QATAR UNIVERSITY
COLLEGE OF ARTS AND SCIENCES

EXPLORING THE STUDENTS AND FACULTY MEMBERS ATTITUDES AND AWARENESS ABOUT THE USE OF E-TEXTBOOKS AT QATAR UNIVERSITY

BY
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ABSTRACT

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Title: Exploring the Students and Faculty Members Attitudes and Awareness about the Use of eTextbooks at Qatar University

Supervisor of Project: Advisor’s Prof. Ayman, Suleiman, Bakleezi only.

Digitalization plays a big role in world and has an effect on the tools of learning. In 2013, e-Textbooks became commonly used in most science core curricula and some literary curricula at Qatar University. However, there has been no in-depth statistical research for exploring students’ and faculty members’ experience and attitudes toward using e-Textbooks. Therefore, the purpose of this study is to fill out the gap of limited research, especially in Qatar, GCC and Middle East region in general.

A quantitative research approach was used as the methodology. The participants were selected by two sampling techniques namely, stratified random sampling proportional to size for students and census for instructors where all of them use e-Textbooks in their courses and online surveys sent to their emails. The data were used to analyze and look at users’ experience and awareness about e-textbooks, examine factors that either encourage or prevent them from selecting e-Textbooks. This is in addition to exploring the most important features in e-Textbooks. Results of this study showed students and instructors started with adapting their habits about using e-Textbooks as tools of learning and teaching. This has been obvious since the percentage of recommending e-Textbooks to other was high for both. However, they still prefer printed textbooks due to the high cost and difficulty of using e-Textbooks unless the e-Textbooks are free of
charge. Comprehensive e-Textbooks allow interacting and learning more effectively than reading e-Textbooks and printed textbooks. In addition, teachers found it helpful in terms of increasing the students’ academic performance. However, chi-square test explained that no significant relationship between improving academic performance of students with GPA and educational level was found. Binary logistic regression concluded adding Gender, GPA and Students’ Classification to the model does not significantly affect recommending other students to use e-Textbooks. The most factors that encourage both of them to use e-Textbooks are the ability to print pages, keep them forever, seamless integration via Blackboard, lower cost, and the ability to access without an Internet connection. Moreover, the main features (such as reading navigation, study, instructors, and content preparing) are believed as important for both students and teachers. The recommendations that can improve the usage of e-Textbooks at Qatar University and guide further research in this area were discussed.
DEDICATION

I would like to dedicate this work to my family. To my parents, who have always proud of me and encouraged me to chase my goals.
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TABLE OF CONTENTS

DEDICATION..................................................................................................................v

ACKNOWLEDGMENTS ....................................................................................................vi

LIST OF TABLES .............................................................................................................x

LIST OF FIGURES .........................................................................................................xi

CHAPTER 1: INTRODUCTION .........................................................................................1

OVERVIEW .....................................................................................................................1

STATEMENT OF THE PROBLEM ....................................................................................1

RESEARCH OBJECTIVES ..............................................................................................2

RESEARCH QUESTIONS .................................................................................................2

DEFINITION OF E-TEXTBOOKS ....................................................................................3

CHAPTER 2: LITERATURE REVIEW ..............................................................................4

OVERVIEW .....................................................................................................................4

RESEARCH BENCHMARK ...............................................................................................4

ATTITUDES TOWARDS USING E-TEXTBOOKS ............................................................6

FACTORS AFFECTING USING E-TEXTBOOKS .............................................................7

FEATURES INFLUENCE TO USE E-TEXTBOOKS .......................................................11

CHAPTER 3: METHODOLOGY .......................................................................................14

OVERVIEW .....................................................................................................................14

RESEARCH SURVEY DESIGN .......................................................................................14
RESEARCH INSTRUMENT ........................................................................................................... 15

POPULATION AND SAMPLE ........................................................................................................ 18

RESEARCH ANALYSIS METHODS ........................................................................................... 21

DATA ANALYSIS PROCEDURES ............................................................................................... 24

CHAPTER 4: RESULT AND DISCUSSION .................................................................................... 27

OVERVIEW ................................................................................................................................. 27

Participants ................................................................................................................................ 27

NON-RESPONSE BIAS .................................................................................................................. 27

DESCRIPTIVE STATISTICS OF DEMOGRAPHICS .................................................................... 32

ANALYSIS OF RESEARCH QUESTIONS ..................................................................................... 35

Research Question 1: Are QU students and faculty aware of the features available in e-Textbooks? ............................................................................................................................... 35

Research Question 2: What is the attitude of QU students and faculty members towards using e-Textbooks? ..................................................................................................................... 39

Research Question 3: What are the factors influencing students in using e-Textbooks in teaching? .............................................................................................................................................. 47

Research Question 4: What features of e-Textbooks students and faculty members find most important in influencing them to select an e-Textbook? ................................................................. 63

STUDENTS’ SUGGESTIONS OR COMMENTS TO IMPROVE THE SERVICES OF E-TEXTBOOKS ................................................................................................................................. 67

INSTRUCTORS’ SUGGESTIONS OR COMMENTS TO IMPROVE THE
SERVICES OF E-TEXTBOOKS ................................................................. 68

CHAPTER 5: CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH ................................................................. 70

CONCLUSION .......................................................................................... 70

RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH ... 76

REFERENCES ......................................................................................... 77

APPENDIXES ........................................................................................ 81

Appendix A .............................................................. 81

Appendix B .............................................................. 93

Appendix C .............................................................. 105
LIST OF TABLES

Table 1. Variables Coding ................................................................. 17
Table 2. Adjusted Sample Size for Students ........................................... 19
Table 3. Students’ response rate after distributing the survey by colleges .......... 29
Table 4. Faculty response rate after distributing the survey by Colleges .......... 30
Table 6. Result of Chi-Square Test between students' use of e-Textbooks to improve their academic performance * Educational Level and GPA ....................... 43
Table 7. Result of binary logistic regression equation ............................... 44
Table 8. Result of Chi-Square Test between recommending other students to use e-Textbooks and Difficulty of use e-Textbooks ........................................... 52
Table 9. Result of Chi-Square Test between recommending other students to use e-Textbooks and the three factors e-Textbooks ........................................... 53
Table 10. Result of Chi-Square Test between recommending other students to use e-Textbooks and the three factors e-Textbooks ........................................... 53
Table 11. Result of Spearman's Correlations between GPA and engagement of students in the class if my instructor used an e-Textbook in class and Using e-Textbooks improves my academic performance ........................................... 55
Table 12. Result of Spearman's Correlations between Educational Level and engagement of student in the class if my instructor used an e-Textbook in class and using e-Textbooks improve my academic performance ........................................... 56
Table 13. Result of Chi-Square Test between recommending other teachers to use e-Textbooks and difficulty of use e-Textbooks ........................................... 61
Table 14. Result of Chi-Square Test between recommending other teachers to use e-Textbooks and Instructors' belief about the cost of e-Textbooks ......................... 62
LIST OF FIGURES

Figure 1. Students’ reminder percentage per time. .................................................28
Figure 2. Age groups of students. ...........................................................................32
Figure 3. Types of e-Textbooks used by students......................................................33
Figure 4. Types of e-Textbooks used by instructors..................................................34
Figure 6. Ways of making students aware of e-Textbook option. ..............................36
Figure 7. Features of e-Textbooks that students are aware of using them.................36
Figure 8. Statements of instructors’ awareness................................................................37
Figure 9. Instructors' experience with using e-Textbooks at Qatar University............38
Figure 10. Features of e-Textbooks instructors aware about and use it.....................38
Figure 11. Instructors get training before starting to use e-Textbooks.........................39
Figure 12. Students’ opinion about the usefulness of e-Textbook resources .............39
Figure 13. Students’ opinions about recommending other students to use e-Textbooks ..................................................................................................................40
Figure 14. The percentage of agreement level of students on some statement about e- Textbooks. ........................................................................................................42
Figure 15. Teachers’ opinion about recommending other colleagues to use e-Textbooks and the usefulness when working on assignment and preparing test.........................45
Figure 16. Preference of using textbooks in the future based on teachers' experience with e-Textbooks ........................................................................................................45
Figure 17. The percentage of agreement level of instructors’ on some statements about
e-Textbooks.........................................................................................................................................................47

Figure 18. Difficulty of use e-Textbooks by students......................................................................................48

Figure 19. Students' belief about the cost of e-Textbooks.................................................................................48

Figure 21. Reasons preventing students from using e-Textbooks.................................................................50

Figure 22. Difficulty of use e-Textbooks by instructors..................................................................................57

Figure 23. Instructors' belief about the cost of e-Textbooks............................................................................57

Figure 24. Factors influence on instructors to select an e-Textbooks rather than a printed textbook.........................................................................................................................................................59

Figure 25. Reason prevent instructors from using e-Textbook.................................................................60

Figure 26. Importance of reading navigation features to students.............................................................63

Figure 27. Importance of study features to students.......................................................................................64

Figure 28. Importance of instructors features to students..............................................................................64

Figure 29. Importance of reading navigation features to instructors..........................................................65

Figure 30. Importance of content preparing features to instructors.........................................................66
CHAPTER 1: INTRODUCTION

OVERVIEW

Nowadays, the world trend to use technology in education has increased rapidly because of the growth of using smart devices, so the learners’ generation is very different from their predecessors. As result, many educational institutions have replaced paper textbooks with e-Textbooks because they found the learners are more engaged and willing to interact effectively with e-Textbook tools. Therefore, this study is exploring the experience and attitude of students and faculty members at Qatar University about using e-Textbooks.

STATEMENT OF THE PROBLEM

Using e-Textbook in teaching with the available interactive features can offer more chances to the needs of students’ learning and instructors’ teaching. Lam, & McNaught, 2009; Mock, 2004; Tosun, (2014) mentioned that e-Textbooks could lead to increased functionality performed with classical reading. The most popular universities in the Middle East, North Africa, and GCC are satisfied with continuing activation and developing e-Textbooks in their curricula, because digitalization of textbooks content can offer educational institutions with accessibility of e-Textbooks anywhere, and anytime (Parwanda.G, 2013). In 2013, Qatar University started to use e-Textbooks either for reading or as comprehensive e-textbooks, which contain assignments, quizzes and multi-media, in addition to being tools for measuring students’ performance. However, there is no in-depth statistical research for exploring students’ and faculty members’ experience and attitudes toward using e-Textbooks. Also, there exists scarce research on this domain especially in Qatar, GCC and Middle East regions in general. Therefore, this research is an attempt to fill this gap by investigating the students’ and faculty members’ experience about using e-Textbooks at Qatar University to provide the outcomes of this study to University Textbooks.
RESEARCH OBJECTIVES

The purpose of this study is to examine all students (undergraduate – graduate studies) and faculty members using e-Textbooks at Qatar University. Whereas, this study will contribute to the perception of the extent of acceptance of students to deal with e-Textbooks and how the University Textbook Section and colleges can help them to develop the use of e-Textbooks more in line with the Qatar University’s digital transformation vision. Therefore, the main objectives of this research are:

- To explore attitudes and experience of students and instructors towards using e-Textbooks.
- To identify the most important features influencing students and faculty members to use e-Textbooks.
- To find factors and reasons influencing positively or negatively on students and instructors using e-Textbooks.
- To check the awareness level of students and faculty members about the available features in e-Textbooks.

RESEARCH QUESTIONS

- Are QU students and faculty members aware about the features available in e-Textbooks?
- What is the attitude of QU students and faculty members towards using e-Textbooks?
- What are the factors that influence teachers/students using e-Textbooks in learning and teaching?
- What features of e-Textbooks do students and faculty members find most important in influencing them to select an e-Textbook?
DEFINITION OF E-TEXTBOOKS

The electronic textbook (also known as e-Textbook) is a learning tool and can be considered as a worth source of supplementary tasks and materials for students and teachers. E-Textbooks are digitized versions of paper textbooks that can be used online or offline. They are of two types, namely e-Texts for reading purpose only and comprehensive e-Textbooks that contain interactive tools, such as adding notes, highlighting, audio files, videos, animations, 3D visualizations and online assignments and tests, as well as hyperlinks to relevant chapters, sections and websites.
CHAPTER 2: REVIEW

OVERVIEW

This chapter displays an overview of literature related to exploring students and instructors using e-Textbooks in higher education. Firstly, focus begins with the benchmark for this study. Then, three sections that reviewed some existing related literatures to goals of study are highlighted. Firstly, it deals with investigating the relation between perceived attitudes of students and instructors about using e-Textbooks in studying and teaching. Second, it examines the most important features existing in e-Textbooks that influence students and faculty members to use e-Textbooks. Finally, it explores the factors influencing both students and instructors to adopt e-Textbooks in higher education courses.

RESEARCH BENCHMARK

Denoyelles and Raible (2017) conducted a multiyear surveys (2012, 2014, and 2016) to evaluate students’ attitudes and usage about e-Textbooks at the University of Central Florida (UCF). The purpose of 2012 survey was to offer a reference line and to construct future research, while the aim of the 2014 and 2016 surveys was to instrument changes that had happened in excess of time. Specifically, in the 2016 survey, they focused on studying the rate of use, influential factors, role of instructors for e-Textbook types and OER. The 2014 and 2016 survey questionnaire was developed based on the 2012 survey, which contained more in-depth information about instructor performances and the e-textbook types. The three surveys conducted had the same student respondent characteristics and were distributed to 1,179 students by an online survey system. To analyze the data, they used frequencies and percentages to preform students’ use of and beliefs about e-textbooks. In addition, Chi square statistics was used to identify if demographic factors influenced students' e-textbook usage. They
compared outcomes of the 2016 survey to the 2014 and 2012 surveys. According to the three research areas of e-Textbooks usage, adoption factors, and results of the survey of the instructor’s roles showed that the rate of e-Textbook usage increased over the period of four-years from 42% in 2012 into 66% in 2016. Undergraduate students, whose demographic information was -age (younger students), gender (males) in 2014 studying at the College of Business were significantly more likely to use e-textbooks than others were. 51% students commonly used e-textbooks that offered essential features such as highlighting and annotations. Whereas, other types declined slightly in the two-year period (10% "Flat" PDFs, interactive features such as embedded assignments and quizzes) in 2016. Moreover, the students mentioned products that had been used to open e-Textbooks such as Bookshelf, Yuzu, MyMathLab, Lynda, ALEKS, McGraw Connect, and Google Books. However, the factors of (lower cost, ability to access e-Textbooks anywhere, offline and store in one device) that usually encouraged students to use an e-textbook have all declined. Whereas the factors that discouraged students to use an e-textbook have all decreased such as preference of printed textbooks, unfamiliarity with e-Textbooks, and selling back. Also, over the years, students believe that they have the technical and skills to use e-Textbooks effectively. Finally, the teachers’roles results confirmed that the factors of e-textbook acknowledged in the syllabus, technical instructions provided by them, and the instructor modeled the educational use of the e-textbook assisted to adopt e-Textbooks in higher education successfully. In addition, the most positive conclusion that increases the percentage of instructor’s activities to use features of the e-textbook, such as note-taking or highlighting which encourage students to use e-Textbooks increased highly in 2016.
ATTITUDES TOWARDS USING E-TEXTBOOKS

Weisberg (2011) performed a two-year study about college students’ behavior and attitudes toward their use of e-textbook. Consequences of the study disclosed that students’ acceptance and interest in electronic books increased observably as students became more aware and able to use e-textbooks due to some skills they gained from the utilization of e-books such as searching capabilities, taking and sharing notes, as well as other factors that attracted students to use e-books such as portability, cost, and availability.

