSI Commerce at the rate of $180 million, or more up to $170 million in get out portions in light of execution through 2012.

- 2010: Groupon as far as anyone knows rejects a $6 billion offer from Google. Or maybe, the social affair buying destinations continued with an IPO on 4 November 2011. It was the biggest IPO after Google.

- 2011: Quidsi.com, also known as watchman association of Diapers.com, picked up by Amazon.com for $500 million in exchange expansion to $45 million out commitment and distinctive duties. GSI Commerce, an association speak to significant power in making, making and running web shopping regions for piece and mortar associations, picked up by eBay at the rate of $2.4 billion.

- In 2014: Overstock.com shapes over $1 million in Bitcoin bargains. India's e-business industry is assessed to have grown more than 30% from 2012 to $12.6 billion in 2013. US e-trade and Online Retail bargains foreseen to reach $294 billion, a development of 12 percent more than 2013 and 9% of all retail bargains. Alibaba Group has the greatest Initial open offering ever,worth $25 billion.

- 2015: Amazon.com speaks to more than half of all e-business improvement, offering practically 500 Million SKU's in the US.

3.1.2 Impact of E-Commerce on Markets and Retailers

Budgetary specialists have guessed that e-business should incite strengthened cost rivalry, as it constructs purchasers' capacity to hoard data about things and costs. Research by four fiscal masters at the University of Chicago has found that the change of web shopping has additionally affected industry structure in two regions that have seen the preeminent progression in e-trade, bookshops and travel work environments. For the most part, more prominent firms can utilize economies of scale and offer lower costs. The single rejection to this case has been the amazingly most modest game plan of the book shop, shops with some spot around one and four authorities, which seem to have withstood the illustration. Subordinate upon the class, e-business may move the exchanging costs—procedural, social, and budgetary—experienced by clients (Khosrow-Pour, 2008).

Persons or business need in e-commerce whether consumers or transporters rely on an Internet-based development recollecting the last goal to fulfill their trades. E-trade is seen for its capability to allow business to go on and to packaging exchange at whatever time and wherever. Whether a person is in the country or outside, a business can be directed through the internet. The power of e-commerce gifts geophysical breaking points to vanish, making all buyers and relationship on earth possible consumers and dealers. Along these lines, exchanging cutoff points and exchanging expenses may move. E-Bay is a bearable example of e-trade operators and affiliations can post their things and offer them around the world (O'Brien and Marakas, 2011).

In e-business works out, stock system and logistics are two most noteworthy parts ought to be considered. Usually, cross-periphery logistics need a couple of weeks' chance round. Considering this low profitability of the stock system organization, buyer devotion will be colossally decreased (Zhu, 2004). Some researcher communicated that joining e-exchange wellness and IT setup could well enhance association’s general business worth (Leung et al., 2000). Other expert communicated that e-exchange need to think about the founding of stockroom centers in outside countries, to make the high viability of the logistics structure, advance customers' fulfillment, and in addition can upgrade customers' resolve.

3.1.3 Impact of E-Commerce on Supply Chain Management

For quite a while, affiliations had been tormented by the parted between the purposes of interest which store framework headway has and the reactions for go on those good circumstances. Regardless, the change of e-trade has given a more sensible and proficient methodology for going on the upsides of the new creation framework types of progress (OECD, 1999).

E-trade can orchestrate all amongst affiliation and intra-affiliation limits, proposing that the three flows (physical flow, money related flow and data flow) of the stock framework could be in addition affected by e-business. The affections on physical streams redesigned the procedure for thing and stock change level for affiliations. For the data streams, e-trade redesigned the purpose of repression of data dealing with than affiliations used to have, and

for the financial streams, e-business gifts relationship to have more effective segment and settlement courses of action.

Moreover, business contains a more character boggling intensity of result on supply chains: Firstly, the finishing separated will be shed as affiliations can perceive openings between different amounts of supply chains by electronic procedure for arrangements; Secondly, as a consequent result of e-trade rise, new points of confinement such acknowledging ERP structures have helped relationship to direct operations with clients and suppliers. However, these new limits are still not completely manhandled. Thirdly, improvement affiliations would continue contributing on new e-business programming courses of action as they are expecting hypothesis return. Fourthly, e-trade would settle different parts of issues that affiliations may feel hard to acclimate to, for the case, political preventions or cross-country changes. At long last, e-business gives affiliations a more gainful and appropriate approach to managing bunch up with each other inside the store framework (Delia, 2008).

3.1.4 The Social Impact of E-Commerce

At the side of the e-business and its one of a kind demand that has looked bit by bit, virtual venture, virtual bank, system endorsing, web commerce, payment and broadcasting, like these recent terms that are unbelievable and now has become to be as well known to persons. This reflects the e-business has colossal effect on the financial system and culture from the other point of view (OECD, 1999). For example, B2B is a fast emerging business on the earth that costs small expense and encourages the monetary productivity furthermore get beside the improvement of work (Fazlollahi, 2002).

- To see how the e-business has influenced the general public and economy, this article will say three issues beneath:

- The e-business has affected the relative importance of time, yet as the stronghold of indicator of the country economic condition that the significance of time must not be neglicted.

- The e-business presents the purchaser or activity different data that is required, making data into combined honesty, will drive endeavor that can never utilize the method of space or notice to raise their aggressive edge (Schniederjans and Cao, 2002). Also, in principle, immaculate rivalry between the purchaser sway and industry will expand social welfare (Child, 1969).

- Actually, amid the financial movement previously, extensive undertaking habitually has favorable position of data asset, and hence to the detriment of purchasers. These days, the straightforward and constant data secures the privileges of purchasers, on the grounds that the buyers can utilize web to choose the portfolio to the regale of them. The aggressiveness of undertakings will be a great deal more evident than some time recently, thusly, social welfare would be enhanced by the improvement of the e-trade.

The new economical activities directed by the e-trade change the human soul also, nevertheless most likely, is the worker devotion (Qin et al., 2014). Because of the business sector with rivalry, the worker's ability of demonstrating skills changes to the crucial for large business in the specialty market. The events must pay attention to the most powerful way to improve the endeavor internal society and an agreement of smart tool and it is the prime issue for them. Moreover, however the method of e-business diminishes the data expense and exchange cost, be that as it may, its advancement likewise makes person are excessively PC proficient. In subsequently, underlined more humanistic disposition to work is another venture for big works to enhancement. Existence is the foundation of all and high improvement is merely an assistive device to encourage our personal happiness.

The e-trade is not a type of new business, but pretty it is creating another economic model. Most of people concur that the e-trade in reality to be imperative and vast for monetary society after, all things considered that is a handle of staggered mood toward the opening, this issue is precisely reveal the e-business is a kind of ethereal insurgency (Lamersdorf et al., 2005). By and large talking, as a kind of business dynamic technique, the e-trade is going to driving a phenomenal transformation on the planet, the impact of this model far surpassed the business issue itself (Laudon and Traver, 2014). But the specified above, in the range of law,

instruction, society furthermore arrangement, the e-trade will proceed with that ascent in effect. The e-trade is really to take individuals into the data society.

3.2 E-Commerce Applications in Higher Education Institutions

Pretty much as Information Technology (IT) has come to pervade pretty much all of institutional fabrics, e-Commerce/e-Business, a basic part of IT, lately has turned into the pith of everyday institutional operations at Higher Educational Institutions (HEIs). Furthermore, the sending of data innovation and e-Commerce has prompted expanded adaptability in business operations, including course conveyance, as far as e-Learning (Chnapko, 2002, Djoleto, 2008), and additionally inaccessible instruction and Course Management Systems (CMS), e-Admissions and e-Registration. This quick change in data innovation achieved galactic development in CMS required for compelling separation instruction, a segment of e-Commerce. The uplifted requirement for e-Commerce/e-Business arrangements means the popularity for programming such programming models (united/coordinated) designers for HEIs (Djoleto, 2009; Gil-Garcia and Pardo, 2006; Olsen, 2000 and 2002).

With this wave, higher instructive establishments and associations that have not yet grasped e-Business battle to contend in the focused worldwide business sector. Thusly, numerous HEIs have contributed altogether and have deliberately set out on online course offerings and e-Commerce-based scholarly exercises to support understudy enrolment and enhance understudy scholastic execution while giving quality training and setting them deliberately over their rivals (Djoleto-Okunbor, 2009; Armstrong, 2002). Green sets out and writes about his progressing study of IT usage at HEIs concentrating by and large on acquisitions of PC equipment and programming and the advancement of data innovation and telecom administration unit of the association. Case of these regions incorporate workplaces, classrooms, and living arrangement corridors, grounds dial-up limits for workforce, staff and understudies (Green, 2000). As per Green’s (2006) review, 51.2% of school classrooms have remote systems, a jump from 42.7% in 2005 and 31.1% in 2004. More than 68.8% of grounds that took an interest in Green’s yearly study have a vital arrangement to send remote by fall

2006 (Green, 2006). This base gives upgraded environment to the reception of e-Business (Green, 2000).

