

Are We Ready for E-books? Omani University Students' Uses and Perceptions of E-books

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ABSTRACT

As the presence of e-books on university campuses proliferate, it is crucial that we understand their role in students' lives. This research reports on a survey distributed to Sultan Qaboos University students and shares their perceptions of the use of e-books. The study used the quantitative approach to investigate the issues related to the uses and perceptions of e-books by asking students to weigh in on this important issue. The findings indicate that students at SQU have multiple and diverse experiences with e-books, but do not necessarily prefer the electronic format over print for their academic experiences. Despite e-books growing presence, students may need more time and encouragement to change their use and preferences to e-books so exclusively.

Keywords: e-books, uses, perceptions, university students, Oman

INTRODUCTION

E-books have recently gained rapid acceptance among higher education institutions around the world as the favored format for text resources. Like other academic institutions, Sultan Qaboos University (SQU) in the Sultanate of Oman realizes the importance of e-books and its responsive role in sustainability. Since e-books tend to be somewhat cheaper compared to print books, it offers academic institutions access to knowledge regardless of the shortage of spaces or required budget. E-books also offer educators and students opportunities to view the desired content of their preferred books in a novel format which could be more engaging when utilizing some of its interactive and attractive features. Currently, SQU is planning to make e-books available for its academic staff, researchers and students as the primary format of instruction.

However, this may pose some challenges in the future due to the feasibility of e-books if they are not the widely favored resource of instruction and research for students. Therefore, this paper aims to gain insights into the perceptions of SQU students of the use of e-books in their learning programs, particularly the students' perceived role of e-books and their current use in their university experiences. This study contributes to the literature of students' perceptions and use of e-books and their viable replacement for print books in higher education by gathering insights of how the use of e-books can be envisioned in academia by SQU students.

The study begins with a review of the literature on previous research done on students' e-book use and perception followed by a description of the methodology used. The findings the *SQU Students Use and Perceptions of E-Books Survey* are reported and discussed. Finally, recommendations and future research are suggested to conclude the paper.

LITERATURE REVIEW

The high visibility of e-books in the academic market got its start in 1971 with the Gutenberg Project which began making plain text books freely available in the electronic format. Over time and as a result of the advancements in the e-books market, e-books evolved into forms of readers and databases. These two technologies eased the accessibility and feasibility of e-books for both academic and non-academic uses. Electronic readers were introduced in 1990s with the release of the SoftBook and the Rocket e-book but did not gain popularity until the mid-2000s with the introduction of Sony's Librie, Amazon's Kindle, Barnes & Noble's Nook, and Apple's iPad (Kossey & Brown, 2011). Since the introduction of these more advanced e-readers, the

use of e-books increased globally and users' awareness and perceptions have evolved accordingly (Liaw & Huang, 2014).

Defining e-books has also evolved as a result of the changing features of the e-books over time. Researchers do not agree there is one distinctive definition of what it actually means (Nelson, 2008; Tripathi & Jeevan, 2008; Doering, Pereira & Kuechler, 2012; Gonzalez, Gasco & Llopis, 2014; Liaw & Huang, 2014). For some researchers, an e-book is viewed as a text or book that can be read in a digital format using technology devices such as computers, smart phones, tablets or any portable reading machine (Nelson, 2008; Tripathi & Jeevan, 2008; Liaw & Huang, 2014). Others view it as text designed to be read over technology devices, making it different from printed books by offering some extra features that allow users to interact with the text through the use of sound, visuals and links (Baki, 2010). Still others describe it as a digital format created with an abundance of new features such as search and cross reference functions, multimedia features and hypertext links (Vassiliou & Rowley, 2008). Regardless of all these different views and definitions of e-books, they all seem to agree that an e-book involves the use of technology tools to view and read books.