Hoseth and McLure (2012) examined attitudes towards e-books such as individual differences in preferences, scholarly behaviors and habits, and interactions with e-textbooks. The method of collecting data was by preforming focus groups for students and teachers at a mid-western university. Consequently, this study found that teachers and students accepted that e-Textbooks have had a positive effect on their university lives in changing their strategies for preforming research and in the ways of using the library, generally. The search function of e-books and e-resources allowed users to get specific information. Availability of these attributes (i.e. quick, easy access and convenience) and features (i.e. search function and e-resources) that characterized electronic books, allowed the users who stay outside campus and faraway students to get specific information easily and in a timely manner.

Alawami, N. A. (2016) investigated seven students and three teachers’ perceptions towards three particular e-Textbooks for three majors in three different colleges at Rocky Mountain University by implementing in-depth interviews. The researcher used social cognitive theory which is focused on (a) ease of e-textbook use, (b) oral persuasion/social norm, and (c) prior computer
experience. Students and teachers agreed that selecting textbooks should be in
general based on the quality of the material comprised within the textbooks
regardless of whether the textbook format is print or electronic. They emphasized
that e-Textbooks allowed them to change their strategies of remembering or
organizing while reading. This is because they are more interactive in terms of
using the variety of text tools and ease of access. Finally, there are signs that
innovative technology can change how students learn and this change will reflect
on e-textbooks. Therefore, due to this potential change in student learning process
further research would be required to highlight this question.

Alhammad, R. A. (2017) explored the experiences and attitudes toward
using e-Textbooks for graduate students in college courses while considering the
impact of knowledge, previous technological experience, and confidence on
perceptions and decision-making related to e-Textbooks and their impact on the
attitude either positively and negatively. The findings, according to the in-depth
interviews, indicated that some students have positive attitudes toward selecting
to use the given e-Textbook to the given paper textbook because of the
availability of sharing, discussing, and communicating their thoughts and
opinions about e-Textbook via the Internet with others easily and efficiently.

**FACTORS AFFECTING USING E-TEXTBOOKS**

Chong, Lim, & Ling, 2009 conducted a study about significant obstacles
that discourage a lot of students from using e-books. The outcomes of the study
revealed that students’ acceptance and preferences to using electronic books are
influenced by some factors such as the poor design in terms of page layout,
navigations design, and content design where the good design of an e-book is
considered fundamental to facilitate the process of using of electronic resources.
In terms of navigations design, the findings indicated to the value of the links from the table of contents to chapters and subchapters of the e-book, inserting page number, supplying bookmarking, highlighting, annotating functions, and using short pages to avert scrolling.

Similarly, McLure and Hoseth (2012), studied the behavior of students and employees toward e-books at the Library of Colorado State University (CSU). Researchers used a web survey as a tool to conduct this project. The results indicated that regardless of college and department to which students and employees belong, students’ and employees’ attention to read e-books are affected by the following aspects: subject matter and type of search. They also found that users prefer e-textbooks for several reasons such: easy reviewing content, skimming for information, as well as easy and simultaneous users’ access. However, there remains preference by some users for printed textbooks for the following reasons: some e-Textbooks included restrictions on uploading and printing, eye fatigue as well as some difficulties of moving among electronic textbooks. Moreover, Hoseth & McLure (2012) explored the barriers that face students while using e-books. The results of this study indicated some common obstacles between students during the use of electronic textbook such as the inability to turn the pages, write notes on e-book pages as well as students found difficulties in comparing the information between many e-books at the same time due to difficulty in movement between electronic resources. Furthermore, the results showed more barriers that face students during using e-books such as, some e-textbooks need a connection to the Internet to access the e-book while sometimes the internet service is not available. Moreover, reading e-books for a long time causes some health problems for users such as
headache and eye fatigue. Finally, the results showed that e-book formats vary on different types of devices (smartphones, e-readers, and computers) and often do not work in the same way. However, many students and faculty staff pointed out that the adoption of e-books has become an urgent need in this digital era, though some of them do not yet feel comfortable with these books.

Nilgün Tosun (2014) conducted a study about the reasons for the preferences of students and teachers for reading printed books or e-books. Reading printed books and e-book preferences of students are discussed in terms of two variables; gender and department. 258 students and teachers participated as volunteers in this study; they belong to different education sectors and departments in Trakya like: Computer Education and Instructional Technologies (CEIT), Music Education (ME), Preschool Education (PE), Primary School Education (PSE), Social Sciences Education (SSE) and Turkish Language Education (TLE) departments. The researcher used a survey questionnaire as well as percentage, mean, standard deviation and chi-square test are also used to obtain results of this study. The results showed that 20.9% of the students currently read e-books. The rate of reading e-books among students is higher in CEIT and Social Sciences Education divisions than the other divisions. According to the gender variable, male students read e-books more than female students. The reading rate of students who prefer reading e-books to printed books is 96.5%. However, the results of the study indicated that there are some reasons for students preferring to read printed books to e-books as follows: 25.6% of the participants tend to protect eye health" and 25.2% "of them like holding the book in hands" are the most given answers.

Wang, S. (2015) examined the difference between demographics and...
teachers who are using or not using e-Textbooks, and the relation between the perceived attributes of e-Textbooks and using instructors’ e-Textbooks in teaching in education. A multiple regression, descriptive analysis and Chi-Square tests of independence are the statistical analysis methods that have been used to analyze the research questions. A quantitative research method was adopted by using a questionnaire in this research study. Consequently, descriptive analysis methods such as frequency indicated that there are generally five factors that prevented teachers from using e-Textbooks which were “Instructors’ preference to printed textbook, limited support from institutions, concerning to students’ preference to printed textbooks and students’ different learning styles, availability of e-Textbooks and inadequate knowledge of e-Textbooks in relative teaching subjects, and e-Textbooks as not being helpful. Also, other reasons can be due to the instructors who do not encourage experience of using e-Textbooks and in meeting their teaching needs.”

Recently, Noreen Barajas (2017) investigated quantitative research to examine the factors that influence students to continue to use digital texts. According to theoretical framework, the researcher used the Technology Adoption Model (TAM). This model was developed by Fred Davis (1986) and is used extensively to provide an understanding of user acceptance processes and it is used into the implementation of learning technology. This study used a quantitative, cross-sectional survey instrument based on the E-Book Adoption Scale (Jin, 2014b), and an instrument that was tested for reliability by using Cronbach’s alpha and validity. Reliability is about the consistency of a measure, and validity is about the accuracy of a measure. The results of this study indicated that students whose instructors did not provide resources for using a digital text were more likely to be satisfied with the
digital version of the textbook. Furthermore, the results showed that there was no significant relationship between instructors’ expectations and interventions and students’ continuance to use digital textbooks.

**FEATURES INFLUENCE TO USE E-TEXTBOOKS**

Sheila K. Frye (2014) explored the impact of interactive features of e-Textbooks on understanding the behaviors that students engage in during the modes of “Read-to-Me” (automated without any control by user) and “Read-and-Play” reading (controlled by the user), and the affordances and restrictions of these reading modes. Qualitative data were conducted through interviews, observations, and videotaping during two non-consecutive 30-minute sessions at school for 30 second grade, lower-level readers of students who met individually while observing how each one interacts with two eBook modes while reading on an iPad. Data was collected gradually with getting information about participants’ prior-reading “background knowledge”, thru-reading “behaviors”, after-reading “retellings”, understanding question answers, and individual sights of reading interactive eBooks. Repeated measures ANOVA disclosed that students’ understanding increased over time. However, there was no effect conditions of reading or interactions between time and mode, which show that the change in reading outcome over pre-test to post-test does not differ by mode. In addition, the participants revealed extensive view into the stories and made lengthy deductions about characters’ motives and significant events of story. The findings articulated that styling of eBook as the read aloud feature, speech bubbles, and animations granted participants the ability to create meaning across both modes, producing in powerful grasp outcomes.

Alhammad, R. A. (2017) examined 20 graduate students’ experiences
with comprehensive features (multimedia, tests, feedback, reading and sharing tools) when they use a given e-Textbook compared to the given printed textbook. To collect data, qualitative research of interviewing student one-to-one was conducted. The results of analysis showed they were interested in using demonstrative media (i.e., videos, images, animations, audios, etc.), self-tests features and supportive features (i.e., word definitions, notes searching, flash cards, underlining, keyword search, highlighting with different colors, adding notes, and bookmarking), while the last four supportive features are the most used by participants. The graduate students emphasized that the features available in e-Textbooks contributed a lot to their learning and the causes of giving a value for these features were to “decrease the need for external resources or help, save time and effort, easily work with, adapt and anticipate readers’ needs, easily identify and organize information, reinforce the (I can do) attitude, promote interest, consolidate many things (e.g., definitions, visuals, etc.) into one component, reinforce the ability to retrieve comprehended information, reinforce thoughts, organize ability, widen learning opportunities, be more convenient and efficient.” In conclusion, the students recommended some changes they are looking to see in the layout that include functionality, and a reader device of e-Textbooks, in order to better support their learning and promote chances of e-Textbook acceptance in education. The changes of layout and functionality contain “social interaction (i.e. ability to share written notes with others online), more demonstrative media (i.e. 3D images, animations, and audios), direct links for references and external resources, ability to draw and handwrite notes by using electronic pen, embedding definitions with vocal pronunciation, and images to further explain the meaning, ability to modify
(font type, color, size, and background), ability to voice record notes, bookmarking with emoji that reflect emotions and perspectives, downloading visuals and written notes from e-books, having space in the margins to do handwriting or drawing, taking tests that could track user’s progress and providing unlimited time accessibility.”

Simon (2001) conducted a pilot study to comprehend the e-Reading habits and examine features used and valued by students who used e-textbooks in their college courses during these semesters (Fall 1999, Spring 2000 and Summer 2000) at Fordham College at Lincoln Center. The key findings of this study demonstrated that the most important features for students in e-Textbooks were glossary, bookmarking, highlighting, and annotation because they raised their relief level. Moreover, the researcher mentioned that the design of e-Textbooks that contains friendly and plain to use features would lead to widely spread the favor of using e-Textbooks in education as learning tools.

Vassiliou & Rowley (2008) presented the interactive features existing in e-books such as hyperlinks that tie users to other parts of the e-book, external resources and multi-media items (videos, audios, and images), which make users be able to alter easily from e-books they are reading into searching in the internet for supplementary resources or opening videos and images that would support their learning. Consequently, it was expected that students become attracted and motivated to discover extra information while reading e-books more than when reading printed books. With the upgrading of social tools, such as remarking and chatting, real interaction between users could be easily maintained.
CHAPTER 3: METHODOLOGY

OVERVIEW

This chapter presents the methodology of this study of the attitudes and awareness by students and faculty members about the use of e-Textbooks in higher education. The aims are to explore their attitudes and awareness about using e-Textbooks, examine the factors influencing teachers to adopt e-Textbooks as electronic content and e-Textbooks features that influence teachers and students to select e-Textbooks in their study and teaching, which are essential in encouraging digital learning. Moreover, in the following sections the research survey design, instrument of data collection, research methods, research setting, participants, and procedures for conducting the study, and data analysis procedure will be described.

RESEARCH SURVEY DESIGN

Designing survey was similar to the survey constructed by the University of Central Florida (2016) and the permission of using the survey was approved by the people who take part in research at UCF. For this study, the researcher with University Textbooks Section developed the survey to be suitable for situation of Qatar University and accordingly used two questionnaires for students and instructors. The questionnaire was designed to be in four parts. The first part aims to collect biographic information necessary for applicant's survey that can help us to distinguish the basic details of the students and faculty members. The second part aims to investigate the perception of general use of e-Textbooks. The objective of the third part was to gather students’ and faculty members’ attitudes towards using e-Textbooks. The aim of the last part is to obtain the most important features influencing students and faculty members to use an e-Textbook and get their possible recommendations and comments that may help in improving the experience of using e-Textbooks at Qatar University. Samples of both Arabic and English versions of the questionnaire can be viewed in Appendix A for
students and Appendix B for faculty members. Contingency tables for frequency and percentage for perceptions of participants’ answers to particular questions with using different types of chart such as pie chart, bar chart and histogram were performed. Then, Chi-square test was conducted to determine whether there were statistically significant variations in participants’ answers based on four variables: age, gender, status (student or teacher) and college affiliation. Moreover, Binary logistic regression model was applied to determine the most variables (genders, student classification and GPA) that affect binary responses (if they would recommend other students to use e-Textbooks). Also, the factors impacting students and teacher who are using Reading and Comprehensive e-Textbooks were tested.

RESEARCH INSTRUMENT

The data for this quantitative research has been collected via questionnaire. The participants were selected by two methods, stratified random sampling proportional to size for students, and census for instructors from the two lists provided by the Students Information Services Department (SIS) for all students and instructors who are only using e-Textbooks at Qatar University. The populations are relatively large; two comprehensive questionnaires were designed and distributed to both students and instructors. The data for this study has been collected via two online surveys sent by email to both students and instructors (see surveys in Appendix A and B), which consist of four sections as follows:

The first section (Demographics Data): it consists of age, gender, nationality, college, educational level, student classification, GPA, and years of teaching experience.

The second section (General Use of e-Textbooks): the first question is whether the students or instructors have ever used e-Textbooks since in this study we
look for who used e-Textbooks, then the other remaining questions include frequency, such as types of e-Textbooks used, awareness of downloading and reading offline, way of get e-Textbooks, difficulty level of accessing, the person who makes them aware of availability of e-Textbook option, cost of e-Textbooks (value Likert scale), questions of using features by students and instructors (frequency of use - Likert scale – 4 point), and assessment of instructors’ role (Level of Participation Likert scale – 3 point).