While E-Commerce arrangements advance client organization connections in industry settings that decipher into consumer loyalty, in advanced education establishments, clients are understudies and along these lines, understudies' fulfillment measures imperativeness and suitability of the scholastic projects at the foundation (Armstrong, 2002; (Devaraj, Fan and Kohli, 2002); Djoleto, 2008). Understudies' fulfillment may rely on upon their dedication to the organization versus their craving to go to that foundation. The electronic talk and texting are getting to be omnipresent applications in advanced education organizations. These two advancements, alongside electronic mail administration and video conferencing structure the bedrock of the e-Conferencing arrangement at foundations and are utilized consistently for struggle resolutions. (Warger, 2003).

The smoothness of information and data points out for imperative guaranteeing that these associations and establishments guarantee consistency, respectability, efficiency and adequacy in the utilization of e-Business arrangements (Djoleto-Okunbor, 2008; Kleiner and Maury, 2002; Kvavik, 2002; Robertson and Sarathy, 2003; Schneider, 2003).

3.2.1 Challenges Faced by University from E-Commerce

Mainstream thinking proposes that the conventional college is under gigantic weight from private partnerships (and some open foundations) that utilization e-business to begin new colleges in the realm of virtual space. Liberated by the requirement for classrooms, libraries, quarters, and football groups, and ready to select and utilize an alien and very focused workforce, these companies (now more than five hundred in number) probably have an upper hand in business sector reach and low overhead. Revenue driven training organizations, for example, the Apollo Group and DeVRY, Inc., concentrate on vocation arranged instruction in quickly developing fields, for example, business, gadgets, connected expressions, and human services. Their enlistments are developing to where they hold about 2 percent of the general piece of the overall industry and they are developing at more than 10 percent yearly (Blustain

et al., 1998). They have right now an anticipated stream of profit, interest for their projects is strong, and they are imaginative in the improvement of educational program and training conveyance that speaks to both understudies and bosses. Different players incorporate corporate colleges, for example, Motorola, GM, and McDonald's, which instruct their own particular workers, and super colleges, for example, the Open University, which benefit well more than 164,000 understudies in more than forty nations. Furthermore, as of late, Michael Saylor declared that he would utilize $100 million of his product benefits to make free online training gave by a great many instructors (New York Times, Mar. 2000).

Mainstream thinking, while frequently convincing, is regularly oversimplified and requires further examination on the off chance that we are to comprehend outer difficulties to the conventional college. All the more definitely, what is it about the customary college that spots it at danger in the e-business environment? Correspondingly, perceiving variables that put the college at danger, how does the college conform to and alleviate these dangers? It ought to be noted from the beginning that e-business is more than the virtual college. The utilization of the program and Internet can be connected as effortlessly to instructive procedures as it can to the facilitating of college managerial and business forms. Puryear and Melnicoff (1999) offer knowledge from the private area. They perceive five substances that influence the aggressiveness of customary organizations in the new business environment. I extend their contentions to the college and add to them.

3.3 E-Commerce and Demographic Factors

The difficulties of gender differences being utilized and point of view toward IT have gotten to be fundamental energy among academic experts. Most studies have uncovered that females has demerits in the utilization of IT working environments separated from their male counterparts. They have uneven acceptance, a low rate of usage among the females and show of negative mentalities toward IT are affirmation. Sherman et al., (2000) states that males utilized the Internet all the more much of the time and had more raising points of view than females. The inclination is seen much however both young women and energetic associates are similarly wonderful and show positive emotions toward the Internet. Jackson, et al., (2001)

reported that females have more PC weight, less PC self-adequacy, and less extraordinary PC points of view.

It is unavoidable to suit business areas individual and budgetary information, for event, a Visa number, telephone number, spot of home, and individual ID number, and so on. As people have encountered the guaranteed associations of various e-trade territories more an extraordinary part of the time than females, they are more OK with and trust the Internet all the more reliably. What's more, female purchasers emphasizd the social bit of shopping (Van Slyke, Comunale, and Belanger (2002). Ladies see a few sorts of shopping as to a more essential degree a social development than do men. In any case, some e-business destinations build up a slant gathering by allowing obliged cooperation among buyers, web shopping still remains a private change. If ladies tend to get advantage from the social parts of standard and logged off shopping, web shopping may be respected less firmly.

In irregularity to most particular revelations, the possible results as of late explore uncovered that clients demonstrated raising demeanors toward the Internet paying little respect to sex (e.g., Luan, Fung and Atan, 2008). The outcomes uncovered no sexual presentation refinement in Internet utilization; the female clients were found to contribute as much essentialness using the Internet as their male associates. Shaw and Gant (2002) reported that no sexual presentation contrasts are recognized in various online exercises. Fram and Grady (1997) found that web shopping plots for men and ladies were relative, regardless of the way that ladies tended to buy more blooms from online shippers and men gained more PC equipment. Likewise, Ono and Zabodny (2003) reported the sexual presentation parted is vanishing as female clients have risen to opportunity to encounter the Internet and get basic association from online exercises; however ladies were in a general sense more abnormal than men to utilize the Internet in the mid-1990s. It is said that sex incongruities in Internet get to and use are vanishing.

Web use besides may have specific case among various age packs. Regardless, distinctive studies suggest that the age crevice in Internet use transmits an impression of being closing after some time, the utilization continues on through that the hole for age, particularly with those more than 50, is not reducing (Dickinson et al., 2006; Kiel, 2005; Nayak et al., 2006). Much research announced that the inevitable result of age get-together errors inside Internet use was an immediate aftereffect of a less get to, furthermore to a nonattendance of nice social affair (Iyer and Eastman, 2006; Nayak et al., 2006; Reisenwitz et al., 2007). More arranged individuals have less opportunity to have entry the Internet and other IT. Thusly, they may not completely welcome the upsides of IT, and consequently, will search for after less e-business determination. On separation, the more youthful people has an improved probability of using the Internet and getting a charge out of shopping on the web. Properly, it is recognized that age sways Internet use, and besides e-trade determination furthermore.

Edifying status may in like way effect Internet use and e-business task. Developing levels of rule appear differently in relation to an improved probability of PC and Internet access. Those with less heading may have less opportunity to get to the Internet, thusly reducing their probability of totally regarding the upsides of IT, and thusly, they may not search for after e-business segment. Along these lines, it is recognized that rule sways Internet use and besides e-business parcel too.

Moreover, level may in like way effect Internet use and e-trade distributing. Amplifying levels of remuneration appear differently in relation to an upgraded probability of having PCs at home and Internet access. Those of a lower budgetary status have fewer assets for get a PC for home use, including Internet access. They may not completely welcome the benefits of IT, and thusly, they will search for after less e-trade choice. Individuals in a more raised measure of pay have the cash related preferences for case home PCs which can get to the Internet, allowing proprietors to recognize web shopping. Thusly, it is typical that remuneration sways Internet use and besides e-trade assignment also.

3.4 Higher Education Institutions and E-Commerce

Various higher education institutes have added e-learning programs into their schedule. Public school systems often shift to e-learning because it offers a cost-effective choice for expansion. They also considered it as a means to accommodate a planned 20% increase in participants by 2008. Generally, online courses are increasingly attracting more students in an era of shrinking traditional education budgets and its role in e-commerce. Public colleges expects e-learning to serve increasing numbers of first time and returning students who does all of the payment of fees via e-commerce. In the year 2000, about 50% of college students were older than 21 years of age. Elite and private schools are also considering the use of e-learning techniques as a cost-effective measure whereby associated fees will be paid via e-commerce. Their first experiments involved mainly online engineering experts and business programs targeted at professionals looking for extra training. Some universities offered non-credit online units to avoid problems of academic reputation. Also, Internet companies, museums, publishers, and universities such as UNext.com collaborated to offer e-learning programs. UNext.com counted Stanford, the University of Chicago, and the London school of Economics among its main contributors. These institutes' faculties developed online courses and delivered lectures through streaming media. However, part time teachers handled the grading and communication with students through e-mail. Some of these institutes provided free academic articles and lectures, in the hope of convincing online visitors to attend associated cyber-courses. Some of them also presented online bookshops. At least one esteemed university, MIT, placed all of its courses online; their classes are publicly accessible, though only those paying to enroll will be granted credit for them. The most controversial participants in the e-education field were for profit, certificate granting institutes existing only online. University of Phoenix had become the most famous and largest private higher education center in America in the year 2000. Another, Jones University, was the first exclusively online university that gained accreditation in 1999. Most of these schools offer standard courses offered by participant instructors. Two main educational field were well served by e-education; these are Corporate and U. S Military training. The education of employee cost American business around $60 billion a year. Online courses suit the time needs of working adult students. These

students have focused discipline approach to education more than ordinary university age students. Therefore, they can manage the less prepared environment of e-education. The American Military employed online education to help retain enlistees. In the year 2000 the Army suggested providing an educational portal that is able to allow duty personnel to pursue their online education from their service location on the expenses of the Military.