While research on e-books is fairly new, a review of the literature reveals that students are beginning to use e-books as a result of the development of the e-book technologies and devices. These developments offer many advantages over printed books. One of these advantages is that e-books are often marketed as cost-effective for students (Johnson et al., 2010). Another advantage is their convenience as they save institutions from using so much physical space by being stored digitally (Pattueli & Rabina, 2010). In addition, e-books are convenient in terms of mobility as readers do not have to worry about their heavy weight (Kiriakova et al., 2010) as they can carry a whole digital library in their pockets. E-books have the added advantage of being accessible. They allow teachers and students to easily access them online at any time and wherever needed (Lam, Lam, & McNaught, 2010; Letchumanana & Tarmizib, 2010; Doering, Pereira & Kuechler, 2012). Further, e-books allow users to search them easily to support their teaching and learning (Abram, 2010). Finally, e-books are user friendly, can be annotated, copy and paste text, and for some users, they are easier to read (Doering, Pereira & Kuechler, 2012).

Despite of the cost effectiveness, convenience and portability of e-books, they lack universal standards and the compatibility of hardware and software (O'Hare & Smith, 2012). As well, many e-books are difficult to access because they are not globally available or not offered in the e-book format (Liaw & Huang, 2014). In addition, e-books can require long download times, do not allow portion printing, can consume more time to access and read, encourages students' overreliance on technologies, and demotivates students from using the library (Jamali et al., 2009). Adding to that, many students may not know how to use the e-book readers and require specific training (Baki, 2010). Further, heavy use of e-books may result in health problems such as headaches and eyestrain (Liaw & Huang, 2014). Finally, many of the e-books that are available in the market are simply copied and pasted from the traditional printed books. They lack the interactive features that enable and support learners with "tools for learning outside the classroom, where students may not meet face-to-face to share and discuss resources and ideas" (Lim & Hew, 2014, p. 35).

In spite of the positives and negatives of e-books, e-books are generally regarded as offering great potential for teaching and learning (Armstrong et al., 2006). Many studies have been done to investigate the use of e-books as a learning medium in a way to enhance students' learning process. Sun et al. (2012) conducted a survey to measure students' perceptions on how the use of e-books may enhance their learning. The results indicate that the students' perceptions on how helpful e-books are for facilitating their learning directly affect students' learning. In other words, if a student thinks that an e-book is helpful, his/her learning outcomes will enhance as a result. Additionally, the researchers also found that the students' use of e-books in class can positively affect their learning outcomes as well. They concluded that e-books can have enormous contribution to students' learning because of the additional features they offer. Such features should engage students in using e-books in class and lay the foundation for successful adoption of e-books.

Another recent study done by Lim and Hew (2014) explored the usefulness of the next-generation e-book (NG-eBook) that has capabilities of annotation and sharing to promote students' learning through reflection and sharing of ideas. The key technical features of their e-book software were navigation, content management, and collaboration. The study found that e-books can enhance students' learning by allowing them to engage and interact with each other to discuss and construct knowledge. Liaw and Huang (2014) also explored the use of e-books as a learning tool. The authors developed a research model based on the activity theory approach, a framework to investigate how social systems work while completing activities, to understand learners' attitudes toward e-books. The results suggest that the screen size could affect learners' perceived self-efficacy. They also found that the interactivity of e-books could have positive effects on students' perceived satisfaction with the usefulness of e-books as a learning tool.

Consequently, many academic institutions began to embrace the use of e-books through their libraries (Wu & Chen 2011) assuming that since students have grown up with technologies, they might want to abandon the use of printed books (Gregory, 2008). Some institutions allocated ample budgets to buy e-books and gradually decreased the number of print books (Wu & Chen 2011). However, that assumption failed to some extent as the acceptance of using e-books for academic purposes has not moved as quickly as predicted (Muir & Hawes, 2013), regardless of the advent of the emerging technologies. This slowness of acceptance might be associated to the lack of resources and awareness of its use (Wiese & du Plessis, 2015). Other research studies report that students prefer to use print books compared to e-books when it comes to academic reading (Gregory, 2008; Strother, et al., 2009; Nicholas & Lewis, 2008). However, their preference for the traditional text books might not indicate their real experience with using e-books depending on how they perceive its definition (Sun & Tanguma, 2012; Wiese & du Plessis, 2015). This is in agreement with the study done by Gregory (2008) which states that student prefer using print books because print books are easy to navigate.