The third section (Attitudes Towards Using e-Textbooks): it consists of the frequency factor of using e-Textbooks, reasons preventing using e-Textbooks, usefulness of e-Textbooks (Frequency – 4 points), using e-Textbooks recommended (Dichotomous Scales), and 9 questions related to four levels of agreement (ease of use, need of training, adopting habits to use e-Textbooks, effectiveness of use comprehensive rather than print textbooks and reading e-Textbooks, engagement in class, improvement of academic performance, free-of-charge e-Textbooks, and clarity of guide materials).

The fourth section (e-Textbook Features): a four-point (1-4) Likert scale is used to assess the level of importance for questions related to three sections in the students’ survey (Reading Navigation features, Study features, and Instructors’ features) and two sections in instructors’ survey (Reading Navigation features, and Study features).

Variables and Codes:

There are three measured variables, eight general variables and seven biographic variables. Below are the names of the variables and codes with their values:
Table 1. Variables Coding

<table>
<thead>
<tr>
<th>Variables</th>
<th>Codes</th>
<th>Target Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group</td>
<td>1= Less than 18</td>
<td>5= 35 – 40</td>
</tr>
<tr>
<td></td>
<td>2= 19 – 24</td>
<td>6= 41 – 44</td>
</tr>
<tr>
<td></td>
<td>3= 25 – 30</td>
<td>7= 45 -50</td>
</tr>
<tr>
<td></td>
<td>4= 31 – 34</td>
<td>8= More than 50</td>
</tr>
<tr>
<td>Gender</td>
<td>1= Female</td>
<td>2= Male</td>
</tr>
<tr>
<td>Nationality</td>
<td>1= Qatari</td>
<td>2= Non- Qatari</td>
</tr>
<tr>
<td>College</td>
<td>1= Business and Economics</td>
<td>6= Law</td>
</tr>
<tr>
<td></td>
<td>2= Medicine</td>
<td>7= Sharia and Islamic Studies</td>
</tr>
<tr>
<td></td>
<td>3= Health Sciences</td>
<td>8= Education</td>
</tr>
<tr>
<td></td>
<td>4= Arts and Sciences</td>
<td>9= Pharmacy</td>
</tr>
<tr>
<td></td>
<td>5= Engineering</td>
<td></td>
</tr>
<tr>
<td>Educational Level</td>
<td>1= Bachelor</td>
<td>2= Diploma</td>
</tr>
<tr>
<td></td>
<td>3= Master</td>
<td>4= PhD</td>
</tr>
<tr>
<td></td>
<td>1= Foundation</td>
<td>2= Freshman</td>
</tr>
<tr>
<td>Student classification</td>
<td>3= Sophomore</td>
<td>4= Junior</td>
</tr>
<tr>
<td></td>
<td>5= Senior</td>
<td>6= Other (Please specify)</td>
</tr>
<tr>
<td>GPA</td>
<td>1= Less than 2</td>
<td>2= 2.1 – 2.5</td>
</tr>
<tr>
<td></td>
<td>3= 2.6 – 3</td>
<td>4= 3.1 – 3.5</td>
</tr>
<tr>
<td></td>
<td>5= 3.6 – 4</td>
<td></td>
</tr>
<tr>
<td>Years of teaching experience</td>
<td>1= Less than 5</td>
<td>2= 6 - 9 years</td>
</tr>
<tr>
<td></td>
<td>3= 10 - 14 years</td>
<td>4= More than 14 years</td>
</tr>
<tr>
<td>Have you used an e-Textbook for any course?</td>
<td>0= No</td>
<td>1= Yes</td>
</tr>
<tr>
<td>Types of e-Textbooks</td>
<td>0= Reading e-Textbooks</td>
<td>1= comprehensive e-Textbooks</td>
</tr>
<tr>
<td></td>
<td>3= Other (Please specify)</td>
<td></td>
</tr>
<tr>
<td>Experience of using e-Textbooks</td>
<td>1= Poor</td>
<td>2= Fair</td>
</tr>
<tr>
<td></td>
<td>3= Good</td>
<td>4= Very Good</td>
</tr>
<tr>
<td></td>
<td>5= Excellent</td>
<td></td>
</tr>
<tr>
<td>Any Question has Yes or No.</td>
<td>0= No</td>
<td>1= Yes</td>
</tr>
<tr>
<td>Any Question has Yes or No or Not sure.</td>
<td>0= No</td>
<td>1= Yes</td>
</tr>
<tr>
<td>Difficulty of using e-Textbooks</td>
<td>1= Easy</td>
<td>2= Moderate</td>
</tr>
<tr>
<td></td>
<td>3= Difficult</td>
<td></td>
</tr>
</tbody>
</table>
Aware of the e-Textbook option
1= Instructor
3= Via Internet
4= Other (please specify)

Cost of e-Textbooks
1= Less than traditional textbooks
3= About the same
2= More than traditional textbooks

Preference of use
1= Electronic Textbook
2= Printed Textbook

Questions that measure the extent of use.
0= Never
2= Almost
1= Seldom
3= Almost Always
2= Sometimes
3= All the time

Questions that measure the extent of agreement or disagreement.
1= Strongly disagree
3= Agree
2= Disagree
4= Strongly agree

Questions that measure the extent of importance.
1= Not at all Important
3= Important
2= Not Important
4= Very Important

Open Question: Write text.

Students & Instructors.

POPULATION AND SAMPLE

Students’ Sample Size:

Students’ questionnaire was distributed to a random sample of 9470 students who used e-Textbooks three times during (Summer 2019 - at the beginning of Fall 2019 – at the end of Fall 2019) semesters. First of all, the researcher contacted SIS department to assist with providing a list of all 14203 students’ detailed information including email contacts. In order to reduce cost and time required, selecting the sample size was based on a confident interval with 2% margin of error and 95% confidence level from the total of population. The total of required sample was 2841 students. Then, each college from the nine colleges was considered as an independent stratum. A proportional stratified random sample was drawn from each stratum. Due to low response from previous surveys experience of University Textbooks section at Qatar University, using an
adjusted sample size according to response rate for the previous experience of responding survey was a good idea to gather responses for at least the original sample size that has been selected from each college. Therefore, the response rate for the last questionnaire was 30%. By finding the response rate for each college and selecting the sample randomly from each stratum by using the function of randomness in Microsoft Excel, the total of adjusted sample based on percentage of response was 9470 students in Table 2. At the end, the survey was distributed into student’s emails and responses were collected via Institutional Survey Research and Analytics Department (ISRA) by using the University’s online server account in Qualtrics software.

Table 2. Adjusted Sample Size for Students

<table>
<thead>
<tr>
<th>College</th>
<th>Total of Students’ Population $N_i$</th>
<th>Original Students’ Sample Size $n_i$</th>
<th>Adjusted Sample Size $n_i^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business and Economics</td>
<td>4133</td>
<td>827</td>
<td>2756</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>3941</td>
<td>788</td>
<td>2628</td>
</tr>
<tr>
<td>Engineering</td>
<td>2530</td>
<td>506</td>
<td>1687</td>
</tr>
<tr>
<td>Education</td>
<td>1401</td>
<td>280</td>
<td>934</td>
</tr>
<tr>
<td>Law</td>
<td>895</td>
<td>179</td>
<td>597</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>452</td>
<td>90</td>
<td>301</td>
</tr>
<tr>
<td>Sharia and Islamic Studies</td>
<td>355</td>
<td>71</td>
<td>237</td>
</tr>
<tr>
<td>Medicine</td>
<td>306</td>
<td>61</td>
<td>204</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>190</td>
<td>38</td>
<td>127</td>
</tr>
<tr>
<td>Total</td>
<td>$N = 14203$</td>
<td>$2841$</td>
<td>$9470$</td>
</tr>
</tbody>
</table>

Students’ Sample Size Calculation:

Total of all student population $N = 14203$

Based on confidence interval and margin of error, the overall of the student sample is $n = 2841$

To find the proportion for each college, below is formula used:

$$n_i = \frac{N_i}{N} \times n$$
Here is an example of using formula with the College of Business and Economics (CBE) and so on for the other colleges.

\[
CBE: n_1 = \frac{N_1}{T} = \frac{4133}{14203} \times 2841 = 826.7 \approx 827
\]

\[
Response\ Rate = \frac{\text{Number of Student responses in past survey}}{\text{Total of sample Students}} = \frac{2100}{7000} \times 100 = 30\%
\]

\[
n_i^* = \frac{n_i}{\text{Response Rate}} = \frac{n_i}{0.30}
\]

**Instructors’ Sample:**

An online questionnaire method was utilized to collect data of instructors. The contact information (e-mails) list of instructor who used e-Textbooks was extracted from the Banner report available in database of University Textbooks Section. Due to the small size of instructor’s population, census technique was employed. Then, as a staff in University Textbooks Section, the researcher used the personal job email to send invitations for finishing the survey for all 278 instructors’ emails by using a URL link of Monkey Survey online software. Research aims, procedures, and advantages were attached to the survey as clarification of doing this research.

**Problems encountered in the data collection and the questionnaire used:**

As the researcher’s aimed to obtain acceptance of distributing design survey, there was a need to go through many processes of reviewing with two departments of Students Affairs and ISRA. Moreover, the time of these procedures was too long because of the postponement of reviewing meeting which took place once a week. In addition, expiration of Qualtrics software, which constructs surveys led to losing more time that could have been exploited to distribute the survey to students before summer vacation.
RESEARCH ANALYSIS METHODS

Stratified Sample:

A stratified sample is a probability sampling technique in which the researcher divides the entire target population into different subgroups, or strata, and then randomly selects the final subjects proportional to the size of strata. This type of sampling is used when the researcher wants to highlight specific subgroups within the population (Crossman, 2013).

Reasons of Use Stratified Sampling:

There are many situations in which researchers would choose stratified random sampling over other types of sampling. First, it is used when the researcher wants to highlight a specific subgroup within the population. Stratified sampling is good for this because it ensures the presence of key subgroups within the sample (Gerow K., Ott R., Scheaffer R.L., & Mendenhall, W., 2011). In order to avoid observed perceptions, most respondents come from specific colleges which are not using e-Textbooks frequently and properly. Thus, proportional stratified random sampling was applied to select appropriate and more accurate sample of the concerned students.

Principal reasons for using stratified random sampling rather than simple random sampling include:

1. Stratification may produce a smaller error of estimation than would be produced by a simple random sample of the same size. This result is particularly true if measurements within strata are very homogeneous.

2. The cost per observation in the survey may be reduced by stratification of the population elements into convenient groupings.
3. Estimates of population parameters may be desired for subgroups of the population. These subgroups should then be identified (Gerow K., et al., 2011).

**Descriptive Analysis:**

Descriptive statistics assist to simplify and summarize huge amounts of data by using different types of descriptive techniques such as graphs, central tendency, dispersion and shape of distribution.

Proportional, bar, and histogram are different types of charts that will be applied to give us a quick and summarized view of respondents’ thoughts and opinions to understand their attitudes and explore the most important factors and e-Textbook features influencing them.

**Contingency Tables Analysis:**

A contingency table is a type of table in a matrix format that displays the (multivariate) frequency distribution of the variables. Contingency tables show frequencies produced by cross-classifying observations.

**Pearson's Chi-Square and Fisher's Exact Tests:**

The original chi-square test, often known as Pearson's chi-square, dates from papers by Karl Pearson in the earlier 1900s. The test serves both as a "goodness- of-fit" test, where the data are categorized along one dimension, and as a test for the more common "contingency table", in which categorization is across two or more dimensions. The expected frequencies are computed as Ri _ Cj=N; where Ri and Cj represent row and column marginal totals and N is the grand total (Howell). We will use the chi-square test for independence for various hypotheses in this project. This test statistic is given by
\[
\chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}
\]

where \(i\) and \(j\) index the rows and columns of the table. on the left is approximately on \((r-1)(c-1)\) degrees of freedom.

Fisher's exact test is applied only in the analysis of small samples but actually, it is valid for all sample sizes. While the chi-squared test relies on an approximation, Fisher's exact test is one of exact tests. Especially when more than 20% of cells have expected frequencies < 5, we need to use Fisher's exact test because applying approximation method is inadequate (Kim, H.-Y., 2017).

It can be used to give a brief of the relationship between interested variables and summarize it in table. In addition, it can apply chi-square and Fisher exact tests by using contingency table to conclude if there is a relationship between the two variables.

**T-test:**

The t-test is any statistical hypothesis test in which the test statistic follows a Student’s t-distribution under the null hypothesis. It can be used to determine if two sets of data are significantly different from each other by using means and standard deviations of two samples to make a comparison. Commonly, it is applied when the test statistic would follow a normal distribution. The formula for T-test is given below:

\[
t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}
\]

This method will be used with the most important variables to make comparison between students who responded first and who responded last, so if means are equal for both of them that may give us an impression that outcomes of survey analysis will not be affected by non-response units and it will be similar for both responses and non-responses.
Logistic Regression:

The logistic regression model has a linear form for the logit of this probability,

\[ \text{logit}[\pi(x)] = \log\left(\frac{\pi(x)}{1-\pi(x)}\right) = \alpha + \beta x \]

The formula implies that \( \pi(x) \) increases or decreases as an S-shaped function of \( x \). The logistic regression formula implies the following formula for the probability \( \pi(x) \)

\[ \pi(x) = \frac{e^{\alpha + \beta x}}{1 + e^{\alpha + \beta x}} \]

Ordinal Logistic Regression

The ordinal logistic regression model has a linear form for the logit of this probability,

\[ \ln\left[ \frac{P(Y \leq j)}{1 - P(Y \leq j)} \right] = \beta_j + \beta x \]

It is used when a dependent variable has more than two categories and the values of each category have a meaningful sequential order where a value is indeed ‘higher’ than the previous one.

This model can be used to determine if (genders, student classification and GPA) affect binary response (if they would recommend other students to use e-Textbooks).

DATA ANALYSIS PROCEDURES

There were two packages used to analyze this study, Microsoft Excel®, version 2016, and IBM® SPSS statistical software, version 26. Microsoft Excel application that is used mainly to construct the proper graphical charts and figures along performing data cleaning and data organizing as it has easy-to-use arithmetic operations, which are useful for organizing data manipulations. The second package, in rank of usage, was
SPSS. This package is most widely used to process a comprehensive statistical analysis for data ranging from basic as descriptive statistics to in-depth inferential statistics.

The first research studies the awareness level of students and faculty members about how they have become aware about e-Textbooks, their experience of using e-Textbooks, the availability of features such as downloading e-Textbooks offline, reading navigation, sharing, making notes and other features. Results will contribute to pointing out if the support and training offered is enough or not. Contingency tables for frequency and percentage for perceptions of participants’ answers to particular questions with using different types of chart such as proportion chart and bar chart were employed to demonstrate the awareness levels to students and teachers with using e-Textbooks.