Apart from cyber classes, the internet effects have reached even the traditional education, face to face class room education system. Most of campus employees and personals are using e-mail to accomplish all communication processes between teachers and students, feed-back on assignments, arranging meetings, and all other type of communications. Educational software consisted in the beginning of student produced, course adopted web sites, and online lecture notes. However, these delivery platforms were developed in collaboration between elite professors from famous universities and e-education associations. Their online course schedules are licensed from the developer's universities. Some courses offered the possibility to set up chat rooms and course bulletin boards that offer interactive e-learning, post documents, provide links for different materials relevant to the course. Smart class rooms also were introduced to assist the online education and assess students learning. They offer online grading and diagnostic components to follow with student's learning. Audio and visual resources can also be included into the online lectures to support the purpose of course. Real time lecture also can be offered by professors from all over the world.

Observers expect that online versions of the most important general courses that are important for all higher education fields will replace individual written courses. These courses include generally, American history, psychology, calculus, physics, English composition, and other courses producing about half of the offered credits.

College portals also have emerged. They offer the possibility to apply online for many schools. They also allow filling out applications of financial aid, class registration, tuitions payment and many other services. Some portals were exclusively intended for administration elements and instructors. Using these portals, they can track student's enrollment, grades, and activities. They can also submit grades using an online system. In the beginning, a lot of these services

were freely provided for many schools and universities. The only fee is to allow these online service providers to publish advertisements on their websites alongside with the campus information. Cookies also were implemented to track users' habits.

3.5 E-learning as a Driving Force for E-Commerce in Higher Education

E-learning has become a driving force for e-commerce in recent years, hot discussions concerning the efficiency and suitability of e-commerce and internet have risen due to their increasing presence in higher education. Due to the lack of related studies on the subject; there are difficulties for governmental agencies and educators to formulate policy recommendations. Supporters argue that the internet and new technologies facilitate communications between students, faculties, and administration staff and e-commerce activities in the higher institution. Class lectures are supported by including new explanation methods like online graphics, audio materials, video displays, and animated presentations. Furthermore, learners benefit from internet access instantly of their lecture notes, readings, relevant sites, e-books, and many other sources of information online. They also benefits from interactive education between students and teachers, in addition to online assessment tools as all financial and economic activities of this e-learning institution are taken care off by e-commerce vendors which allows financial administrative activities to be properly segmented in such educational institution.

Online learning is flexible and accessible in an extra simple manner. This accessibility appeal to students, especially those adults who has their works and want to pursue additional education. It offers them the flexibility of courses and time, in addition to easy access to all required resources. Studies concerning the use of students about the value of e-learning were carried out. They show that most of them felt more interaction ability with teachers compared with traditional education. The students who were unsettled in traditional class rooms became more interactive and contributed more actively in online deliberations.

Supporters of e-learning consider it as "democratizer" of higher education. Geography can no longer prevent students from studying courses presented by leader universities around the world. it can also help many students who desire to continue their education, but job and family responsibilities prevent them from doing so in the traditional way. Hence, e-learning is

likely to happen at the student's conditions and environment. Internets role extends to cover other goals such as raising the commercialization of higher education. Supporters argue that traditional education centers are financially inefficient, with professors gaining large salaries for little effort in the classroom. They also criticize the wasted expenses in the university buildings and equipment. As they argue that online education offers high quality products customized to suit the desire of consumers. They believe that this education is offered with the minimum investment in labor or physical plants. In 1998, the Governor of the American capital Gary Locke pronounced that online education eventually could replace all public universities.

On the other side of the debate, critics fear that as online education is expanding, the administrative personals gain more control of the performance of faculties and contents of courses. The academic freedom will fall in danger as a result of the expanding control of administrators. They argue also the unproven track records. They believe that students have to be motivated and restricted, the thing which is absent in the e-learning systems due to the lack of supervision. They also claim about the interaction, encouragement, and direct contact those physically actual instructors and colleagues can offer in a class room.

The quality of online education fluctuates widely and course retention rates vary between 20 and 97%. The problem of accreditation for most of programs indicates that many online schools are no more than "degree mills." One of the most important concerns expressed by doubters of e-education is the lack of information about adequate standards of online education. Some responsible committees like AFT (American Federation of Teachers), they proposed the development of quality standards governing the distance education institutes and organizing their work.

As an answer for the argument that internet offer equal opportunities for higher education access, critics mention a college study concerning the "Virtual University and Educational Opportunity". This study claimed that the growing trend toward digital education can exaggerate the fears of unequal opportunities in education. The study indicated that low income students often lack computer skills and Web access. Over more, accredited online

universities mostly charge a little extra fee more than traditional similar universities.

Another issue critics are concerned about is the consequence of e-education on the liberty of education and on the independent of faculty. Also they worried about whether the online instructors own the intellectual property rights to their courses, and if the content of the course or the teaching method can be dictated by online institutes or universities. These concerns are considered very important in judging the online education. Actual official standards concerning fair use exclusions of copyright protection laws for educational purposes can be inefficient in the case of internet education. The licensing measures governing the acquisition and use of online teaching materials are also uncertain.

Last but not the least, the first sale rights of libraries that permit them to lend books and teaching materials to students, may be put in danger. A Questionnaire established by the AFT mentioned earlier showed that half of instructors claimed that they didn't receive any compensation for extra time spent developing their own online courses. 90 percent of the Questionnaire sample revealed that the online course preparation needs more time and effort than traditional courses. This Questionnaire shows that adjunct part timers in particular are facing vulnerable positions. Finally, critics declare that the e-learning trend has been promoted by administrators, course material vendors, and e-learning institutions, without participation of faculties and students. Government personals see a shift to online education as a chance of cost reduction by escalating the coverage of the educational systems.

3.6 E-learning and E-Commerce Worldwide

E-commerce and e-learning has spread all over the world nowadays, especially in the developing countries. The educational infra-structures in these countries are weak and cannot satisfy the demand for education. Such countries have relied on TV or radio distance education for decades. Many of these countries required online education to obtain the prestige of western higher education and at reduced costs which has in its own way led to increase in e-commerce activities. With online education, the western higher education could be brought to these countries citizens at acceptable expenses without the need of special infra structures. Over more, the online education offers the opportunity of being competitive to the less

developed nations in the global market system. This can be acquired by creating highly educated work forces equipped with the latest technologies; the thing that can be presented at low costs with the new online education revolution. Therefore, the demand for continuing education and skill expansion can be likely remain stable.

However, throughout many parts of Asia, Africa, and South America, an important obstacle to the development of online education was the absence of even elementary infrastructures, especially in rural areas. These areas also face lack of computer teachers and experts and even in some cases the lack of computer and internet. From another point of view, the concerns of distance education in the developed countries exist also in the developing countries, such as questions of the quality and efficiency of online education and intellectual property rights. However, extra problems concerning e-learning in the developing countries emerges, especially in the hot online market competition between famous institutes and local small universities. For example, if national universities' programs are successful, the fear of facing international competitors that enters the market. These international competitors can afford more expenses and offer stronger online programs regarding their staff and history in education. Some countries like Argentina and Chile force all online education offered locally come under the supervision of their national accreditation agencies. In India, All foreign universities seeking to offer courses have to register a file in the government. Brazil's education ministry refuses to recognize any degree earned from programs sponsored by foreign institutions. Some Middle East countries still worry about recognizing online obtained degrees even if these degrees are awarded by very famous institutes.

The European Commission adopted a $3.3 billion e-Learning Action Plan to empower online education in European colleges in 2001; the arrangement prompted socializing IT infrastructure, giving instructor advices, and associating all European colleges in a one single system.

The main potential effect of e-learning may be in reality felt in the countries of the developing areas. Their exploding population and lack of skilled workers due to different reasons, these countries suffers a pressing need to enlarge higher education access in a short time with the

minimum expenses. Such a goal can be achieved by recognizing the e-learning and encouraging national institutes to offer online courses. The UNESCO anticipated that exclusive three percent of adults in sub-Saharan Africa and seven percent in Asia got some post-auxiliary instruction, in modern nations this number is around 58% generally speaking and 81% in America, numerous creating nations are trying with local online foundations to be supported predominantly by the World Bank.

3.7 The Future of Cyber Education and E-Commerce

Concerning the cyber education, many basic questions are still without clear answers. Among these questions are: Who has the rights to courseware and other online educational materials? What are the circumstances governing the employment of teachers in an online institute? Are there any limitations on the online education? And if yes, what are these limitations? How governments can control the contents offered online by these institutes? How to protect the privacy and rights in an online system? What guidelines should govern research conducted online? In addition to many other concerns that can be presented by those fearing from the spread of online education. Actually, while the debate about the nature of e-learning is still violently occurring, universities are in rushing developing their own online education infrastructures which will in turn increase electronic commerce all over the globe. Higher education's are modifying its structure for a serious reduction of the number of employee and a down time reduction in time for such activities to be performed.

3.8 Factors Determining Need for Customer Service in Higher Education

When analyzing the student's practice in the superior education entrance procedure, enrollment support, obtaining practical aid to find course materials, three factors are basically moving the classic loom to another one that requires organizations to be inclusively service intellect, these are:

3.8.1. Student Expectations

People are more and more using the Internet to facilitate customer purchases, buying everything from their smart phones to their cars online. Early in 1995, the International Data

Corporation (IDC) revealed that a minor percentage of the world population was using the Internet; however in 2013, that number has jumped from 0.4% up to 38.8% percent of the world population, this explosion of access has created a marketplace that made $289 billion in online purchases in 2012.