In light of the above, a review of the available literature reveals that no study about students' perceptions on the use e-books has been conducted in the context of Oman. Thus, this research is important for SQU academics as it may offer insights to understand how Omani students perceive the use of e-books. It is hoped that the findings of this research could assist in planning successful implementation of e-books resources for SQU students.

Methodology

To investigate the uses and perceptions of e-books by SQU students, the researchers of this study reviewed other studies and how other universities explored this topic. A well-constructed survey developed at St. Mary's University College by Mulholland and Bates (Mulholland & Bates, 2014) closely fit the study focus and with permission was adopted and modified to adapt to the student target audience's language and culture. The *SQU Students Use and Perceptions of E-Books Survey* included 24 questions (see Appendix). The first four questions aimed to gather information about the respondents' demographic information. The survey also contained questions about the definition of e-book, its usage, purpose and frequency of use, its advantages and disadvantages. The last questions were the main elements of the survey, which asked about the preference for using e-books versus print books, the reasons for using them and how they envision their future use in their lives. Six additional open-ended questions were embedded throughout the survey to allow for more in depth responses and explanations for specific questions. The survey was then uploaded in both Arabic and English to SmartSurvey, an online subscribed survey application that would allow access to all the SQU students in the different SQU colleges.

The survey questions were validated by five highly experienced educational researchers in the SQU College of Education. After gaining the permission from SQU Academic Research Office, the survey was distributed to all SQU students through the university email system during the fall semester of 2015. The email message sent to all students included instructions to access the survey, a hyperlink to the survey application and a statement that assured confidentiality. The steps taken in this study were traced to maintain a chain of evidence to increase reliability of information as well as validity of the methods. Results from this survey were collected throughout the fall of 2015 and the results were analyzed in the spring of 2016. Analysis was conducted through an iterative process that took the form of categorical aggregation, axial coding for patterns and themes, and direct interpretation. Disaggregation of core themes through open, axial coding was framed in grounded theory. Data results from the open-ended questions helped to form the narrative that the role e-books has for students, particularly in academia. In addition, potential barriers and cultural implications for e-book usage were identified during analysis and interpretation of the feedback.

RESULTS

The results section of this paper is organized around the main research and divided into three parts. The first describes the *SQU Students Use and Perceptions of E-Books Survey* participants' demographics. The second part reports their use of e-books reporting for general and academic uses. The third part the *SQU Students Use and Perceptions of E-Books Survey* participants' reports on their perceptions of e-books from general and academic frameworks.

Demographics

The profile of the survey respondents was established from the demographics section of the survey distributed during the fall semester of 2015 with 425 students taking part in the survey. Females account for approximately 66% of the overall respondents with the majority. Overall, 68.70% of all respondents having been at SQU for 3 years or less. By far, the majority of respondents (84.94%) are currently earning their Bachelors degree at SQU. The distribution of respondents' studies spread over all nine colleges at SQU with the bulk of the respondents

(79.76%) coming from the College of Arts and Social Studies, College of Education, College of Engineering, College of Science, College of Economy and Political Science. The majority of SQU students (79.53%) rated their skills in using computer technologies as either good or excellent and accessing the Internet either daily (27.53%) or several times a day (62.12%). Refer to Table A. below for the student demographic information.

Table A. Student Demographics

| Gender | n | Percent |
|---------------|----------|----------------|
| Females | 279 | 65.65% |
| Males | 146 | 34.35% |

| Degree Level | n | Percent |
|---------------------|----------|----------------|
| Diploma | 15 | 3.53% |
| Bachelor | 361 | 84.94% |
| Master | 36 | 8.47% |
| PhD | 13 | 3.06% |

| # of Years at SQU | n | Percent |
|--------------------------|----------|----------------|
| 1 | 131 | 30.82% |
| 2 | 96 | 22.59% |
| 3 | 65 | 15.29% |
| 4 | 58 | 13.65% |
| 5 | 50 | 11.76% |
| 6 | 14 | 3.29% |
| 7 | 7 | 1.65% |
| More Than 7 Years | 4 | .94% |