The second research question examines how the students and teachers think about using e-Textbooks. Results will assist to understand how users in higher education contexts perceive and explain the ease of using and adopting e-Textbooks among students and faculty members. Contingency tables frequency and percentage were performed for collecting perceptions of participants’ answers to particular questions with using different types of chart such as pie chart, bar chart and histogram. Then, Chi-square test was performed to determine whether there were statistically significant variations in participants’ answers based on four variables: age, gender, status (students or teacher) and college affiliation. Also, the binary logistic regression model was applied to determine the most variables (genders, student classification and GPA) that affect binary response (if they would recommend other students to use e-Textbooks).

The third research investigates the factors affecting students and teachers negatively or positively from all aspects such as financial, technical, or any other
reasons. The outcomes will indicate the factors that stimulate or reduce students and
teachers to use e-Textbooks. Moreover, they will assist to put recommendations on how
to improve the usage of e-Textbooks at Qatar University. Cross tabulation frequency
and percentage for perceptions of participant answers to particular questions with using
different types of chart such as proportion chart and bar chart were applied to display
the relation of recommendation of using e-Textbooks to other students by students with
factors of cost, accessibility, and use features by teachers. Moreover, a correlation
analysis between GPA and academic level with two statements (student engagement
with e-Textbooks in class and using e-Textbooks improve academic performance) will
be performed to examine if there is any relationship between these factors.

The fourth research question studies the most important features of e-Textbooks
for both students and teachers such as keywords search, glossary, multimedia, add tags,
add highlight, and add notes and other features. Results will indicate the most
significant tools that make users interested in using e-Textbooks. Contingency tables
and frequency and percentage for perceptions of participant answers to particular
questions with using different types of chart such as proportion chart and bar chart were
used to illustrate the most important tools that motivate both students and faculty
members to select e-Textbooks. In addition, it will contribute to understanding how
teachers interact with these tools that can affect and encourage students to interact with
the e-Textbook, as well.
CHAPTER 4: RESULT AND DISCUSSION

OVERVIEW

The next chapter analyzes the data collected from the participants by applying the research methods that have been demonstrated in chapter III. Findings are organized according to the four research questions and their associated hypotheses, if any, proposed by this study. The findings offer a better insight into how the perceived attributes of e-Textbooks relate to students and instructors using e-Textbooks in learning and teaching with understanding the reasons and features that lead participants to either use or not use e-Textbooks in higher education.

Participants

In this study 9470 students and 278 faculty members were invited to complete the survey via email invitations sent by Survey Research and Analytics Department (ISRA) and the researcher, respectively. The questionnaires were voluntary and participants can leave the survey any time by closing the web browser window. The responses from students were 500 and 53 from teachers who filled out the surveys.

NON-RESPONSE BIAS

During collecting data, there are two kinds of non-response bias such as unit and item non-response. Unit non-response occurs when an individual from the random sample was completely absent to participate in a survey, while item non-response takes place when a respondent does not answer specific questions in a survey. The bias happens once answers to questions are different between the observed and non-respondent units or items.

The item non-response occurred in this study through the times of reminders. Whereas, it was considered in the analysis as missing values. The missing value of some questions increased especially for the questions related to the last two sections of survey and the missing values for students ranged between 127, 187 and 225 out of 500
participants, while missing values for instructors were between 2 and 4 out of 53 participants. Therefore, the last two sections were analyzed by excluding the missing values.

The non-response units existed in this study and the response rate was less than 30% as a previous study implemented in Textbooks section at Qatar University. In order to reduce non-response units, the survey was sent as a reminder to students and faculty members who did not participate in different periods during three semesters. Therefore, a reminder was one of the ways to increase response rate and it was successful to get more responses but not that much and still the non-response rate is low compared to the sample size of study population (see Table 3 and Table 4).

To measure the independent samples between early and late responses based on demographic and agreement statement variables, T-test was used. A non-response bias analysis checks whether non-respondents have different ideas or answers comparing to late respondents that answer survey after a reminder.

![Survey Reminders](image)

**Figure 1.** Students’ reminder percentage per time.

Figure 1 indicates that most of students’ response was from the first time of sending the survey 57%. While, the last reminder did not increase the percentage of response too much as it scored around 43%. 
**Response Rate:**

Response rate is the ratio of the number of participants from the sample who fill in the survey compared to the total number of the original sample to whom the survey is assigned. It is used as a tool to grasp the degree of success in earning a completed survey from a sample.

To calculate the percentage of the survey response rate, the following equation was used:

\[
\frac{\text{# of responses to survey}}{\text{# of people you sent the survey to}} \times 100
\]

Table 3. Students’ response rate after distributing the survey by colleges

<table>
<thead>
<tr>
<th>College</th>
<th>Adjusted Sample Size</th>
<th>Students’ Response to Survey</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business and Economics</td>
<td>2756</td>
<td>130</td>
<td>4.7%</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>2628</td>
<td>122</td>
<td>4.6%</td>
</tr>
<tr>
<td>Engineering</td>
<td>1687</td>
<td>109</td>
<td>6.5%</td>
</tr>
<tr>
<td>Education</td>
<td>934</td>
<td>42</td>
<td>4.5%</td>
</tr>
<tr>
<td>Law</td>
<td>597</td>
<td>32</td>
<td>5.4%</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>301</td>
<td>24</td>
<td>8.0%</td>
</tr>
<tr>
<td>Sharia and Islamic</td>
<td>237</td>
<td>10</td>
<td>4.2%</td>
</tr>
<tr>
<td>Studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td>204</td>
<td>13</td>
<td>6.4%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>127</td>
<td>18</td>
<td>14.2%</td>
</tr>
<tr>
<td>Total</td>
<td>9470</td>
<td>500</td>
<td>5.3%</td>
</tr>
</tbody>
</table>
Table 4. Faculty response rate after distributing the survey by Colleges

<table>
<thead>
<tr>
<th>College</th>
<th>Faculty Response</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business and Economics</td>
<td>23</td>
<td>8.3%</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>21</td>
<td>7.6%</td>
</tr>
<tr>
<td>Engineering</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>Education</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Law</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Sharia and Islamic Studies</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Medicine</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>General Studies.</td>
<td>3</td>
<td>1.1%</td>
</tr>
<tr>
<td>CCP</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>53</strong></td>
<td><strong>19%</strong></td>
</tr>
<tr>
<td><strong>Total of Faculty Population</strong></td>
<td><strong>278</strong></td>
<td></td>
</tr>
</tbody>
</table>

**T-Test Analysis:**

This test was used with the most important variables to make comparison between students who responded first and who responded last, so if means are equal for both of them that may give us an impression that the outcomes of survey analysis will not be affected by non-response units and it will be similar for both response and non-response.

\[ H_0: \mu_{\text{Earlier}} - \mu_{\text{Last}} = 0 \]
\[ H_a: \mu_{\text{Earlier}} - \mu_{\text{Last}} \neq 0 \]

T-Test

Table 5 shows that the p-value of Levene's test and t-test is greater than 0.05, so we fail to reject the null hypothesis and conclude that the variance in demographic variables [age group, gender]. Some of the important e-Textbook statements such as [Types of e-Textbooks; Difficulty of using e-Textbooks; Students' beliefs about the cost of e-Textbooks; Recommending other students to use e-Textbooks; If the e-Textbook is free of charge, I will prefer to use it rather than a printed textbook and Using e-
Textbooks improve my academic performance] show that an earlier reminder is not significantly different than that of last reminder. In other words, there is no difference in the ideas or answers between [earlier – late] respondents.

Table 5. Result of T-test analysis for students' responses after reminders

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equalities of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Age</td>
<td>Equal variances assumed: 3.951 0.047</td>
<td>-1.374 498 0.17</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: -1.35 427.183</td>
<td>0.178</td>
</tr>
<tr>
<td>Gender</td>
<td>Equal variances assumed: 1.538 0.215</td>
<td>-0.623 498 0.534</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: -0.619 448.298</td>
<td>0.536</td>
</tr>
<tr>
<td>GPA</td>
<td>Equal variances assumed: 3.414 0.065</td>
<td>2.589 498 0.01</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: 2.612 472.765</td>
<td>0.009</td>
</tr>
<tr>
<td>Types of e-Textbooks</td>
<td>Equal variances assumed: 0.009 0.926</td>
<td>0.822 371 0.412</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: 0.818 318.983</td>
<td>0.414</td>
</tr>
<tr>
<td>Difficulty of use e-Textbooks</td>
<td>Equal variances assumed: 0.184 0.669</td>
<td>-0.753 371 0.452</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: -0.752 322.166</td>
<td>0.453</td>
</tr>
<tr>
<td>Students believe about cost of e-Textbooks</td>
<td>Equal variances assumed: 1.769 0.184</td>
<td>0.855 371 0.393</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: 0.846 312.959</td>
<td>0.398</td>
</tr>
<tr>
<td>Recommend other students to use e-Textbooks</td>
<td>Equal variances assumed: 0.379 0.539</td>
<td>-0.303 311 0.762</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: -0.303 278.485</td>
<td>0.762</td>
</tr>
<tr>
<td>Reading of the e-Textbook is as easy as a printed textbook</td>
<td>Equal variances assumed: 7.235 0.008</td>
<td>-1.261 311 0.208</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed: -1.235 256.757</td>
<td>0.218</td>
</tr>
<tr>
<td>If the e-Textbook is free of charge, I will prefer to use it rather than a printed textbook</td>
<td>Equal variances assumed: 2.289 0.131</td>
<td>-0.355 311 0.723</td>
</tr>
</tbody>
</table>
DESCRIPTIVE STATISTICS OF DEMOGRAPHICS

Students:

Based on the age groups in Figure 2, 79% of students’ response are between 19 – 29 years, 12% are between 25 – 30 years old, 5% are between 31 – 43 years old, 1% less than 18 and 0.2% are more than 40 years old.

From the frequencies tables in Appendix C, the most students who participated are females with 80% and 20% male students. 58% are Qataris and 42% are non-Qataris. The majority of students from these colleges were as follows 26% from the College of Business and Economics, 24% from the College of Arts and Sciences and 21% from the College of Engineering. Other colleges had the lowest percentages as 8% for Education, 6% for Law, 4% for Health Sciences, 2% for both Medicine and Sharia and Islamic Studies. Most of the students were at the Bachelor degree level with a percentage of 94% and the rest of them were at the graduate degree level as follows: 3% at the Master's degree level, 2.6% at the Diploma level and 0.2 at the PhD level. As for the student classification, they were mostly seniors, juniors, and sophomores with percentages 34%, 23.4% and 23.2% respectively. While, the other student classification came as follows: 11% freshmen, and 2% at the Foundation level and 6.2% are missing.
values. The GPA of most of the respondents was high and their percentages were 26% 3.1 – 3.5, 23% 3.6 – 4 and 22% 2.6 – 3. Whereas, 24% of the students had a GPA of 2.1 – 2.5 and whereas only 5% were less than 2.

Figure 3. Types of e-Textbooks used by students.

The result for types of e-Textbooks used by students were based on only responses (N= 373) whereas the missing value of students was excluded (N= 127). Figure 3 shows 53% of students used comprehensive e-Textbooks while 27% used both reading and comprehensive e-Textbooks in their courses. The rest of students - about 18% of them - used reading e-Textbooks, 2% used other types of e-Textbooks such as a PDF file or e-Textbooks from the internet and 0.3% used comprehensive and other types of e-Textbooks.

Instructors:

From frequencies tables in Appendix C, The age group largest number of teachers’ respondents to survey was more than 50 years old with 43%. While, the age groups for other participant teachers were between 40 – 44 years at 25%, 15% were between 45 – 49 years old, 11% between 35 – 39 years and 6% were between 30 – 34
years old. The most instructors who participated in the survey were males with a percentage of 81% and 19% were females. The 87% were non-Qataris and 13% were Qataris. The majority of instructors come from these colleges as follows: 43% belong to Business and Economics, 40% Arts and Sciences and 7% General Studies. However, other colleges had the lowest percentages in terms of 4% for both Medicine and Engineering, 2% for both Law and Core Curriculum Program. The years of teaching experience for many respondent teachers were more than 14 years with 60%, while the years teaching experience of the others were between 10 – 14 years at 17%, 13% were between 5 – 9 years and 9% less than 5 years.

![Diagram showing types of e-Textbooks used by instructors](image)

Figure 4. Types of e-Textbooks used by instructors

Figure 4 shows that 70% of instructors used reading e-Textbooks and that was because most of the respondents were from the College of Business as mentioned in the descriptive analysis above where roughly most of their e-Textbooks used in courses were for reading only. While, 30% used comprehensive e-Textbooks in their courses.
ANALYSIS OF RESEARCH QUESTIONS

Based on the collected data, several Chi-Square tests, logistic regression, and descriptive analysis were performed in the following sections to answer the four research questions and their associated hypotheses, and present the findings from the results of those tests. All the hypotheses were tested using p < .05. At the end, there is a summary to present and discuss the findings for each analysis of research questions and provide a more conceptual and combined analysis of the whole results.

Research Question 1: Are QU students and faculty aware of the features available in e-Textbooks?

Students' Descriptive Statistics:

The results demonstrate the awareness levels among students and teachers with regard to using e-Textbooks.

Figure 5. Statements of students’ awareness.

Figure 5 reveals that 94% of students used e-Textbooks in their courses and 6% of them did not use them. Moreover, 60% of students did not know that e-Textbooks can be downloaded into their devices and can be read without using the internet and 40% of them are aware of these features. Thus, the support and training of available features is required.
Figure 6. Ways of making students aware of e-Textbook option.

Figure 6 shows that 84% of students became aware of the availability of e-Textbook option by instructors while 7% via internet, 6% classmate and 3% by other ways such as QU website, list of books via My Banner System as the book was only available as an e-Textbook, and referred to the e-Textbook when the physical books were not available.

Figure 7. Features of e-Textbooks that students are aware of using them

Figure 7 shows that reading navigation and study features were commonly used among students with 32% and 40%, respectively. However, students had a very low
sense of awareness of all these features as the above graph mentioned high percentages of lack of awareness for the listed features ranging between 60% - 96%.

**Instructors Descriptive Statistics:**

![Bar chart showing awareness percentages](chart.png)

Figure 8. Statements of instructors’ awareness.

Figure 8 illustrates that 74% of instructors used e-Textbooks for the first time at Qatar University for students as textbooks in their course and 26% of them used them before. Moreover, 43% of the instructors did not have previous experience in using e-Textbooks before they joined Qatar University. In addition, 62% of instructors know about the possibility of downloading e-Textbooks into their devices and reading them without using the internet; 38% of them were not aware of these features. Thus, they need some support and training about the available features.
Figure 9. Instructors' experience with using e-Textbooks at Qatar University.

Figure 9 shows that 45%, 23% and 11% of instructors had a good, very good and excellent experience with using e-Textbooks at Qatar University, respectively. On the other hand, 11% had fair and poor experiences with using e-Textbooks.