Students imagine shifting from searching online their interests to enroll their preferred degree online the same way they can buy something from an online market. They search blogs, social media and other sources of information asking about everything related to their university. They also ask about the support provided by the institutes, the instructors, and online programs. They entirely wait for college web pages, the data and the experience of education to reflect the simplicity, sensitivity, and expediency of their preferred online shop sites.

3.8.2. Increasing Number of Professionals Going Back for Graduate Work

As education is becoming more and more reachable, universities now have to increase the challenge of offering services to new audience of young experts. These experts are looking for additional degrees and high level educational qualification because online courses became an accessible option even with a full-time job conditions. Recent Questionnaires reveal the main cause for attending an online program is the possibility to balance work, private life and school. This increases the duties of institutions to concentrate their efforts to being more open, accepting, responsive, and service minded.

These qualified students also expect to be able to find alternative degree programs online. Studies revealed the two most used research ways for those returning to education for an online degree were:

- Direct visits to the institutions' websites
- Internet search engines and social media

This attracts the attention of the university on producing a user experience that is creative and flexible to be used, similar to online shopping.

CHAPTER 4
METHODOLOGY

4.1 Research Model

This study tends to identify what types of e-commerce applications are available for students in North Cyprus universities and to detect students' mastery in using e-commerce applications for personal and educational use. This study is conducted in cross-sectional manner with causal comparative and correlational research design approaches.

For the causal comparative design part; the independent variables and causal comparative study includes three variables: gender, age, faculty. The dependent variable is use of e-commerce applications in North Cyprus Universities consist of general statements with 5-Likert type items which range from 1 to 18. The average score was calculated for these 18 items and was used as a complete score. The correlational design part has independent variable as level of confidence in using e-commerce which comprised of 3 Likert type questions and the dependent variable as use of e-commerce applications in North Cyprus universities. Average score of the 3 items (Items 15,16,17 at part 1) were used as independent variable.

The first four research problems and objectives of this study have been carried out in a scientific framework. A clear description of the model of the research in addition to the significances of the used words are given in Figure 4.1.

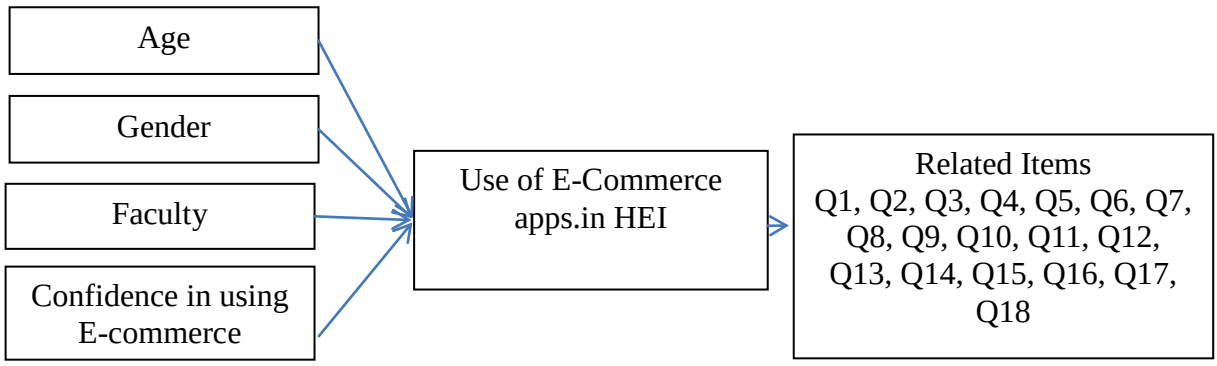

Figure 4.1: Research model of the study

4.2 Research Setting

The demographic questions were extracted from (AARP, 2000) of National Survey on Consumer Preparedness and E-commerce. The Liker type items in the questionnaire was adapted from Kleen and Shell (2006) used in this study to gather data from students. The questionnaire is divided into four sections, the demographic data of participants, and status on e-commerce, confidence in using e-commerce and e-commerce applications use in HEI. Studies have been carried out at universities given below in (Table 4.1).

Table 4.1: Universities and faculties

University	**Faculty**
Near East University	Faculty of Engineering Faculty of Medicine
Eastern Mediterranean University	Faculty of Economics and Administrative Sciences Faculty of Medicine
Cyprus International University	Faculty of Education Faculty of Architecture
Girne American University	Faculty of Architecture Faculty of Engineering
Middle East Technical University	Faculty of Education Faculty of Economics and Administrative Sciences
Lefke European University	Faculty of Engineering Faculty of Education

4.3 Participants

Totally 1200 students joined to questionnaire and 1132 students filled the out questionnaires properly. The Questionnaire was conducted in English. Participants of the Questionnaire are 60.4% male and 39.6% female. 37.7% of participants are from age group 21-23, 31.4% from age group 18-20 and 30.9% belongs to age group 24+. 77.6% of participants are undergraduate students. 22.4% are master and PhD student and 41.1% of participated students are from Turkey, 9.9% is Turkish Cypriot and 49% of students are from other countries. According to the faculties, 28.4% is studying in Faculty of Engineering, 20.7% is from Faculty of Economics and administrative sciences, 15.4% is from Faculty of Architecture, 18.3% studying in Faculty of Education and 17.2% of participated students is from Faculty of medicine (Table 4. 2).

Table 4.2: Demographic data of participants (N=1132)

Characteristics	Frequency	%
Gender		
Male	684	60.4
Female	448	39.6
Age		
18-20	355	31.4
21-23	427	37.7
24+	350	30.9
Nationality		
Cypriot	112	9.9
Turkish	465	41.1
Others	555	49
University		
NEU	226	20
CIU	176	15.5

Table 4.2: Continued...

EMU	224	19.8
GAU	204	18
METU	135	11.9
LEU	167	14.8
Faculty		
Engineering	322	28.4
Economics and Administrative Sciences	234	20.7
Architecture	174	15.4
Education	207	18.3
Medicine	195	17.2
Department		
Electric and Electronics Engineering	77	6.8
Civil Engineering	147	13
Computer Engineering	98	8.7
Business Administration	125	11
International Business	109	9.6
Architecture	174	15.4
English Language Teaching	207	18.3
Medicine	195	
Education Level		
Undergraduate	878	77.6
Masters & PhD	254	22.4

4.4 Procedures

These research on the use of e-commerce applications by university students in North Cyprus, the study made use of questionnaire for data collection, about 1200 questionnaires was distributed in 6 universities in North Cyprus (Near East University, Cyprus International University, Eastern Mediterranean University, Girne American University, Lefke European University and Middle East Technical University, 1132 was collected and used for this study and this lasted for over 45 days, the questionnaire was distributed in different locations during this time, the distribution was non-random convenience sample among the students each time the researcher visits each University, the research was conducted in spring of 2015-2016 semester. The study is quantitative, the data collected was subjected to series of analysis such frequency analysis, percentage, independent sample t-test, one way ANOVA and correlation in order to be able to answer the research questions and fulfill the aim and objectives of the study. The result gotten was discussed extensively, suggestions were made, conclusion was drawn and a recommendation was made from the result of the study.

4.5 Instrument

University Students' use of E-Commerce Applications in Higher Education Questionnaire named questionnaire was adapted by thesis supervisor and the researcher. The questionnaire consisted of 2 main parts. Part 1 aimed to collect demographic information and their approaches about e-commerce from the respondents with 17 questions. Part 2 of the questionnaire consisted of 18 questions again and it is focused on gathering information about how students uses internet in respect to e-commerce. The 18 5-Likert scale items has calculated Cronbach's alpha reliability (internal consistency) of 0.845 Cronbach's alpha value in the range of .80 to .89 is considered good (Cohen, 1988) which is an evidence that the Questionnaire is an highly reliable instrument to administer.

4.6 Computer and Internet Usage Behavior of Students

4.6.1 Hours Students Spent on the Internet Daily

From the Figure 4.2 the result shows that 382 which are 33.7% of the respondents spend 4-5 hours on the internet every day. 356 which are 31.4% respondents spent more than 6 hours on the internet per day. While 325 which are 28.7% spends 3 hours, only 69 which is 6.1% of participants spend 0-1 hours on internet in a day, from a population pull of 1132 students whom participated in the Questionnaire.

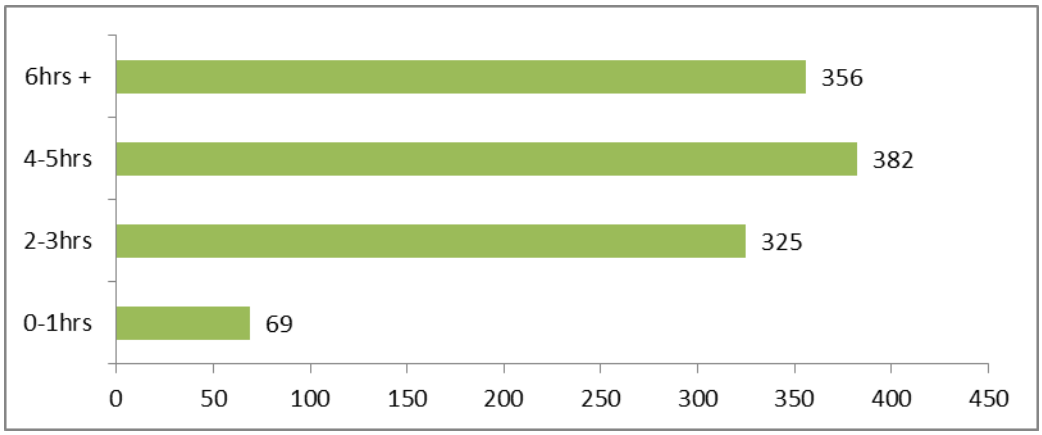

Figure 4.2: Hours students spent using the Internet

4.6.2 Students Level of Computer Experience

From the Figure 4.3, the result shows that 613 which are 54.2% of the respondents are experience with the computer, 364 which are 32.2% are experts and 154 which are 13.7% of the respondents are novice, from a population pull of 1132 students whom participated in the Questionnaire.