| College of Study | n | Percent |
|-------------------------------|----------|----------------|
| Agriculture | 32 | 7.53% |
| Arts and Social Studies | 86 | 20.24% |
| Economy and Political Science | 51 | 12.00% |
| Education | 78 | 18.35% |
| Engineering | 65 | 15.29% |
| Law | 15 | 3.53% |
| Medicine | 27 | 6.35% |
| Science | 59 | 13.88% |
| Nursing | 12 | 2.82% |

| Computer Skills | n | Percent |
|------------------------|----------|----------------|
| Poor | 7 | 1.65% |
| Average | 52 | 12.24% |
| Good | 153 | 36.00% |
| Excellent | 185 | 43.53% |
| Expert | 28 | 6.59% |

| How Often Access Internet | n | Percent |
|----------------------------------|----------|----------------|
| Several times a day | 264 | 62.12% |
| Daily | 117 | 27.53% |
| Every couple days | 36 | 8.47% |
| Weekly | 4 | .94% |
| Rarely | 4 | .94% |

Use of E-Books: General

The majority of students (80.24%) responding to this survey have had experience using e-books. When asked what purpose do they usually use e-books for, most chose either in their studies for reading resources (65.98%), in their research (62.46%), or in their leisure (66.86%). When adding the respondents choosing the purpose being in their studies for designing resources (14.08%), it appears the major purpose for using e-books among the SQU student sampled is for their studies. When asked what other purpose they may add for using e-books, the students identified reading as a hobby as their main purpose besides accessing non-printed books and books not available in the country (Table 1). When students were asked to identify the sources of e-books, the majority

of choices (52.20%) were social networking sites. However, two close seconds included the university e-library (43.40%) and sharing applications and websites (42.52%) with university course materials having just over a quarter of the responses (26.69%). MOOCs training (24.05%) and iTunes U (10.56%) comprised the other choice of e-books sources. Students also listed commercial and free e-libraries among the other sources (Table 2).

Table 1. Purpose of E-book Use

| Purpose | n | Percent |
|-------------------------------------|-----|---------|
| In my study for reading resources | 225 | 65.98% |
| In my study for designing resources | 48 | 14.08% |
| In my research | 213 | 62.46% |
| Other areas of interest (Leisure) | 228 | 66.86% |
| Other | 18 | 5.28% |

Table 2. Source of E-books

| Source | n | Percent |
|-----------------------------------|-----|---------|
| Social networking sites | 178 | 52.20% |
| University e-library | 148 | 43.40% |
| Sharing applications and websites | 145 | 42.52% |
| University Course Materials | 91 | 26.69% |
| MOOCs | 82 | 24.05% |
| iTunes U | 36 | 10.56% |
| Other | 29 | 8.50% |

When asked how much time in a week they usually spend using e-books, the highest number of responses was less than 30 minutes (36.36%). Less than a quarter (22.87% and 21.70% respectively) responded they spent 30 minutes to an hour and one to two hours per week using e-books (Table 3). The majority of students (59.23%) reported they spent more than 10 minutes reading an e-book from a screen (Table 4) with the most typical student use reported as either browsing through the chapters or searching through the contents page. The second and third highest responses of typical use of e-books were using the search tools to identify key words within the books (35.78%) and reading entire book chapters (35.48%) (Table 5).

Table 3: Time Using E-books/Week

| Time | n | Percent |
|-------------------|-----|---------|
| less than 30 min | 124 | 36.36% |
| 30 minutes–1 hour | 78 | 22.87% |
| 1–2 hours | 74 | 21.70% |
| 2–5 hours | 42 | 12.32% |
| 5–10 hours | 14 | 4.11% |
| 11+ hours | 9 | 2.64% |

Table 4: Time Reading an E-book from the Screen/Session

| Time | n | Percent |
|---------------------|-----|---------|
| less than 3 minutes | 25 | 7.33% |
| 3–5 minutes | 35 | 10.26% |
| 6–10 minutes | 79 | 23.17% |
| 11–20 minutes | 84 | 24.63% |
| 21+ minutes | 118 | 34.60% |