Figure 10. Features of e-Textbooks instructors aware about and use it

Figure 10 reveals that reading navigation features were widely used among teachers with 73%. As for the remaining features, 21% of teachers were aware of the instructors’ features whereas 2% were aware of the instructors and social features. Also, 4% of teachers were not aware of all these listed features.
Figure 11. Instructors get training before starting to use e-Textbooks.

Figure 11 depicts that 66% of instructors did not get training before starting to use e-Textbooks while the percentage of instructors who got training before starting to use e-Textbooks was 34%.

**Research Question 2: What is the attitude of QU students and faculty members towards using e-Textbooks?**

**Descriptive Statistics:**

The contingency tables for frequency and percentage for perceptions of participant answers to particular questions with using different types of charts such as pie chart, bar chart and histogram.

**Students Analysis:**

![Bar chart showing students' opinion about the usefulness of e-Textbook resources](image)

Figure 12. Students’ opinion about the usefulness of e-Textbook resources
Figure 12 shows that the majority of participating students find the e-Textbooks and their resources helpful sometimes or rarely when they are working on assignments for the class or preparing for a test with 47% and 27% respectively. 13% never find e-Textbooks helpful. 14% find e-Textbooks helpful in preparing their class works all the time.

![Recommend other students to use e-Textbooks](image)

Figure 13. Students’ opinions about recommending other students to use e-Textbooks

From the above pie chart in Figure 13, it is clear that the percentage of students who will recommend e-Textbooks to other students is 56% which is higher than those students who would not recommend e-Textbooks to others by 44%.

**Students’ Rate of Agreement Level Section:**

To perform an analysis of the results of charts and tables for frequency in this section, the missing value for students was (N= 187) and for instructors was (N= 2). However, the results were based on the participants who answered the questions only for students (N= 313) and instructors (N= 51).

The outcomes for this question are briefed in Figure 14. The following statements indicated a similar distribution with around 14 – 18% and 24 – 29%; each for strongly disagree and disagree, respectively. Also, results came as around 34 – 49%;
each for agree and 13 – 25% strongly agree.

- The guide materials about how to use the e-Textbooks was clear.
- If the e-Textbook is free of charge, I will prefer to use it rather than a printed textbook.
- It is effective and better to learn from a comprehensive e-Textbook than through an e-Textbook with reading features only.
- To effectively learn from a comprehensive e-Textbook compared with a printed textbook.
- Be certain to adapt my study habits while using an e-Textbook.
- To access e-Textbook and use it effectively, I believe I need training.

Other statements showed that three questions with around 23 – 26% of answers of strongly disagree and 37 – 43% disagree, with around 27 - 33% for agree and 5 – 7% strongly agree:

- Using e-Textbooks improve my academic performance.
- If my instructor used an e-Textbook in class, I would be more engaged in the class.
- Reading of the e-Textbook is as easy as a printed textbook.
Figure 14. The percentage of agreement level of students on some statement about e-Textbooks

**Crosstabs and Chi Square:**

Crosstabs and Chi Square were used for these categories versus general e-Textbooks questions and some demographic variables such as educational level and GPA. To perform this test, the researcher combined some categories to obtain expected frequencies larger than 5, such as the answer of the question that states “students use e-Textbooks to improve their academic performance” come under two categories “Strongly disagree” and “Disagree” into one category “Disagree” and “Agree” and
“Strongly agree” become one category “Agree”. In addition, educational level became two categories “Undergraduate” and “Graduate”. The following tables indicate the results:

\[ H_0: \text{There is no relation between "Students use e-Textbooks to improve their academic performance and educational level."} \]

\[ H_0: \text{There is no relation between "Students use e-Textbooks to improve their academic performance and GPA."} \]

Table 6. Result of Chi-Square Test between students’ use of e-Textbooks to improve their academic performance * Educational Level and GPA

<table>
<thead>
<tr>
<th>Pearson Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Expected Cells Count</th>
<th>N of Valid Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students use e-Textbooks to improve their academic performance * Educational Level</td>
<td>1.985(^a)</td>
<td>1</td>
<td>.159</td>
<td>a. 0 cells (0.0%)</td>
<td>313</td>
</tr>
<tr>
<td>Students use e-Textbooks to improve their academic performance * GPA</td>
<td>6.529(^a)</td>
<td>4</td>
<td>.163</td>
<td>a. 1 cells (10.0%)</td>
<td>313</td>
</tr>
</tbody>
</table>

Based on Table 6, P-value = 0.159 and 0.163 of Pearson Chi-Square is greater than significant level \(\alpha = 0.05\). Thus, we fail to reject the null hypothesis and the data provide sufficient evidence to conclude there is no relation between students’ use of e-Textbooks to improve their academic performance and educational level as well as GPA.
**Binary Logistic Regression Model:**

Logistic regression model was applied to determine the most variables (genders, student classification and GPA) that affect binary response (if students who used e-Textbooks will recommend other students to use them). The general logit model is given by:

\[
\ln \left( \frac{\pi}{1 - \pi} \right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \\
\ln \left( \frac{\pi}{1 - \pi} \right) = \beta_0 + \beta_1 \text{Gender} + \beta_2 \text{Student Classification} + \beta_3 \text{GPA}
\]

The below output from SPSS shows Block 1 section which is added the gender, GPA and Student Classification variables as a predictor. Therefore, the output analysis will be as follows:

\[
H_0: \beta_i = 0 \quad \text{for all } i \\
H_a: \beta_i \neq 0 \quad \text{for at least 1 coefficient}
\]

<table>
<thead>
<tr>
<th>Variables in the Equation</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
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<tr>
<td>Step 1a</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.275</td>
<td>0.294</td>
<td>0.872</td>
<td>1</td>
<td>0.35</td>
<td>1.316</td>
</tr>
<tr>
<td>Student classification</td>
<td>-0.104</td>
<td>0.113</td>
<td>0.844</td>
<td>1</td>
<td>0.358</td>
<td>0.901</td>
</tr>
<tr>
<td>GPA</td>
<td>0.003</td>
<td>0.097</td>
<td>0.001</td>
<td>1</td>
<td>0.979</td>
<td>1.003</td>
</tr>
<tr>
<td>Constant</td>
<td>0.283</td>
<td>0.684</td>
<td>0.171</td>
<td>1</td>
<td>0.679</td>
<td>1.327</td>
</tr>
</tbody>
</table>

Table 7. Result of binary logistic regression equation

Table 7. The P-value for the result of adding [Gender – GPA – Students Classification] into the model is given in the table above and we can see that P-value is greater than the conventional significance level of 0.05. Hence, we would conclude that the addition of [Gender – GPA – Students Classification] to the model is not statistically significant. In other words, these variables do not significantly affect students who used e-Textbooks to recommend others to use them as well.
Instructors' Analysis:

From the bar chart below in Figure 15, it is clear that the percentage of teachers who will recommend e-Textbooks to other colleagues is 71% which is higher than teachers who would not recommend e-Textbooks to others 29%. Moreover, the majority of instructors’ find the e-Textbooks and their resources highly helpful when they are working on assignments for the class or preparing for a test with 69%, while 31% never find e-Textbooks helpful in preparing their class works.

Figure 15. Teachers’ opinion about recommending other colleagues to use e-Textbooks and the usefulness when working on assignments for the class or preparing for a test.

Figure 16. Preference of using textbooks in the future based on teachers' experience with e-Textbooks

Figure 16 indicates the percentage of teachers who have experience with e-Textbooks and their preference of using Textbooks in the future. The rate of teachers who prefer e-Textbooks is 58% higher than those who would like to use printed textbooks 42%.
Instructors' Rate of Agreement Level Section:

The results for this question are briefly illustrated in Figure 17. The following statements indicated around 8 – 14% and 18 – 22%, each for strongly disagree and Disagree, respectively whereas around 43 – 59% each for agree and 8 – 24% strongly agree:

- It was easy to create and grade assignments using the online system.
- The guide materials about how to use the e-Textbooks were clear for my students.
- If the prices of e-Textbook were less than printed, I would prefer to buy it.
- Using e-Textbooks improves my students’ academic performance.
- My students would be more engaged in the class if I used an e-Textbook in the class.
- I believe my students can learn more effectively with a comprehensive e-Textbook than with an e-Textbook with reading features only.
- I believe I can adapt my teach habits to use an e-Textbook.

However, the remaining two statements showed approximate similar distribution of answers. Answers of strongly disagree and disagree were around 24% and 31 – 35%, respectively with around 39 – 41% for agree and 2 – 4% for strongly agree:

- I believe I need training to learn how to access and use an e-Textbook effectively.
- Reading of the e-Textbook is as easy as a printed textbook.
Figure 17. The percentage of agreement level of instructors’ on some statements about e-Textbooks

Research Question 3: What are the factors influencing students in using e-Textbooks in teaching?

Descriptive Statistics:

The contingency tables show the frequency and percentage for participant answers to the factors affecting on them in terms of using e-Textbooks can be either positive or negative.

Students' Analysis:

To analyze these two questions, missing value of students was excluded (N=127) and the result can be found in the figures below based on only responses (N=373).
Figure 18. Difficulty of use e-Textbooks by students

Among the participants in Figure 18, 57% the majority of them described the difficulty of using e-Textbooks as moderate. The reset of them find it easy and difficult to use with around 26% and 16% respectively.

Figure 19. Students' belief about the cost of e-Textbooks

As shown in Figure 19, 41% of students believed that the cost of e-Textbooks and printed textbooks are the same. Although 34% of them believed the cost of e-Textbooks is less than traditional textbooks, 25% believed e-Textbooks are more costly than printed textbooks.

As demonstrated in Figure 20 below, the following factors had an overwhelmingly influence on most students in terms of selecting e-Textbooks rather than printed textbooks and the percentage ranged between 82 – 86%:
Allowance to print pages from an e-Textbook if required.

The e-Textbook is integrated seamlessly with an online course via Blackboard.

Absence of interactive features available in printed textbooks.

Accessing e-Textbooks on devices without the Internet.

Lower cost than printed textbook.

In addition, Figure 20 illustrates that 73% of participants are selecting to use e-Textbooks rather than printed textbooks due to ability to keep it as a reference book for future use.

The remaining two factors still had a high percentage of around 67 – 68% to select using e-Textbooks rather than printed textbooks.

- Accessibility anywhere and store many e-Textbooks on one device.
- Environmentally friendly by saving paper.

![Bar graph showing factors influencing students to select e-Textbooks](image)

Figure 20. Factors influencing students to select e-Textbooks rather than printed textbooks
As illustrated in Figure 21, the following are the most causes that encourage students to use e-Textbooks in their college courses and the range of percentage is around 86 – 97%:

- No device that allows me to read an e-Textbook.
- Never been requested to buy an e-Textbook from an instructor.
- High cost of books.
- Health reasons.
- Not familiar with e-Textbooks.
- Book list does not have an e-Textbook version.

However, 42% of students stated that the reason of not using e-Textbooks was that they prefer to use printed textbooks and 58% prefer using e-Textbooks.

![Figure 21. Reasons preventing students from using e-Textbooks](image)

Additionally, students shared other causes that may discourage them to use e-Textbooks 37 frequency, such as the following:
Comprehensive e-Textbooks take a lot of time to be downloaded, and need a very strong connection. Format of answers in assignments and quizzes is said to be wrong of mistakes, so I feel it is somehow limited and a cause of stress for students, especially on submission days when you cannot afford a very strong internet connection.

I do not want to sit on computers for a long time and I enjoy writing test on the outside paper and sticking them to the paper book.

Student like a printed book because if I read e-Textbooks for long hours or anywhere it needs for a charger to the device.

I prefer to have both an e-textbook and a printed book.

I take too much time to open e-books.

Low display quality of e-book.

E-Textbook access is limited for only one year compared to a printed textbook.

Students like to use both because with a printed textbook they can focus more and e-Textbook is very friendly.

Teachers do not provide us with enough explanation of how to use e-Textbooks.

Like to use e-Textbooks for assignment only not for studying.

Some courses do not need to use e-Textbooks because teacher's explanation with using PowerPoint is enough.

E-Textbooks cannot be kept forever as printed textbooks.

The content of tests is not similar to e-Textbooks and teacher's explanation via class.
**Crosstabs and Chi Square:**

Crosstabs and Chi Square were used for these categories versus students’ attitude towards e-Textbooks questions and three variables of e-Textbooks factors such as difficulty of use e-Textbooks, beliefs about the cost of e-Textbooks cost and rate level of using for Instructor features. The following indicates the results in Table 8:

**H₀: There is no relation between Recommend other students to use e-Textbooks and the three factors e-Textbooks**

Table 8. Result of Chi-Square Test between recommending other students to use e-Textbooks and Difficulty of use e-Textbooks

<table>
<thead>
<tr>
<th>Pearson Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Expected Cells Count</th>
<th>N of Valid Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommend other students to use e-Textbooks * Difficulty of use e-Textbooks</td>
<td>30.068&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2</td>
<td>0.000</td>
<td>a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.49.</td>
<td>313</td>
</tr>
</tbody>
</table>

Based on Table 8, the P-value = 0.000 of Pearson Chi-Square is less than the significant level α = 0.05, so we reject the null hypothesis. Therefore, the data provide sufficient evidence to conclude there is a relation between recommending using e-Textbooks to other students and the difficulty of use e-Textbooks.

**H₀: There is no relation between Recommend other students to use e-Textbooks and the three factors e-Textbooks**
Table 9. Result of Chi-Square Test between recommending other students to use e-Textbooks and the three factors e-Textbooks

<table>
<thead>
<tr>
<th>Pearson Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Expected Cells Count</th>
<th>N of Valid Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommend other students to use e-Textbooks * Students believe about cost of e-Textbooks</td>
<td>30.079a</td>
<td>2</td>
<td>0.000</td>
<td>a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.19.</td>
<td>313</td>
</tr>
</tbody>
</table>

Based on Table 9, the P-value = 0.000 of Pearson Chi-Square is less than the significant level $\alpha = 0.05$, so we reject the null hypothesis. Therefore, the data provide sufficient evidence to conclude there is a relation between recommending using e-Textbooks to other students and the three factors of e-Textbooks beliefs about the cost of e-Textbooks cost.

$H_0$: There is a no relation between Recommend other students to use e-Textbooks and the three factors e-Textbooks

Table 10. Result of Chi-Square Test between recommending other students to use e-Textbooks and the three factors e-Textbooks

<table>
<thead>
<tr>
<th>Pearson Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Expected Cells Count</th>
<th>N of Valid Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommend other students to use e-Textbooks * Instructor features (e.g. reading highlights from instructors, responding to instructor, etc.)</td>
<td>4.167a</td>
<td>1</td>
<td>0.041</td>
<td>a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 26.01.</td>
<td>313</td>
</tr>
</tbody>
</table>

Based on Table 10 below, the P-value = 0.041 of Pearson Chi-Square is less than the significant level $\alpha = 0.05$, so we reject the null hypothesis. Therefore, the data
provide sufficient evidence to conclude there is a relation between recommending using e-Textbooks to other students and rate level of using for Instructor features.