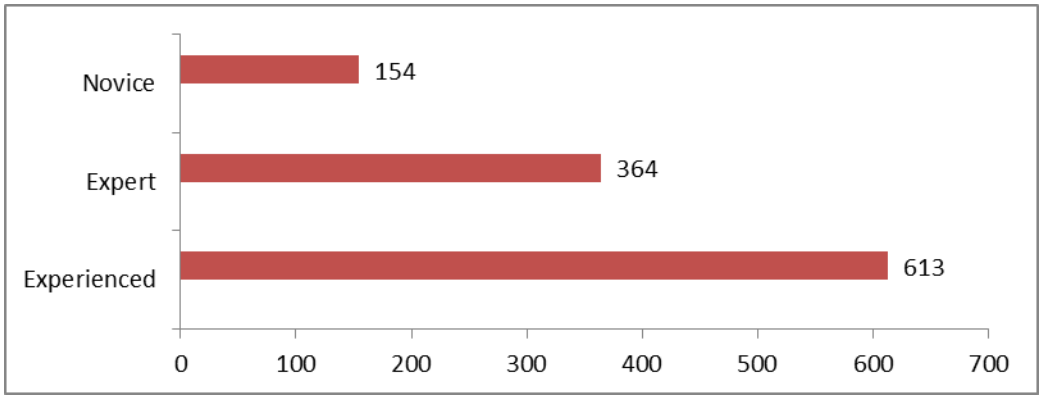

Figure 4.3: Students levels of computer experience

4.6.3 Students Use of the internet for E-Commerce

From the Figure 4.4, the result shows that 525 which are 46.4% of the respondents has made purchases less than 5 times, 319 which are 28.2% respondents indicated they have made purchases on the internet between 5-9 times, while 197 which are 17.4% respondents they have made purchases between 10-20 times in the past one year, finally 91 which are 8% of the respondents has made more than 20 purchases in the past one year, from a population pull of 1132 students whom participated in the Questionnaire.

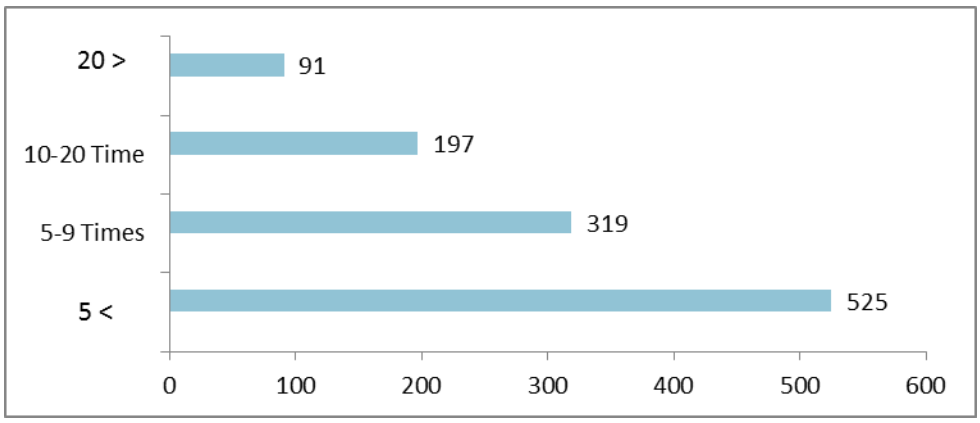

Figure 4.4: Students online shopping usage

4.6.4 Computer Programs Used by Students

From the Figure 4.5, explains most used programs by students. According to the findings, word processing is the most frequently used program with choice of 915 students and anti-virus programs come second with 751 students. Usage of education software is another most used program with 561 votes from students.

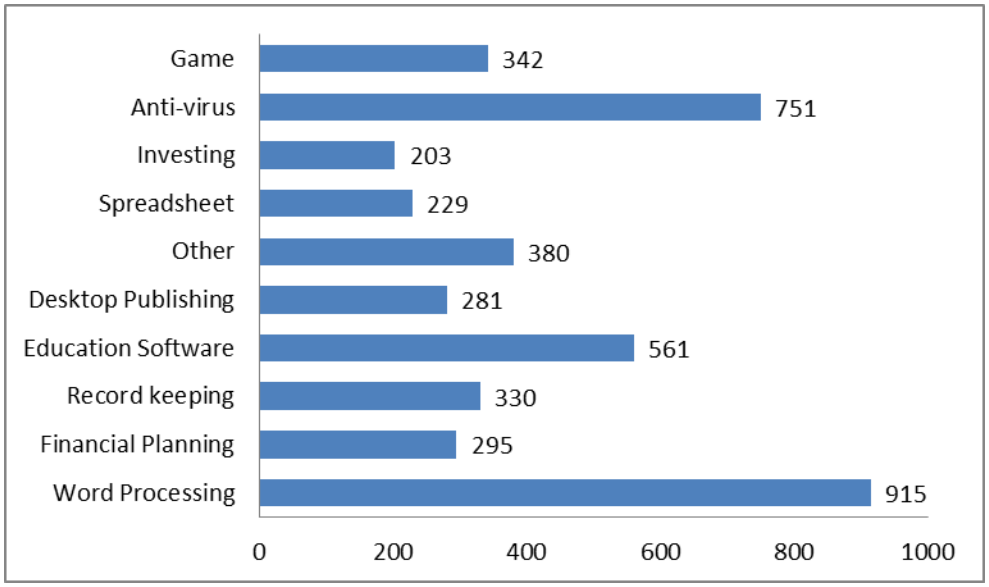

Figure 4.5: Most used programs by students

4.6.5 Reasons why Students use the Internet

From the Figure 4.6 shows internet usage reasons of students. Findings pointed that e-mail services are the most used internet option by students and education and training is second reason while chatting is the third. Newsgroups, travel and banking are other highly preferred options as a reason of internet usage.

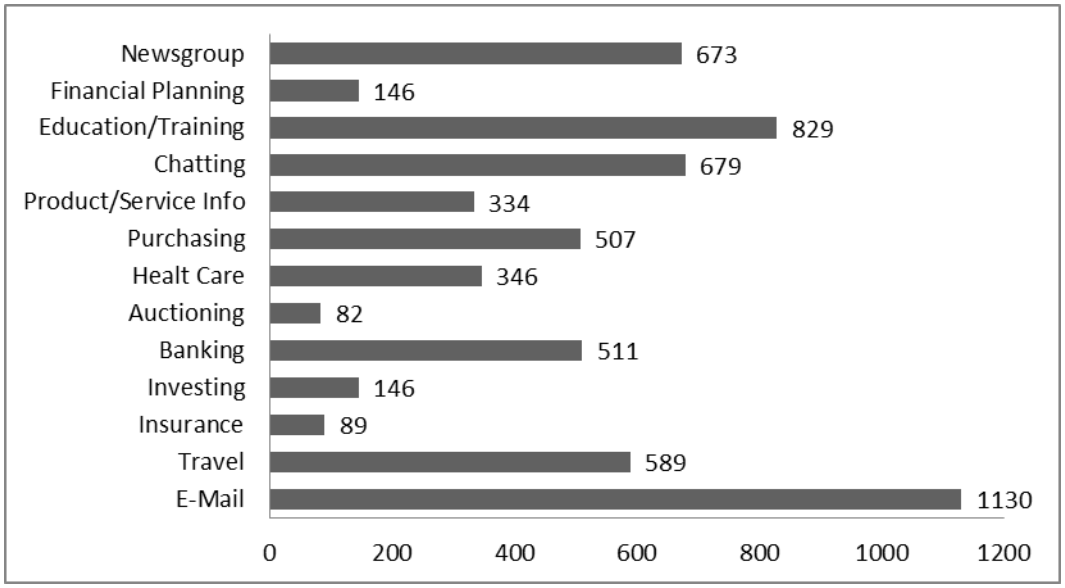

Figure 4.6: Internet usage reasons of students

4.6.6 How Do Students Usually Purchase Items

From the obtained results, it was seen as demonstrated in Figure 4.7a below, that just 20.3% of students don't usually purchased goods and services, 34.8% of students purchased goods and services from stores, 16% of students purchased goods and services by phone, 24.6% of students purchased goods and services on the internet and 4.2% of students purchased goods and services some other way from a population pull of 1132 students whom participated in the Questionnaire. And from that, Figure 4.7b below shows the students that purchase good and services from some other way. From Figure 4.7b below, a pool of 230 students who choose some other way of purchase goods and services, 65 students don't like to shop online, 2 students have concerns about privacy, 48 students prefer face-to-face shopping, 6 students are not interested in online shopping, 3 students says expensive, 33 students show concerns about scams, 25 students prefer to examine products before buying, 4 students says because of not enough product information provided, 42 students shows concern about safety of payment and 2 students shows concern about company/ refund policy.