Table 5: General Uses of E-books

| Uses | n | Percent |
|---|-----|---------|
| Browse through the chapters | 195 | 57.18% |
| Read entire chapters | 121 | 35.48% |
| Use the search tools to identify key words within the books | 122 | 35.78% |
| Scan information quickly | 101 | 29.62% |
| Search through the contents page | 189 | 55.43% |

| | | |
|---|----|--------|
| Annotate (highlight) text that was useful | 98 | 28.74% |
| Copy and paste text into MSWord or other software | 77 | 22.58% |
| Print out pages to read in print | 60 | 17.60% |

Use of E-Books: Academic

When asked how much they depend on e-books for learning and research, the majority of the students (41.35%) chose the low and the lowest scale for their responses. However, responding to the same question, a substantial percentage of the remaining student population (26.98%) chose the high and the highest scale of use that depended on e-books for learning and research. Considering the wide-spread use of print materials in the traditional university setting in this region, it was surprising to the researchers that almost a third responded on the dependence of e-books for their studies (Table 6). When asked about whether and how their instructors recommend or actively encourage them or their classmates to use e-book materials, students responded with mixed results often choosing more than one way e-books were being used. Less than half (42.23%) reported instructors did not include them, while the remainder (43.33%) reported instructors included the e-books in the online course management system (*Moodle/Blackboard*), and/or included e-books as course materials (22.58%), and/or e-books were on their reading lists or handouts (18.77%). SQU faculty members appear to encourage the electronic book materials for their students far more than initially expected by the researchers (Table 7).

Table 6: Academic Use of E-books

| Learning/Research Use | n | Percent |
|-----------------------|-----|---------|
| highest dependency | 35 | 10.26% |
| high dependency | 57 | 16.72% |
| average dependency | 108 | 31.67% |
| low dependency | 74 | 21.70% |
| lowest dependency | 67 | 19.65% |

Table 7: Instructor Recommend or Include E-books

| Instructor Recommend or Include E-book Use | n | Percent |
|---|-----|---------|
| Yes, e-books are included in <i>Moodle/Blackboard</i> resources | 147 | 43.11% |
| Yes, e-books are included on my reading list or handouts | 64 | 18.77% |
| Yes, e-books are included as course materials | 77 | 22.58% |
| No | 144 | 42.23% |

Perceptions of E-Books: General

The critical question pertaining to e-book perceptions is how students define an e-book. Early in the *SQU Students Use and Perceptions of E-Books Survey* this question was asked with more than a third (38.82%) of the responses defining e-books as “an electronic version of a printed book that can be read on a computer or handheld device designed specifically for this purpose.” Even more chose the response of all of the above (47.29%), which allowed more flexibility in the definition. In addition to the response quoted above, this included “a dedicated device for reading electronic versions of printed books”, “text in pdf file format”, and “a digitally presented format of information with embedded enhancements that includes multimedia published by an authorized distributor.” (Table 8)

Table 8: E-book Definition

| Definition | n | Percent |
|--|-----|---------|
| An electronic version of a printed book that can be read on a computer or handheld device designed specifically for this purpose | 165 | 38.82% |
| A dedicated device for reading electronic versions of printed books. | 9 | 2.12% |
| Text in .pdf file format | 23 | 5.41% |
| A digitally presented format of information with embedded enhancements that include multimedia published by an authorized distributor. | 13 | 3.06% |
| I would consider all of the above an e-book to me. | 201 | 47.29% |
| I don't know how to define an e-book. | 10 | 2.35% |
| Other (please specify): | 4 | 0.94% |

When asked about advantages of using e-books, the majority of students (85.63%) identified the ease-of-access e-book aspect as the biggest advantage with the convenience and remote access being the second most often chosen answer (66.28% and 62.17%). It is worth noting here that more than 50% of students recognized the embedded search tools added greatly to the value of e-books. Nevertheless, 34.60% of students stated that the availability of a big range of titles to choose from was another advantage. Respondents also identified the following other advantages: lightweight, save time and effort, cost effective compared to printed books, and ease of translation (Table 9).