**Correlation:**

This section investigates the relation between GPA and academic level with two statements (students' engagement with e-Textbooks in class and using e-Textbooks improve academic performance).

*H₀: There is a no relationship between GPA and the two factors [students' engagement with e-Textbooks in class if their instructor used an e-Textbook in class and using e-Textbooks improves my academic performance]*

As demonstrated in Table 11 below, the Spearman's correlation confirms the week negative relationship between GPA and both factors [students' engagement with e-Textbooks in class if their instructor used an e-Textbook in class and Using e-Textbooks improve my academic performance], which was not statistically significant (r = -.021, p = .713 and r = -.043, p = .449), respectively. While, the Spearman's correlation confirms the approximately strong positive relationship between both factors [students' engagement with e-Textbooks in class if their instructor used an e-Textbook in class and Using e-Textbooks improves my academic performance], which was statistically significant (r = .584, p = .000 and r = .584, p = .000), respectively.
Table 11. Result of Spearman’s Correlations between GPA and engagement of students in the class if my instructor used an e-Textbook in class and Using e-Textbooks improves my academic performance

<table>
<thead>
<tr>
<th>Spearman’s rho</th>
<th>GPA Correlation Coefficient</th>
<th>I would be more engaged in the class if my instructor used an e-Textbook in class</th>
<th>Using e-Textbooks improve my academic performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.000</td>
<td>-.021</td>
<td>-.043</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.</td>
<td>.713</td>
</tr>
<tr>
<td>N</td>
<td>313</td>
<td>313</td>
<td>313</td>
</tr>
<tr>
<td>I would be more engaged in the class if my instructor used an e-Textbook in class</td>
<td>Correlation Coefficient</td>
<td>-.021</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.713</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>313</td>
<td>313</td>
<td>313</td>
</tr>
<tr>
<td>Using e-Textbooks improve my academic performance</td>
<td>Correlation Coefficient</td>
<td>-.043</td>
<td>.584**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.449</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>313</td>
<td>313</td>
<td>313</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Table 12. Result of Spearman’s Correlations between Educational Level and engagement of student in the class if my instructor used an e-Textbook in class and using e-Textbooks improve my academic performance

<table>
<thead>
<tr>
<th></th>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman’s rho</td>
<td>I would be more engaged in the class if my instructor used an e-Textbook in class</td>
<td>.071</td>
<td>.210</td>
</tr>
<tr>
<td></td>
<td>Using e-Textbooks improve my academic performance</td>
<td>1.000</td>
<td>.078</td>
</tr>
<tr>
<td></td>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.210</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>313</td>
<td>313</td>
</tr>
<tr>
<td></td>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.078</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>313</td>
<td>313</td>
</tr>
</tbody>
</table>

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

Table 12 indicates a weak positive relationship between educational level and both factors [students’ engagement with e-Textbooks in class if their instructor used an e-Textbook in class; and using e-Textbooks improves my academic performance], which was not statistically significant \((r = .071, p = .210 \text{ and } r = .100, p = .078)\), respectively.
Instructors' Analysis:

Among the participants in Figure 22 below, 62% the majority of teachers referred to the difficulty of using e-Textbooks as moderate. However, the rest teachers found it easy and difficult to use with around 21% and 17% respectively.

Figure 22. Difficulty of use e-Textbooks by instructors

As shown in Figure 23 below, 68% of teachers believed that the cost of e-Textbooks is less than traditional textbooks. Although 30% of them believed the cost of e-Textbooks is about the same to traditional textbooks, only 2% believed e-Textbooks are more costly than printed textbooks.

Figure 23. Instructors' belief about the cost of e-Textbooks
As shown in Figure 24 below, the following factors overwhelmingly influence most teachers to select e-Textbooks rather than printed textbooks and the percentage ranges between 49 – 62%:

- Allowance to print pages from an e-Textbook if required.
- The e-Textbook is integrated seamlessly with an online course via Blackboard.
- Allow to keep it as a reference book for future use.
- Lower cost than printed textbook.

However, 60% of teachers expressed that these two factors do not encourage them to select to use e-Textbooks rather than printed textbooks:

- Accessibility anywhere and store many e-Textbooks on one device.
- Environmentally friendly by saving paper.

The remaining factors influence teachers and still have a high percentage of around 53 – 59% to select using e-Textbooks rather than printed textbooks.

- Absence of interactive features available on printed books.
- Accessing e-Textbooks on a device without Internet.
Figure 24. Factors influence on instructors to select an e-Textbooks rather than a printed textbook.

Figure 25 below illustrates the following most reasons that prevent instructors from using e-Textbooks in their college courses and the range of percentage is 79 – 94%:

- No device that allows me to read an e-Textbook.
- The cost of books was too high.
- Health reasons.
- Not familiar with e-Textbooks.

While, 42% of teachers stated that the reason of not using e-Textbooks was that they prefer to use printed textbooks and 58% prefer using e-Textbooks.
Additionally, teachers shared other reasons that may prevent them from using e-Textbooks, such as the following:

- E-Textbook is not user friendly.
- Lack of desired titles.
- Lack of support to faculty and student.
- Less printing of pages available with e-Textbooks.
- Students find it difficult to read and deal with e-Textbooks.
- The platform VitalSource on Windows is slow, very difficult to use and not very friendly.
- There is no interaction between the authors and the students.

Figure 25. Reason prevent instructors from using e-Textbook
Crosstabs and Chi Square Test:

Crosstabs and Chi Square were used for these categories versus teachers' attitude towards e-Textbooks question and two of e-Textbook factors variables such as difficulty of use e-Textbooks, beliefs with regard to e-Textbook cost. To analyze these questions, the missing value of teacher is excluded (N=2) and the result of test is based on only responses (N=51). The following indicates the results in Table 11 and 12:

\( H_0: \) There is a no relation between "Recommending other teachers to use e-Textbooks and difficulty of use e-Textbooks"

Table 13. Result of Chi-Square Test between recommending other teachers to use e-Textbooks and difficulty of use e-Textbooks

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
<th>Point Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.650(^a)</td>
<td>2</td>
<td>.438</td>
<td>.518</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.644</td>
<td>2</td>
<td>.440</td>
<td>.518</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>1.627</td>
<td></td>
<td>.518</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.588(^b)</td>
<td>1</td>
<td>.208</td>
<td>.231</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 13 above, since there are (33.3% and 50.0%) of the cells have expected count less than 5, it is better to use Fisher Exact test to draw conclusions. Based on the P-value = 0.518 is greater than significant level \( \alpha = 0.05 \). Thus, we fail to reject the null hypothesis and can conclude the data provide sufficient evidence that there is no relation between recommending using e-Textbooks to other teachers and difficulty of use e-Textbooks.
**H₀**: There is no relation between "Recommend other teachers to use e-Textbooks and Instructors' belief about the cost of e-Textbooks"

Table 14. Result of Chi-Square Test between recommending other teachers to use e-Textbooks and Instructors' belief about the cost of e-Textbooks

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Asymptotic Significance</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
<th>Point Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.443a</td>
<td>.801</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.722</td>
<td>.697</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>.535</td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.009b</td>
<td>.923</td>
<td>1.000</td>
<td>.547</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .29.
b. The standardized statistic is -.097.

In Table 14 above, since there are (50.0%) of the cells have expected count less than 5, it is better to use Fisher Exact test to draw conclusions. Based on the P-value = 1 is greater than significant level α = 0.05. Thus, we fail to reject the null hypothesis and can conclude the data provide sufficient evidence that there is no relation between recommending to use e-Textbooks to other teachers and believes of e-Textbooks cost.
Research Question 4: What features of e-Textbooks students and faculty members find most important in influencing them to select an e-Textbook?

Descriptive Statistics:

This section analyzes the answers to the most important features influencing student and faculty members to choose to use e-Textbooks, whereas the missing value has been excluded for students (N= 225) and for teachers (N= 4). The results in the figures below are based on only responses for students (N= 275) and (N= 49).

Students' Analysis:

As showed in Figure 26 below, all reading navigation features had an overwhelmingly important result with both important with around 42 – 47% and very important with around 33 – 43% chosen by most students.

![Figure 26. Importance of reading navigation features to students](image-url)
As presented in below Figure 27, all study features had a significantly important result with both important with around 37 – 54% and very important with around 31 – 48% chosen by most students.

<table>
<thead>
<tr>
<th>Study Feature</th>
<th>Not at all Important</th>
<th>Not Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Download e-Textbook and keep it forever</td>
<td>7</td>
<td>8</td>
<td>37</td>
<td>48</td>
</tr>
<tr>
<td>Take interactive quizzes and assignments/assessments embedded in the each chapter</td>
<td>6</td>
<td>12</td>
<td>51</td>
<td>31</td>
</tr>
<tr>
<td>Make notes within the page, and view all of the chapter notes in a single area</td>
<td>7</td>
<td>8</td>
<td>48</td>
<td>37</td>
</tr>
<tr>
<td>Highlight words, and view all of the chapter highlights in a single area</td>
<td>5</td>
<td>11</td>
<td>51</td>
<td>33</td>
</tr>
<tr>
<td>Add tags or keywords to categorize information in the chapter</td>
<td>6</td>
<td>15</td>
<td>54</td>
<td>25</td>
</tr>
</tbody>
</table>

Figure 27. Importance of study features to students

<table>
<thead>
<tr>
<th>Instructor Feature</th>
<th>Not at all Important</th>
<th>Not Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read highlights and notes made by the instructor</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respond to an instructor’s notes or discussion topic in the e-Textbook</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have the instructor reply to your notes/discussions the e-Textbook</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 28. Importance of instructors features to students
As illustrated in Figure 28, all instructors' features had a significantly important result with either important with around 43 – 46% or very important with around 32 – 39% chosen by most students.

**Instructors Analysis:**

As shown in Figure 29, all reading navigation features had a significantly important result with either important with around 59 – 71% and very important with around 18 – 29% chosen by most instructors.

![Bar chart showing the importance of reading navigation features to instructors](image-url)

Figure 29. Importance of reading navigation features to instructors
As presented in Figure 30, three content preparing features had a significantly important result with around 57 – 59% as important or very important with around 14 – 16% chosen by most instructors, which are:

- Add tags or keywords to categorize information in the chapter.
- Highlight words, and view all of the chapter highlights in a single area.
- Make notes within the page, and view all of the chapter notes in a single area.

In addition, instructors indicated that creating interactive quizzes, assignments, assessments, media videos and case study embedded in the chapter is 41% very important, and 51% as important for content preparing feature.
STUDENTS’ SUGGESTIONS OR COMMENTS TO IMPROVE THE SERVICES OF E-TEXTBOOKS

The most important comments for students were mentioned in the points below:

- Make the electronic books only cover the part we study so we can focus on that part to study and do not feel overwhelmed.
- Explain how to access e-Textbooks because it takes time and the design of layout has been a major annoyance such as turning the pages.
- Most e-Textbooks only have the simple features such as highlighting and making notes, but in order to be preferred they must include all the features from the main publisher such as quizzes, answers for comprehensive questions and other different activities.
- Preferably provide us with the Textbook beside the eBook especially for physics, calculus, and other books that need exercising because it is difficult to read from the eBook.
- I believe students and instructors in QU need to be taught how to effectively utilize e-Textbooks and the take advantage of the ubiquity of this advanced technology. Because the level of awareness is so low, this makes us feel that it is a difficult thing and disables us from using it in the meant way.
- They do not like e-Textbooks because it is waste of time and they can find all books online free.
- I usually use a pdf version of my book on iPad and it works perfect, adding photos that represent my answer of a question in the book or an explanation written by the lecturer on the white board makes me study better and understand more. Handwriting my notes on pdf is also important.
- It is a good survey but to be honest it is a little bit long which as student I know that other students will not complete it or ignore it. Also, it was helpful in some
questions as I did not know about that features in e-books.

- Make them available on all types of devices like tablets and phones and make sure they are easy to use.
- Traditional printed books are better because they can be passed down to students who need them but cannot afford to buy them or would rather save their money for other university expenses. (Yes students like these do exist) but this feature is impossible to have in e-Textbooks.
- By using laptops and iPads, it is impossible to focus and take notes in the class; one small notification will disturb student’s focus immediately.
- Make both e-Textbooks and printed available and optional.
- I hope the Qatar University administration cancel the e-Textbooks system, because I purchased an e-Textbook based on request of the professor, but he did not use it and never read it, so it is a waste of time and money for the student.
- At every first academic year for each course the professor should explain how to use e-Textbooks, and the professor uses the e-book features such as highlighting and making notes.
- There may be a course for students and professors to learn how to effectively use e-Textbooks, and this may be part of the seminar course.

INSTRUCTORS’ SUGGESTIONS OR COMMENTS TO IMPROVE THE SERVICES OF E-TEXTBOOKS

The most important comments for instructors were mentioned in the points below:

- Integrate them to make quizzes in blackboard.
- Authors within Qatari context should author Arabic texts.
- Focus on interactive e-Textbooks.
• Have a smooth platform and easy to use. Sometimes, the platforms are very difficult to use and this makes the experience awful! Guidelines for students should be made available, as this is not totally the responsibility of the faculty.

• Most of the administrations do not like to take the risk of applying new ideas.

• Those students who are forced to use an e-book are also printing the chapters of the e-book for reading. It is more costly and resource consuming. Mostly all students do not have the habit of reading from an electronic device for longer and it can be hard for their health.

• The inclusion of e-Textbooks as a mandatory book in some courses.

• The e-Textbook facilities the printed textbooks but not as an alternative.

• The reality is that students do not read the e-book (as used in a 1st year multi-section course). They rely on class notes and a variety of other assignments as well as the internet to study. The quizzes provided by our e-Textbook are useful but students would have profited from the publisher providing versions that are more accessible to non-English native speakers and quiz questions while having the same difficulty being more simply worded. We have had minimal or no assistance from the publisher in spite of promises when we started the e-book version. Instead, students relied very heavily on lecture notes I provide on Blackboard.
CHAPTER 5: CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

CONCLUSION

This quantitative study discovered the students and faculty members’ attitudes and awareness about using of e-Textbooks. Also, it explored the factors that influenced the use of both types of e-Textbooks and the most important features that encourage or prevent them to choose e-Textbooks to use as learning and teaching tools in higher education. The literature reviews focused on a multiyear surveys conducted at the University of Central Florida (UCF) to evaluate students’ attitudes and usage about e-Textbooks and they were used as research benchmarks of this study with other three sections related to the research questions.