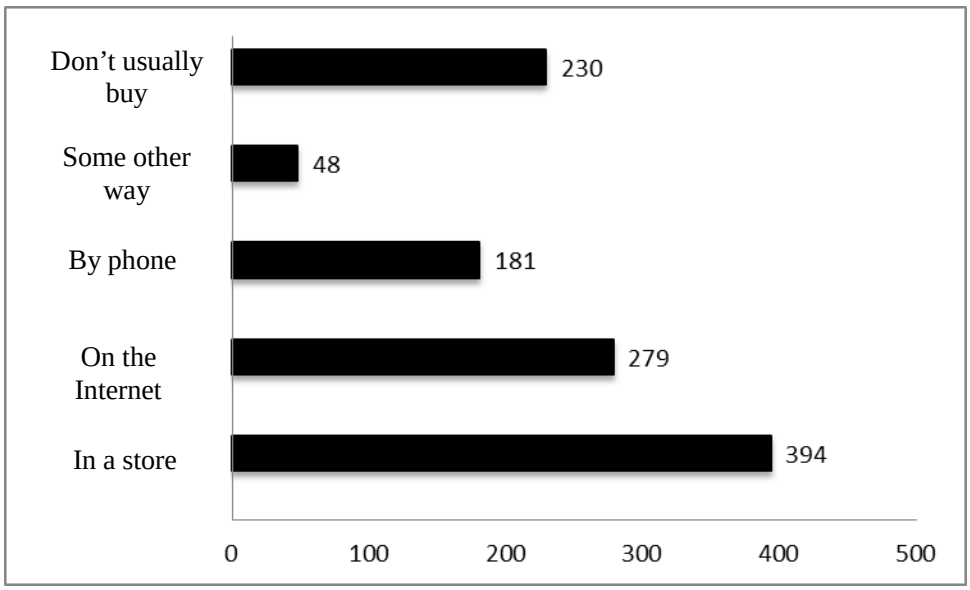

Figure 4.7a: Internet usage reasons of students

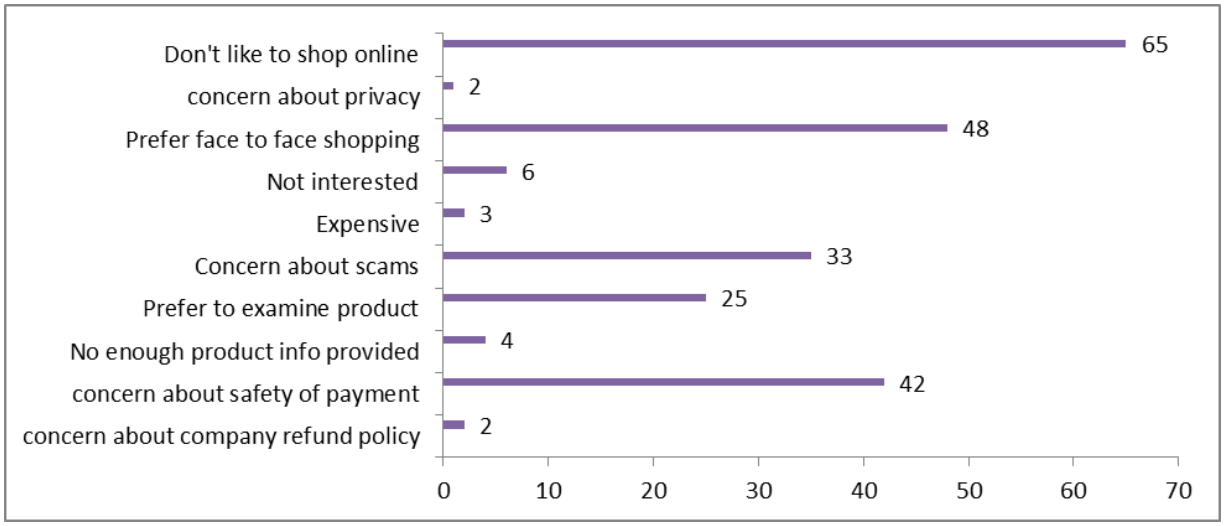

Figure 4.7b: Why have you not made any purchases over the Internet?

4.7 Data Analysis

The Excel Spreadsheet package was used in arranging data drawn from the administered questionnaires. This data was then transferred to the Statistical Package for Social Sciences (SPSS 20.0) for analysis. To answer first research question tables and frequencies with percentages were used. Firstly, descriptive statistics which included frequencies and

percentages were used to get a clearer understanding of all elements of the research work. Secondly, Independent sample t-test for research question 2, one-way ANOVA methods were used for answering research questions 3 and 4 and Pearson correlation analysis was used to answer research question 5.

4.7 Procedures

This research the use of e-commerce applications by university students in North Cyprus. The study made use of questionnaire for data collection, about 1200 questionnaires was distributed in 6 universities in North Cyprus (Near East University, Cyprus International University, Eastern Mediterranean University, Girne American University, Lefke European University and Middle East Technical University, 1132 was collected and used for this study and this lasted for over 45 days, the questionnaire was distributed in different locations during this time, the distribution was non-random convenience sample among the students each time the researcher visits each University, the research was conducted in spring of 2015-2016 semester. The study is quantitative, the data collected was subjected to series of analysis such frequency analysis, percentage, independent sample t-test, one way ANOVA and correlation in order to be able to answer the research questions and fulfill the aim and objectives of the study. The result gotten was discussed extensively, suggestions were made, conclusion was drawn and a recommendation was made from the result of the study.

CHAPTER 5
RESULTS AND DISCUSSION

5.1 Students' Use of E-Commerce Applications

For the researcher to understand and see the pattern of the response of the students on their view of their confidence of the general use of e-commerce and academically related use, descriptive statistics was employed to provide a basic knowledge on their opinion. The result of mean range and standard deviation of the research items are shown below in Table 5.1 where the mean indicates and average data from total respondents while standard deviation shows how far a particular value or data differs from the mean value. From the result, "how confident are you, about your activities on the Internet being monitored or tracked without permission" (M = 2.71; SD = 1.22) has the least mean value out of all the items used in this Questionnaire for confidence use of e-commerce application while the confident in students ability to use computer/internet in paying household bills, investing and shopping has the highest mean of 3.21 with SD =1.25 which was as a result of the responses from the respondents, from the usage of academically related e-commerce application the result indicates that "View final grades" has the highest mean value (M = 4.42; SD = 1.46). In general students use of e-commerce applications at HEI closer to (M= 3.72; SD= 1.62). In general students confidence about the use of e-commerce applications closer to (M= 2.93; SD= 1.22). The result showed that majority of the respondent have same use on the confidence use of e-commerce app., this implies that the use are between not confidence and don't know, The result showed that majority of the respondent have same result on the use of e-commerce in HEI, this implies that the use are changing between seldom to sometimes.

Table 5.1: Total standard deviation and mean of the question

Confidence Use of E-commerce App.	**Mean**	**SD**
15. How confident are you about your ability to use the Computer / Internet such as paying household bills, investing or shopping?	3.21	1.25
16. How confident are you, about the privacy of the information you provide when making Internet purchases?	2.86	1.18
17. How confident are you, about your activities on the Internet being monitored or tracked without permission?	2.71	1.22
Total Average score of 15-17	**2.93**	**1.22**
The usage of Academically Related E-commerce App		
1. Complete application for admission (school, job, etc.).	3.75	2.11
2. Order a transcript.	3.69	1.49
3. View final grades.	4.42	1.46
4. Register for classes.	4.13	1.51
5. Search an online directory of faculty.	3.73	1.60
6. Search an online directory of university services.	3.65	1.61
7. Search academic catalog online.	3.68	1.58
8. Audit academic performance online (courses, instructors, students etc.).	3.75	1.56
9. Purchase/ extend textbooks from library.	3.35	1.67
10. Pay tuition and fees.	3.56	1.64
11. Find accommodation online.	3.39	1.59
12. View financial status with university (fees, fines, etc..).	3.93	1.57
13. Receive online academic advice from instructors.	3.62	1.62
14. Schedule meetings such as tutoring, counseling, etc..	3.43	1.63

Table 5.1: Continued...

15. Take a complete web-based course.	3.35	1.64
16. Take web-based courses in a lecture.	3.41	1.68
17. Upload/ view projects/ assignments online.	4.05	1.53
18. Scan projects/ articles for plagiarism online.	3.88	1.68
Total Average Score of Q1 through Q18	**3.72**	**1.62**

5.2 Students' Use of E-Commerce Applications Based on Gender

For a better understanding on the students view on the use of e-commerce applications based on gender differences, independent samples t-test was also employed. The assumption of Levene's test for equality of variances showed that variances are different across gender (p=0.05). The results were shown below in Table 5.2, use on privacy is statistically significant difference between genders in the study (p<=.05)

Table 5.2: Difference across genders

	Gende	**N**	**Mean**	**SD**	**Mean Difference**	**t**	**p**
E-commerce	Male	684	3.765	0.8111	.104	1.965	**.05***
	Female	448	3.661	0.914			

Where; the dependent variable is e-commerce in HEI: Total sampled population (N); Standard Deviation (SD); p≤.05 (there is statistical significant difference)

From the result of the independent sample t-test shown in the table above, it can be seen that there existed statistical significance. From the study it can be seen that female and male in the study have different use on e-commerce in higher education. The mean values are 3.765 for male and 3.661 for females, use on the e-commerce applications in HEI, the closeness in the mean difference shows that the on usage of e-commerce application in higher education by students are seen to be very important which results in paying serious attention to it. The

research carried out by Sharma, (2013), shows that significant difference exist in gender and attitude towards e-commerce and e-learning, some other related study (Abedalaziz et al., 2013, Suri et al., 2014) showed that female students uses the computer than male. Genis-Gruber and Gonul, 2012) stated that there exist statistical difference between genders in shopping online (e-commerce).

5.3 Students' Use of E-Commerce Applications in HEI Based on Age Differences

For a better understanding on the students view on e-commerce applications in HEI, based on age difference one-way ANOVA was also employed. The assumption of Levene's test of homogeneity of variances showed that the variances are equal for ($p = 0.541$). There was a significant effect of age on students' use of e-commerce applications at $p<.05$ level ($F(2,1129) = 6.954$, $p = 0.001$) The results is shown below in Table 5.4, in this study, it is seen that there is statistical differences between all ages towards the use of e-commerce ($p<.05$)

Table 5.3: Difference between Ages

	Age	**N**	**Mean**	**SD**	**Mean Square**	**F**	**p**
E-commerce	18-20	355	3.622	.830	5.031	6.954	**.001***
	21-23	427	3.700	.836			
	24+	350	3.856	.887			

Where; Use the dependent variable is E-commerce in HDI; Total sampled population (N); Standard Deviation (SD), $p<0.05$ (there exist statistical significant difference).

In all the groups' age category, the result shows that 24+ had the mean in both cases, for use on e-commerce application in HEI and the result is significant at $p<.05$, the different from every other age group, the mean values are all close. The result shows that students in various ages are very concerned with e-commerce, the study carried out by Stephen et al., (2003) shows that there is a significant age based difference in relation to the various age groups in the use of e-commerce.

Post hoc comparisons using Fisher's LSD test that is appropriate for three mean scores indicated that then mean score for students with ages 24+ and above (M= 3.8567,SD = 0.8877) were significantly higher than students with age range 18-20 (M = 3.6225, SD = 0.8302) and also from students with age range 21-23 (M = 2.700, SD = 0.836).

Table 5.4 shows the multiple comparisons of all the groups based on the ages of the respondents, the age groups are compared from one section to another based on the research variables which is use on e-commerce in HEI, the result shows that there is a significant difference in age group 24+ from other groups in the study, the difference between other groups is not significant (age group 18-20, 21-23) as seen from the result below (Table 5.4). From the Table 5.4 it is seen that there is statistical difference between age groups, the first group that is 18-20 with the 24+ age group shows that there is statistical difference.

Table 5.4: Multiple comparison of difference based on age

(I) age3	(J) age3	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-20	21-23	-.07744	.06109	.205	-.1973	.0424
	24+	**-.23413***	.06407	**.000**	-.3598	-.1084
21-23	18-20	.07744	.06109	.205	-.0424	.1973
	24+	**-.15669***	.06133	**.011**	-.2770	-.0364
24+	18-20	**.23413***	.06407	**.000**	.1084	.3598
	21-23	**.15669***	.06133	**.011**	.0364	.2770

*. The mean difference is significant at the 0.05 level.

5.4 Students Use on E-Commerce Applications Based on Faculty Difference

For a better understanding on the students view on the use of e-commerce applications in HEI based on faculty difference one way ANOVA was also employed. The assumption of Levene's test of homogeneity of variances showed that the variances are equal for ($p = 0.347$). There was a significant effect of type of faculty on students' use of e-commerce applications at $p<.05$ level ($F(4,1127) = 4.361$, $p = 0.002$)

Post hoc comparisons using Scheffé's test that is appropriate for unequal group sizes indicated that then mean score for students at Engineering faculty ($M = 3.7859$, $SD = 0.4852$) were significantly higher than students at faculty of Medicine ($M = 3.5114$, $SD = 0.83798$) and from students from Economics and Administrative Sciences ($M= 3.8269$, $SD = 0.88445$) have significantly higher mean scores than faculty of medicine students on the use of e-commerce applications at HEI.

The results is shown below in Table 5.5, in this study, it is seen that there is statistical significant differences between all faculties towards the use of e-commerce ($p<.05$).

Table 5.5: Difference between faculties

	Faculty	**N**	**Mean**	**SD**	**Mean Square**	**F**	**P**
E-commerce In HEI	Engineering	322	3.785	.870	3.151	4.361	**.002***
	Econs & Adm.	234	3.826	.884			
	Architecture	174	3.703	.804			
	Education	207	3.729	.825			
	Medical Sci.	195	3.511	.837			

Where; Total sampled population (N); Standard Deviation (SD) and * means $p<0.05$ (there exist statistical significant difference)

From the table above shows the result of the one way analysis of variance, there is significant mean difference ($p<0.05$) between the five faculty used in this study, they are engineering, economics and administration science, architecture, education, and medical sciences, the result of this study suggest that students in engineering, economics and administration science and other faculties pay much attention to e-commerce applications. The result of this study is in line with the result of Odell et al., (2010), he suggested that the faculties of science and engineering students are more computer and internet application users, in like manner, Anderson (2010) argued that there is a faculty based difference in the use of computer and its internet applications, the variation in result might be peculiar to the universities in North Cyprus.

Table 5.6: Multiple comparisons based on faculty difference

(I) Faculty	(J) Faculty	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Engineering	Economics and Administrative Sciences	-.04104	.07302	.989	-.2663	.1842
	Architecture	.08218	.07997	.901	-.1646	.3289
	Education	.05642	.07572	.968	-.1772	.2900
	Medicine	**.27449***	.07713	.013	.0365	.5125
Economics and Administrative Sciences	Engineering	.04104	.07302	.989	-.1842	.2663
	Architecture	.12322	.08509	.718	-.1393	.3857
	Education	.09745	.08110	.836	-.1528	.3477
	Medicine	**.31553***	.08242	.006	.0612	.5698

Table 5.6: Continued...

Architecture	Engineering	-.08218	.07997	.901	-.3289	.1646
	Economics and Administrative Sciences	-.12322	.08509	.718	-.3857	.1393
	Education	-.02576	.08742	.999	-.2955	.2440
	Medicine	.19231	.08864	.319	-.0812	.4658
Education	Engineering	-.05642	.07572	.968	-.2900	.1772
	Economics and Administrative Sciences	-.09745	.08110	.836	-.3477	.1528
	Architecture	.02576	.08742	.999	-.2440	.2955
	Medicine	.21807	.08482	.159	-.0436	.4798
Medicine	Engineering	**-.27449***	.07713	.013	-.5125	-.0365
	Economics and Administrative Sciences	**-.31553***	.08242	.006	-.5698	-.0612
	Architecture	-.19231	.08864	.319	-.4658	.0812
	Education	-.21807	.08482	.159	-.4798	.0436

*. The mean difference is significant at the 0.05 level.

Engineering and Economics and Business administration students have significantly higher mean scores than Medicine students on the use of e-commerce applications at HEI.

Table 5.6 shows the multiple comparisons of all faculties. This compares the faculties in each section within each group between the ages. In Engineering faculty, there is significant difference with medicnine faculty, but there is no significant difference with other faculties that partook in this study. In economics and administrative sciences faculty, there is significant difference with medicnine faculty, but there is no significant difference with other faculties that partook in this study. In architecture faculty, there is no significant difference with other faculties that partook in this study. In education faculty, there is no significant difference with other faculties that partook in this study. In medicine faculty, there is

significant difference with engineering and economics and administrative sciences faculties, but there is no significant difference with other faculties that partook in this study.

5.5 Relationship between Students level of Confidence in Using E-Commerce Application and Use of E-Commerce Applications in Higher Education

For a better understanding of the relationship between student's confidence in the general use of e-commerce application and e-commerce application in HEI, Pearson correlation analysis was also employed. The results shown below in Table 5.7, there is a positive relationship between confidence in the general use of e-commerce and the use of its application in higher education, the correlation coefficient is .205** and its significant at the 0.01 significant level.