The results of demographic questions indicated that the most age groups that participated as students were between 19 – 29 years and more than 50 years old for instructors. The number of female students’ was more than males with 80%. As for teachers, the number of male teachers was more than females with 81%. The nationality for Qatari students is more than non-Qataris while the opposite is true for teachers. The majority of students held Bachelor degree 94% from these the colleges as follows: 26% Business and Economics, 24% Arts and Sciences 21% Engineering, while for instructors, they come from these colleges as follows: 43% Business and Economics, 40% Arts and Sciences and 7% General Studies. The most respondent students had a high GPA. Moreover, the result for the types of e-Textbooks used indicated that most of the students used both reading and comprehensive e-Textbooks while instructors used reading e-Textbooks because most of them belonged to the College of Business where roughly most of their e-Textbooks used in courses are for reading only. On the other hand, the remaining 30% instructors used comprehensive e-Textbooks in their
courses. The years of teaching experience for many teachers’ respondents were more than 14 years and ranged between 10 – 14 years.

The first research question explored the awareness level of students and faculty members about how they became aware about e-Textbooks, their experience of using e-Textbooks, the availability of features such as downloading e-Textbooks offline, reading navigation, sharing, making notes and other features. The findings revealed that both students and teachers were aware of reading navigation features (e.g. search, glossary, etc.) while some students were aware of the study features with 32%. However, the sense of awareness among students and teachers was very low about instructors (e.g. reading highlights by instructors, responding to instructor, etc.), social (e.g. sharing and following others, etc.) and study (e.g. keywords, highlight, making notes, taking homework/quizzes, etc.) features. Moreover, the findings showed 74% of instructors used e-Textbooks for the first time at Qatar University but 43% of them did not have experience in using e-Textbooks before they joined Qatar University. Approximately 79% expressed that their experience with using e-Textbooks at Qatar University ranged between excellent and good. Therefore, instructors’ role to spearhead knowledge to students about the availability of e-Textbooks was clear whereas 94% of students were aware about availability of e-Textbooks in their courses. Although 62% of instructors knew about the possibility of downloading e-Textbooks and reading them without using the internet, this knowledge was not yet transferred by them to 60% of students who were not aware about such features. So, training and support offered with respect to these available features was not enough for both.

The most important findings about students’ attitudes for the second research question indicated that students got benefit as follows: 14% all the time and 47%
sometimes from using e-Textbooks when they were preparing for their assignments and quizzes, while the percentage varied by decreasing gradually to 27% rarely and 13% never finding e-Textbooks helpful. The 56% of students expressed that they were happy with using e-Textbooks and they were going to recommend them to other students. The majority of students agreed on the clarity of guide materials of e-Textbooks, preferred to use e-Textbooks if they were free of charge, willing to use comprehensive e-Textbook better than reading e-Textbook, and found them more interactive than a printed textbook, learned more effectively from comprehensive e-Textbook than printed textbook, ability of students to adopt their study habits to use e-Textbook and they believed e-Textbooks training was required to use them effectively. However, most of the students explained that using e-Textbooks did not improve their academic performance, which is the same result obtained by chi-square test: there were no significant differences found between improving academic performance and biographic variables (GPA and educational level). In addition, students did not find that if their instructor used an e-Textbook in class, they would be more engaged in the class. Moreover, students found reading an e-Textbook was not as easy as a printed textbook. Finally, binary logistic regression concluded that adding these demographic variables [Gender – GPA – Students Classification] to the model did not significantly impact students who used e-Textbooks to recommend other students to use them.

On the other hand, the findings about teachers in the second research question explained that most of them were interested in using e-Textbooks as 71% of them would recommend e-Textbooks to other colleagues, 69% of instructors found the e-Textbooks and their resources as highly helpful when they were working on assignments for the class or preparing for a test and 58% of teacher would prefer to use e-Textbooks in the future. Moreover, around 51 – 78% of teachers believed that e-Textbooks were helpful
to increase their students’ academic performance; students learn effectively with a comprehensive e-Textbook, and become more engaged in class. In addition, instructors’ answers indicated that they had a very good knowledge about using an online system to create and grade assignments so they could adopt their teaching habits to use e-Textbooks. In addition, they agreed to prefer to buy e-Textbooks if the price of e-Textbooks is less than the printed ones. However, around 41 – 45% of teachers strongly agreed that they needed more training to learn and use e-Textbooks effectively. Moreover, instructors believed reading e-Textbook was as easy as a printed textbook.

In the third research question, many factors were found out to influence both instructors and students in terms of using e-Textbooks in teaching. The majority of teachers and students referred to the difficulty of using e-Textbooks as moderate. They also referred to the cost of e-Textbooks as there were different opinions among teachers and students. 68% of teachers and 34% of students believed the cost of e-Textbooks is less than traditional textbooks whereas 30% of teachers and 41% of students said that the cost of e-Textbooks is about the same to traditional textbooks. Moreover, 25% of students believed e-Textbooks are more costly than printed textbooks.

In the survey, the researcher included the most possible and frequently available factors that encouraged or prevented both instructors and students from using e-Textbooks depending on the literature review. The most often revealed factors were encouraging instructors and students to use e-Textbooks “allows printing pages from an e-Textbook if required”, “keep it as a reference book for future use”, “e-Textbooks are integrated seamlessly with an online course via Blackboard”, “Lower cost than printed textbook”, and “Ability to access e-Textbooks on devices without being connected to the Internet”. Although there were conflicting ideas between instructors and students regarding the two following factors “accessibility anywhere and store
many textbooks on one device” and “Environmentally friendly by saving paper”, whereas these factors stimulated students to select e-Textbooks more than instructors. On the other hand, the most reasons that prevented 42% of teachers and students from using e-Textbooks in their college courses is that they “prefer to use printed textbooks”. Additionally, instructors mentioned a few other reasons such as an e-Textbook is not friendly, Lack of desired titles, lack of support to faculty and students, less printing of pages available with e-Textbooks, students find it difficult to read and deal with e-Textbooks and no interaction between the authors and the students. Also, students specified other reasons such as: opening e-Textbooks takes too much time; devices need a charger; low quality of e-Textbooks; they need strong internet connection; e-Textbooks access is limited for one year; it is limited to print pages from e-Textbooks.

Moreover, there are other reasons related to other factors such as low focus on e-Textbooks, they like to use e-Textbooks for assignment only not for studying, teacher explanation with using PowerPoint is enough for some courses, e-Textbooks cannot be kept forever as printed textbooks, and this depends on instructor style of teaching.

The result for Chi-square test indicated that students might not recommend other students to use e-Textbooks due to three reasons: difficulty of using e-Textbooks, they believe the cost of e-Textbooks is either higher than or similar to that of the printed textbooks and the level of Instructor's features is low. The findings of Chi-square test for instructors, however, demonstrated the difficulty of using e-Textbooks and they believed that the cost of e-Textbooks whether higher or that same as that of printed textbooks cost did not affect to recommend using e-Textbooks to other teachers.

Moreover, the findings of Spearman’s correlation indicated that there were a weak relationship between (GPA and educational level) with these two factors (engagement of students in the class if my instructor used an e-Textbook in class and
Using e-Textbooks improves my academic performance, which were not statistically significant. Also, the correlation indicated that if the instructors used e-Textbooks in class, the student will be engagement in class and their academic performance will improve.

Generally, the results for the fourth research question showed a strong trend towards the main features (such as reading navigation, study, instructors, and content preparing) that are believed to be important and very important by both users. Whereas, the most important reading navigation features were searching for keywords, accessibility to electronic glossary, resizing text and image, and viewing multimedia elements within chapter. Study features mentioned as important were (such as adding tags or keywords, taking interactive assignments, quizzes, media videos, case study, highlighting words and adding notes with viewing in a single area, downloading e-Textbook and keeping it forever). In addition, the most important instructors’ features were (such as reading highlights and notes made by teacher, responding to teacher notes or discussion topic and having teachers reply to students’ notes and discussion). Additionally, content preparing features were important to teachers (such as adding tags or keywords, interactive assignments, quizzes, media videos, case study, highlighting words and adding notes with viewing in a single area and creating interactive quizzes, assignments, assessments, media videos and case study embedded in the chapter).
RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Depending on the conclusion of the consequences of this research study, there are a number of suggestions and recommendations that can improve the usage of e-Textbooks at Qatar University and steer further research in this area. First, to get more profound and more accurate understanding of the adoption process of e-Textbooks in higher education, a depth qualitative research study should be implemented with the aim of providing assistance by conducting interviews with the participants who use e-Textbooks in higher education. The ability to explore more facts about the experiences of participants whether positive or negative will assist to explain information given in a survey. Also, since in this study age groups were long and did not give more specific age groups for the young students, it will be worth using more delicate age groups, or simply to write the exact age.

Moreover, University Textbooks Section should collaborate with publishers to support trainers to increase awareness of both users to raise the awareness about the existing features and increase their knowledge of how they can access their e-Textbooks. In addition, to promote e-Textbooks in higher education among instructors and students, enhancing the quality of e-Textbooks and increasing the ability of printing pages by contacting publishers is required. Instructors should have a role to spread the knowledge to students about the most important features such as availability of keeping e-Textbooks forever by downloading it on a platform application, and the possibility to read it without an internet connection during the first week of each semester. The last recommendation is to use other systems of accessing e-Textbooks such as an open access system that allows students to access e-Textbooks seamless without following any registration process so that will assist them to avoid the technical problems of accessing e-Textbooks.
REFERENCES


Survey of Exploring the Students Attitudes and Awareness about the Use of eBooks

Dear Student,

Textbooks Section is studying the student’s attitudes and awareness about the use of eBooks in order to improve the services provided to QU students. The success of the questionnaire depends on your cooperation in the participation, which will not take more than 5 minutes of your time, and the information collected will be kept strictly confidential.

To participate in the questionnaire:

For more information, kindly contact us at:
Tel: 44033863
Email: n.alsowadi@qu.edu.qa

Thank you for your cooperation.

Textbooks Section
البيانات الديموغرافية

Demographics Data

1. العمر:
   - أقل من 18
   - 24 – 19
   - 30 – 25
   - 34 – 31
   - 40 – 35
   - 44 – 41
   - 50 – 45
   - أكثر من 50

Age:

- Less than 18
- 19 – 24
- 25 – 30
- 31 – 34
- 35 – 40
- 41 – 44
- 45 -50
- More than 50

2. الجنس:
   - ذكر
   - أنثى

Gender:

- Male
- Female

3. الجنسية:
   - قطري
   - غير قطري

Nationality:

- Qatari
- Non-Qatari

4. الكلية:
   - اختيار الكلية

College:

- Select College

5. المستوى التعليمي:
   - بكالوريوس
   - دبلوم
   - ماجستير
Educational Level:

- Bachelor
- Diploma
- Master
- PhD

Student classification:

- Foundation
- Freshman
- Sophomore
- Junior
- Senior
- Other (Please specify)

GPA

- Less than 2
- 2.1 – 2.5
- 2.6 – 3
- 3.1 – 3.5
- 3.6 – 4

General Use of e-Textbooks

يمكن أن تكون الكتب الإلكترونية إما قراءة للنص الإلكتروني أو كتاب الإلكتروني شاملة تحتوي على (الاختبارات القصيرة، والواجبات المنزلية، ودراسات الحالة، والنص الإلكتروني).
eBooks can be either reading e-Text or comprehensive eBook contain (Quizzes, Homework’s, cases study and e-Text).

8. هل استخدمت الكتاب الإلكتروني بأي مقرر دراسي؟
   • نعم
   • لا

Have you used eBook for any course?
   • Yes
   • No

9. ما نوع الكتاب الإلكتروني التي استخدمتها؟ (يمكنك تحديد أكثر من خيار واحد)
   • كتب إلكتروني للقراءة فقط ويتم توفيرها عبر منصة (VitalSource Bookshelf و Redshelf و Epistemy Press و … إلخ).
   • أخرى (يرجى التحديد)

What kind of eBook(s) did you use? (You can select more than one option)
   • eBooks for reading only which are available in these platforms (VitalSource Bookshelf, Redshelf, Epistemy Press…etc.)
   • comprehensive eBooks with interactive features (e.g. Create Assignments and Quizzes, Cases Study, Share notes with others, Multimedia) which are available in these platforms (MyLabPlus, MyMathLab, McGraw-Hill Connect, WebAssign, WileyPlus, …etc.)
   • Other (please specify)

10. هل بإمكانك تحميل الكتاب الإلكتروني وقراءته بدون أنترنت؟
    • نعم
    • لا

Are you aware of the possibility of downloading the eBook and read it without using internet?
    • Yes
    • No

11. كيف حصلت على كتابك الإلكتروني؟ (يمكنك تحديد أكثر من خيار واحد)
    • قمت بشراءه من قسم الكتب الدراسية في الحرم الجامعي.
    • بشراء الكتاب الورقي الذي يحتوي بداخله على بطاقة لرمز الكتاب الإلكتروني.
    • البحث عبر الإنترنت.
    • أخرى (يرجى التحديد)

How did you get your eBook(s)? (You can select more than one option)
    • I bought it from the textbooks section on campus.
- It was bundled with my printed textbook that I bought.
- Search via internet.
- Other (please specify)

How difficult to access eBook to read chapter or solve Homework’s or quiz within the website?

- Easy
- Moderate
- Difficult

How did you first become aware of the eBook option?

- Instructor.
- Classmate.
- Via Internet.
- Other (please specify)

I believe electronic textbooks cost:

- Less than traditional textbooks
- More than traditional textbooks
- About the same

What are the advantages of using the electronic textbook?

- More convenient reading and navigation (e.g., search, highlight, bookmark, ...).
- More study features (e.g., key terms, annotations, homework or quizzes, ...).

What are the disadvantages of using the electronic textbook?

- More expensive than traditional textbooks.
- More challenging to access websites.
- More challenging to read texts.
What features did you use of the eBook(s)? (You can select more than one option)

- Reading navigation features (e.g. search, glossary, etc.)
- Study features (e.g. keywords, highlight, making notes, taking homework’s/quizzes, etc.)
- Instructor features (e.g. reading highlights from instructors, responding to instructor, etc.)
- Social features (e.g. sharing and following others, etc.)
- None of the above

Please rate the Level of using for following statements:

Almost Always Seldom Never

15. Your instructor make use of the eBook features, such as highlighting important information and making notes on pages, add assignments via eBook.

16. You actively use the eBook features, such as highlighting important information and making notes on pages.

Not Sure No Yes Rate the following statements.
My instructor provided instruction on how to use the eBook in class.

My instructor designed the content of eBook to use via Blackboard.

The requirement of using an eBook in course was clearly stated in the course syllabus.

I would like my instructors to use more eBooks in my courses.

Which of the following factors would influence you to select an eBook rather than a printed textbook? (You can select more than one option)

- Lower cost than printed textbook.
- Environmentally friendly by saving paper.
- Ability to store many textbooks on one device and access it anywhere.
- Ability to keep it as a reference book for future use.
- Ability to access my eBooks on my device without being connected to Internet.
- The eBook is integrated directly with an online course via Blackboard.
- Ability to print pages from an eBook if required.
- The interactive features that are not available on printed books such as (e.g. keywords, highlight, making notes, taking homework’s/quizzes, etc.)
- Other (please specify)

What are the reasons that may prevent you from using eBook in your college course? (You can select more than one option)

- I prefer to use printed textbooks
- I am not familiar with eBooks.
- I have never been offered an eBook from an instructor.
- The cost was too high of my books.
- My books list does not have eBook version.
- I do not have a device that allows me to read an eBook.
- Health reasons.
- Other (please specify)

You find the eBook and its resources to be helpful when working on assignments for the class or preparing for a test:

- All the time
- Sometimes
- Rarely
- Never

22. ما أسباب عدم استخدامك للكتاب الإلكتروني في مقرراتك الدراسية؟ (يمكنك تحديد أكثر من خيار واحد)

- أفضل استخدام الكتاب الورقي.
- لا أعرف كيف استخدام الكتاب الإلكتروني.
- لم يسبق أن عرض عليًا أستاذ المقرر استخدام الكتاب الإلكتروني.
- كانت التكلفة مرتفعة جداً.
- قائمة كتبني لا تحتوي على كتاب الإلكتروني.
- ليس لدي جهاز يسمح لي بقراءة الكتاب الإلكتروني.
- لأسباب صحية.
- أكبار (يرجى التوضيح)

Pie chart
Would you recommend using these e-textbooks to other students?

- Yes
- No

Please rate your level of agreement with the following statements:

25. Reading of the eBook is as easy as a printed textbook.

26. I believe I need training to learn how to access and use an eBook effectively.

27. I believe I can adopt my study habits to use an eBook.

28. I believe I can learn as effectively with an comprehensive eBook which including assignments, quizzes and e-Text as with a printed textbook.

29. I believe I can learn as effectively with an comprehensive eBook which including assignments, quizzes and e-Text better than eBook with reading features only.

30. I would be more engaged in the class if my instructor used an eBook in class.

If the eBook is free of charge, I will prefer to use it rather than a printed textbook.

The guide materials about how to use the eBooks was clear.

For the next round of questions, the features associated with eBooks will be listed. Whether or not you have ever used an eBook, consider each feature listed below and rank its importance in influencing you to select an eBook.

**e-Textbook Features**

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Important</th>
<th>Not important</th>
<th>Not at all important</th>
</tr>
</thead>
</table>

Please rate the following statements in order of importance:

33. سلّففضل استخدام الكتب الإلكتروني إذا كان مجانيًا بدلاً من الكتب الورقية.

34. البحث عن الكلمات الرئيسية داخل الكتاب الإلكتروني.

35. النقر على الكلمة والوصول فورًا إلى تعريف الكلمات الإلكترونية.

36. اجعل النص والصورة أكبر أو أصغر.

Make text and image bigger or smaller

37. Search for keywords within the eBook

38. Click on a word and immediately access an electronic glossary

39. ظفلك في كل ميزة مدرجة أدناه وترتيب أهميتها في التأثير عليك لاختيار كتاب إلكتروني.
Study Features

<table>
<thead>
<tr>
<th>Very important</th>
<th>Important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>مهم جدا</td>
<td>مهم</td>
<td>غير مهم على الإطلاق</td>
</tr>
</tbody>
</table>

Please rate the following statements in order of importance:

37. عرض عناصر الوسائط المتعددة مثل الصور والفيديوهات داخل كل فصل.

View multimedia elements such as galleries within the chapter

38. أضافة علامات أو كلمات رئيسية لتصنيف المعلومات في الفصل.

Add tags or keywords to categorize information in the chapter

39. القيام بتظليل الكلمات، وعرض جميع مقاطع الفصل المظللة في منطقة واحدة.

Highlight words, and view all of the chapter highlights in a single area

40. القيام بتدوين ملاحظات داخل الصفحة، وعرض كل ملاحظات الفصل في منطقة واحدة.

Make notes within the page, and view all of the chapter notes in a single area

41. القيام بحل الواجبات والاختبارات القصيرة التفاعلية والتقييمات المضمنة في كل الفصل.

Take interactive quizzes and assignments/assessments
embedded in the each chapter.

42. Download eBook and keep it forever.

**Instructor Features**

<table>
<thead>
<tr>
<th>Very important</th>
<th>Important</th>
<th>Not important</th>
<th>Not at all important</th>
</tr>
</thead>
</table>

Please rate the following statements in order of importance:

42. 43. 44. 45.

**Mizas أستاذ المقرر**

يرجى تقييم العبارات التالية حسب الأهمية:

Non at all important

Important

Very important

Not important

42. 43. 44. 45.

Do you have any suggestions or comments to improve the services of e-books?
Appendix B

Survey of Exploring the Faculty Members Attitudes and Awareness about the Use of eBooks

Dear Faculty members,

Textbooks Section is studying the Faculty Members attitudes and awareness about the use of eBooks in order to improve the services provided to QU students and Faculty Members. The success of the questionnaire depends on your cooperation in the participation, which will not take more than 10 minutes of your time, and the information collected will be kept strictly confidential.

Survey link in English language: https://www.surveymonkey.com/r/LCC85FV
Survey link in Arabic language: https://www.surveymonkey.com/r/LCD5H3K

For more information, kindly contact us at:
Tel: 44033863
Email: n.alsowadi@qu.edu.qa

Thank you for your cooperation.
Textbooks Section
البيانات الديموغرافية

Demographics Data

1. **Age:**
   - Less than 25 years
   - 25 - 29 years
   - 30 - 34 years
   - 35 - 39 years
   - 40 - 44 years
   - 45 - 49 years
   - More than 50 years

2. **Gender:**
   - Male
   - Female

3. **Nationality:**
   1. Qatari
   2. Non-Qatari

4. **College:**
   - Select College

5. **Years of teaching experience:**
   - Less than 5
6. Have you had any previous experience in using of eBooks before you join to Qatar University?
   - Yes
   - No

7. Who suggested using eBooks in your courses?
   - I chose the eBook by myself
   - Your department chose the eBook to use
   - Other (please specify)

8. Did you use eBook(s) for first time at Qatar University for students as textbook(s) in your course(s)?
   - Yes
   - No

9. How was your experience with using eBooks at Qatar University?
   - Excellent
   - Very Good
   - Good
   - Fair
10. How many years do you use eBooks in teaching? (Please write number of years in below box)

11. What kind of eBook(s) did you use? (You can select more than one option)

- eBook for reading only which are available in one of these platforms (VitalSource Bookshelf, Redshelf, Epistemy Press, etc.)
- eBook with interactive features (e.g. Create Assignments and Quizzes, Cases Study, Share notes with others, Multimedia) which available in these platforms (MyLabPlus, MyMathLab, McGraw-Hill Connect, WebAssign, WileyPlus, etc.)
- Other (please specify)

12. How did you get your eBook(s)? (You can select more than one option)

- Available via Blackboard.
• Contact directly with Publisher.
• It was bundled with my printed textbook.
• Search via Internet.
• Other (please specify)

 هل أنت على علم بإمكانية تحميل الكتاب الإلكتروني وقراءته دون استخدام الإنترنت؟
• نعم
• لا

13. Are you aware of the possibility of downloading the eBook and read it without using internet?
• Yes
• No

 هل حصلت على أي تدريب قبل استخدام الكتب الإلكترونية؟
• نعم
• لا

14. Did you get any training before start using eBooks?
• Yes
• No

أعتقد أن تكلفة الكتب الإلكترونية:
• أقل من الكتب الورقي.
• أكثر من الكتب الورقي.
• مشابهة لتكلفة الكتب الورقي.

15. I believe electronic textbooks cost:
• Less than traditional textbooks
• More than traditional textbooks
• About the same

ما هي الميزات التي استخدمتها للكتاب الإلكتروني؟ (يمكنك اختيار أكثر من خيار واحد)
• ميزات القراءة والتنقل (مثل: أداة البحث، اضغط على روابط تعريف المصطلحات، ... وما إلى ذلك).
• ميزات المعلم (مثل: التحليل، والاستجابة للطلاب، والكلمات الرئيسية، ودرايس الملاحظات، وإنشاء الواجبات المنزلية / الاختبارات ، وما إلى ذلك).
• الميزات الاجتماعية (مثل: المشاركة ومتابعة الآخرين، وما إلى ذلك).
• لا شيء مما ذكر أعلاه.
16. What features did you use of the eBook(s)? (You can select more than one option)
- Reading navigation features (e.g. search, glossary, etc.)
- Instructor features (e.g. reading highlights, responding to students, keywords, making notes, creating homework’s/quizzes, etc.)
- Social features (e.g. sharing and following others, etc.)
- None of the above.

17. How difficult for your students to access eBook to read chapter or solve Homework’s or quiz with the online content?
- Easy
- Moderate
- Difficult

18. Given your experience with eBooks, would you prefer to use electronic or printed textbooks in the future?
- Electronic textbook
- Printed textbook
You actively use with your students the eBook features, such as highlighting important information, making notes on pages, and add assignments.

**Answer the following statements.**

19. I provided to students instructions on how to use the eBook in class.

   قدمت للطلبة تعليمات حول كيفية استخدام الكتاب الإلكتروني في الفصل.

20. I designed the content of eBook to use via Blackboard.

   قمت بإعداد محتوى الكتاب الإلكتروني لاستخدامه عبر Blackboard.

21. The requirement of using an eBook in course was clearly stated in the course syllabus.

   تم ذكر متطلبات استخدام الكتاب الإلكتروني في المقرر بوضوح في منهج المقرر.

22. I would like to use more eBooks in my courses.

   أريد أن استخدام المزيد من الكتب الإلكترونية في المقررات الدراسية الخاصة بي.

---

**Attitudes Towards Using eBook**

ما أهم العوامل التي تدفعك إلى اختيار الكتاب إلكتروني بدلاً من الكتاب الورقي؟ (يمكنك تحديد أكثر من خيار واحد)

- أقل تكلفة من الكتب الدراسية الورقية.
- صديق للبيئة عن طريق توفير الورق.
- إمكانية تخزين العديد من الكتب الدراسية على جهاز واحد والوصول إليها في أي مكان.
- القدرة على الاحتفاظ بها ككتاب مرجعي للاستخدام في المستقبل.
- إمكانية الوصول إلى الكتاب الإلكتروني على جهازك دون الاتصال بالإنترنت.
- تم دمج الكتاب الإلكتروني مباشرة مع المقرر الدراسي عبر البلاك بورد.
- القدرة على طباعة صفحات من كتاب إلكتروني.
- المميزات التفاعلية غير المتوفرة في الكتاب الورقية (مثل: الكلمات الرئيسية، التظليل، تدوين الملاحظات، حل الواجبات المنزلية / الاختبارات القصيرة، الخ).
23. Which of the following factors would influence you to select an eBook rather than a printed textbook? (You can select more than one option)

- Lower cost than print textbook
- Environmentally friendly by saving paper
- Ability to store many textbooks on one device and access it anywhere
- Ability to keep it as a reference book for future use
- Ability to access my eBooks on my device without being connected to Internet
- The eBook is integrated directly with an online course
- Ability to print pages from an eBook if required.
- The interactive features that are not available on print books such as (e.g. keywords, highlight, making notes, taking homework’s/quizzes, etc.)
- Other (please specify)

What are the reasons that may prevent you from using eBook in your courses? (You can select more than one option)

- I prefer print textbooks
- I am not familiar with eBooks
- The cost was too high My books do not come in eBook version
- I do not have a device that allows me to read an eBook
- Health reasons.
- Other (please specify)

Please rate your level of agreement with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Disagree</th>
</tr>
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</tbody>
</table>
Reading of the eBook is as easy as a printed textbook.

I believe I need more training to learn how to use an eBook effectively.

I believe I can adopt my teach habits to use an eBook.

I believe my students can learn as effectively with a comprehensive eBook which including assignments, quizzes and e-Text as with a printed textbook.

I believe my students can learn as effectively with comprehensive e-Textbooks, which including assignments, quizzes and e-Text better than eBook with reading features only.

My students would be more engaged in the class if I used an eBook in class.
Using eBooks improve my Students academic performance.

If the eBook is free of charge, I will prefer to use it rather than a printed textbook.

With eBooks, it was easy to create and grade assignments using the online system.

The guide materials about how to use the eBooks was clear for you and your students.

If you had a choice, would you use eBooks for your courses?

- Yes
- No

Would you recommend using these eBooks to other colleagues?

- Yes
- No
For the next round of questions, the features associated with eBooks will be listed. Whether or not you have ever used an eBook, consider each feature listed below and rank its importance in influencing you to select an eBook.

**Reading Navigation Features**

Please rate the following statements in order of importance:

- Not at all important
- Not important
- Important
- Very important

*Search for keywords within the eBook*

*Click on a word and immediately access an electronic glossary*

*Make text and image bigger or smaller*

*View multimedia elements such as galleries within the chapter*
Content Preparing Features

مميزات إعداد المحتوى

Please rate the following statements in order of importance:

<table>
<thead>
<tr>
<th>Not at all important</th>
<th>Important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>غير مهم على الإطلاق</td>
<td>مهم جداً</td>
<td>مهم جداً</td>
</tr>
</tbody>
</table>

Add tags or keywords to categorize information in the chapter

أضافة علامات أو كلمات رئيسية لتصنيف المعلومات في الفصل

Highlight words, and view all of the chapter highlights in a single area

القيام بتنليل الكلمات، وعرض جميع مقاطع الفصل المظللة في منطقة واحدة

Make notes within the page, and view all of the chapter notes in a single area

القيام بإنشاء الواجبات والاختبارات القصيرة التفاعلية وفيديوهات التقييمات المضمنة في كل الفصل

Create interactive quizzes, assignments/assessments, media videos and case study embedded in the chapter

سؤال مفتوح:

هل لديك أي اقتراحات أو تعليقات لتحسين خدمات الكتب الإلكترونية؟

Open Question:

Do you have any suggestions or comments to improve the services of e-books?
### Appendix C
Analysis of Demographics

#### Students Demographics

##### Age

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
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<td>Valid</td>
<td>Less than 18</td>
<td>4</td>
<td>.8</td>
<td>.8</td>
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<td>19 – 24</td>
<td>394</td>
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<td>25 – 30</td>
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##### Gender

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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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