There was a positive correlation between two variables, r = 0.205, n = 1132, p = 0.000. A scatter plot in Figure 5.1 below summarizes this finding:

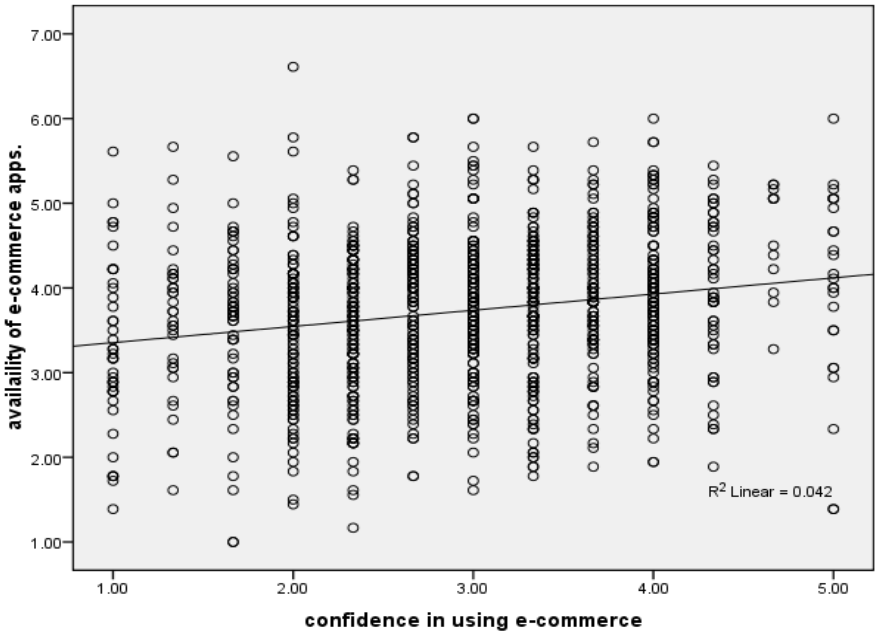

Figure 5.1: Scatter Plot

There exists a weak linear positive correlation between confidence in using e-commerce applications and about the use of e-commerce applications. This implies that increasing the confidence in the general use of e-commerce will result in increase in the use of e-commerce

application in higher education. The relationship between the confidence of general use of e-commerce and the use of e-commerce is on the increase, which can be seen that over time, e-commerce use will increase and confidence in using e-commerce will increase also.

Table 5.7: Relationship between student's confidences in the general use of e-commerce application and e-commerce application in higher education

		Confidence of use of e-commerce	**E-commerce in HEI**
Confidence of use of e-commerce	Pearson Correlation	1	.205**
	Sig. (2-tailed)		.000
	N	1132	1132
E-commerce In HEI	Pearson Correlation	.205**	1
	Sig. (2-tailed)	.000	
	N	1132	1132

**. Correlation is significant at the 0.01 level (2-tailed).

The Sig. 2-tailed level is .000 which shows that there is significance between confidence of use of e-commerce and e-commrece in HEI and the relationship is a positive 20.5%, which means that as one variable goes up or down so will the other one.

CHAPTER 6
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The use of e-commerce has become a daily routine in the life of an average higher educational student around the globe, yet the use of university students on the use of e-commerce applications in higher education is evolving and its level of acceptance is on the increase.

- The result of the study shows that a majority of the students that took part in the study spend 4-5 hours daily on the internet for various purposes,
- A great portion of the respondents rated themselves as experienced users of the computer systems.
- A majority of students has made purchases more than 5 times in the last one year, and some others have made purchases more than 20 times in the past one year.
- The students mostly use word processing computer programs and the main purpose student sometimes use internet as indicated in this research is for emailing, education and training.
- Sometimes students prefer making purchases of items directly from stores.
- There was impact of age which indincated that student of age between 21-23 uses e-commrece.
- Gender shows that majortiy of the students that participated were male.
- Faculty of Engineering has the highest participants.
- The confidence of the use of e-commrece applications in higher on university student's use on the application of e-commrece in higher education.
- The students are confident in their ability to use computer/internet in paying household bills, investing or shopping.

- In considering the relationship between the students level of confidence in using e-commerce application and its use in e-commerce in higher education there is a weak linear positive correlation between the two variables of using e-coming application and its use in Higher Education indicating that over time e-commerce use will increase and the confidence of students using e-commerce will also increase.

In conclusion the view of students in the university on the use of e-commerce for higher education is affected by demographically characteristics of the students, such as age, gender, and faculty and there exists an association between confidence in general and academic use of e-commerce applications.

From the result of this study it can deduced that students, university management should incorporate e-commerce is operational process so as to reduce the down time for some processes in the higher education. It will provide vital information on how demographic characteristics of students in a higher educational environment is affected by e-commerce applications. Possible problems and concern about the use of e-commerce can easily be identified and improvement made to make e-commerce incorporated strata in higher education.

This research is mostly beneficial to the Higher Educational Institutions as it indicates that the use of e-commerce gives better services rendered to student thereby being a convenient method of commerce operation to students.

6.2 Recommendations

The recommendations and the future research direction for this study are stated below:

It is very important to acknowledge the fact that as university student's confidences increase towards the use of e-commerce, the tendency of usage will increase, so factors that increases confidence of usage of e-commerce application in higher education in North Cyprus should be research into, so that the use and confidence of e-commerce application can be increased in higher education, thereby increasing the use of e-commerce in higher education administrative and financial operations. The design of e-commerce applications should put into consideration

issues that have to do with privacy of users, refund policy, scam and other important factors that discourages students in the use of e-commerce applications in higher education.

This study was carried out in quantitative manner; qualitative methods may be employed to obtain deeper insight about the matter of concern.

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APPENDIX

USE OF E-COMMERCE APPLICATIONS IN NORTH CYPRUS UNIVERSITIES

Dear Participant,

This NEU Computer Information systems MS thesis study investigates the current status and use of university students in North Cyprus towards e-commerce applications in higher education. The Questionnaire has 2 parts: first part is demographic information, the second part is about how students use e-commerce applications academically. Please read questions carefully and give your answers sincerely. Your response will be kept confidential, anonymous and only used for this research purposes.

I deeply appreciate your cooperation in this research.

Fairouz Alhashmi Belhaj (CIS graduate student)

Thesis supervisor: Assist. Prof. Dr. Seren Başaran

PART ONE: **Demographic Information**

1) **Gender:** A. Male B. Female
2) **Age:** A. 18_20 B. 21_23 C. 24+
3) **Nationality:** A. Cypriot B. Turkish C. Others.....
4) **Universality :**……
5) **Department**: (Please specify)**:** ……
6) **Faculty**: (Please specify)**:**…….....…….....
7) **Education level**: A. Undergraduate B. Masters & PhD
8) **How many hours do you spend on the internet?**

   A. 0-1 hrs. B. 2-3 hrs. C. 4-5 hrs. D. 6 + hrs.

9) **How would you rate your level of experience with a computer?**

A. Experienced. B. Expert. C. Novice.

10) During the past year, approximately how many times have you purchased goods or services on the Internet?

A. Fewer than 5. B. 5-9 . C. 10-20 . D. More than 20.

11) Which programs or do you use on the computer? (You can select more than one)

A. Word-processing. D. Education software. G. Spreadsheet. I. Anti-virus.

B. Financial planning. E. Desktop Publishing. H. Investing. J. Game.

C. Record Keeping F. Other (please specify:)…….

12) Select from the list on reasons of you're using internet. (You can select more than one)

A. E-mail. E. Banking. I. Product/ service info. M. Newsgroups.

B. Travel. F. Auctioning. J. Chatting interactively.

C. Insurance. G. Health care. K. Education/training.

D. Investing. H. Purchasing. L. Financial planning.

13) After comparison shopping on the Internet, how do you usually purchase the items?

A. In a store. C. By phone. E. Don't usually buy.

B. On the Internet. D. Some other way.

14) If your answer to question 12 is e) Why have you not made any purchases over the Internet?

A. Concern about company/refund policy. G. Expensive

B. Computer at work not for personal use.
C. Concerned about safety of payment.
D. Not enough product info. provided.
E. Prefer to examine products.
F. Concerned about scams.
H. Not interested.
I. Prefer face-to-face shopping.
J. Concerns about privacy.
K. Don't like to shop online.

Group question	**Not very confident**	**Not confident**	**Don't know**	**Confident**	**Very confident**
15) How confident are you about your ability to use the Computer / Internet such as paying household bills, investing or shopping?					
16) How confident are you, about the privacy of the information you provide when making Internet purchases?					
17) How confident are you, about your activities on the Internet being monitored or tracked without permission?					

PART TWO: General Statements

How often do you use the following? Answer by choosing the most appropriate response:

	Items	very rarely	almost never	seldom	sometimes	almost	often
1	Complete application for admission (school, job, etc.).						
2	Order a transcript.						
3	View final grades.						
4	Register for classes.						
5	Search an online directory of faculty.						
6	Search an online directory of university services.						
7	Search academic catalog online.						
8	Audit academic performance online (courses, instructors, students, etc..).						
9	Purchase/ extend textbooks from library.						
10	Pay tuition and fees.						
11	Find accommodation online.						
12	View financial status with university (fees, fines, etc..).						
13	Receive online academic advice from instructors.						
14	Schedule meetings such as tutoring,						

	counseling, etc..						
15	Take a complete web-based course.						
16	Take web-based courses in a lecture.						
17	Upload/ view projects/ assignments online.						
18	Scan projects/ articles for plagiarism online.						

Thank you very much for your participation