Table 9: Perceived Advantages of Using E-books

| Advantage | n | Percent |
|--|-----|---------|
| Ease of access — ability to access books anytime/anywhere (24/7) | 292 | 85.63% |
| Usefulness of search tools and other available features | 178 | 52.20% |
| Automatic referencing/citations | 93 | 27.27% |
| Off campus access (remote access) | 212 | 62.17% |
| Convenient/fast and easy | 226 | 66.28% |
| Good range/selection of titles | 118 | 34.60% |
| Other (please specify): | 17 | 4.99% |

On the other hand, the majority of students (68.91%) identified the discomfort and difficulty reading from the screens as the largest disadvantage to e-books with a lack of choice of titles for relevant subject areas (25.22%) and titles in Arabic (24.93%) coming in a distant second. Students also identified the slow speed of loading and downloading e-books (23.17%) as another disadvantage. Other disadvantages reported by students were the unavailability of text to speech facility on their devices (17.30%) and limited off-campus access to the university e-library (7.62%). In addition to these disadvantages, students also identified other disadvantages of the following: causes health problems, need to buy some of the e-books, difficulty of writing direct notes, distractions caused by other applications while reading the e-book from devices, and losing the sense of reading enjoyment as it is with printed books (Table 10).

Table 10: Perceived Disadvantages of Using E-books

| Disadvantage | n | Percent |
|---|-----|---------|
| Discomfort/difficulty reading from the screen | 235 | 68.91% |
| Lack of choice of e-book titles for the subject areas relevant to my study area | 86 | 25.22% |
| Could not gain access off-campus | 26 | 7.62% |
| Lack of choice of e-book titles in Arabic | 85 | 24.93% |
| Pages take too long to navigate/too slow | 79 | 23.17% |
| No facility to have the text read out loud | 59 | 17.30% |
| Other (please specify): | 35 | 10.26% |

When asked for the reasons why those students reported not having used e-books, the majority of the respondents reported that they had a preference for printed books (62.79%). Other reasons for not using e-books was reported that they did not know about them, they had difficulty reading from the screen and they had difficulty accessing them which made up the bulk of the remainder of reasons (31.40%, 27.91%, and 25.58% respectively). It is worthwhile noting here that the response rate to this and the remaining questions of the survey dropped dramatically to only 86 respondents. This part of the survey was only displayed to the students who had responded that they had not used e-books previously (Table 11).

Table 11: Reasons for Not Using E-books

| Reason | n | Percent |
|--|----|---------|
| Never knew about them | 27 | 31.40% |
| I prefer to use printed books | 54 | 62.79% |
| Had difficulty accessing them/couldn't find them | 22 | 25.58% |
| I find it difficult to read e-books from the screen | 24 | 27.91% |
| I was unaware of relevant titles for the subject I study | 9 | 10.47% |

When asked to predict the role of e-books in their lives within the next 5 years, almost half the respondents (47.67%) predicted that the combination of using, both print and electronic, would be their preference and an

additional number (10.47%) reported they prefer the electronic format. Nearly a third of the respondents predicted they would be reading print books (30.23%) so the results again show varied predictions about the future of e-book usage in their lives with a preference toward print books (Table 12).

Table 12: Role of E-books within 5 years' Time

| Role | n | Percent |
|---|----|---------|
| For some books, I will prefer to read print books, for others I will prefer the e-book. | 41 | 47.67% |
| I will mostly read print books | 26 | 30.23% |
| I will mostly read e-books | 9 | 10.47% |
| I don't know | 10 | 11.63% |

Perceptions of E-Books: Academic

A critical question asked to those who reported using e-books was their preference for e-books or printed books to be used for their subject areas of academia. Again, the student respondents reported in a sizable majority (65.98%) that they preferred a printed book. The reasons stated by the respondents were mixed. Most of these reasons are related to advantages and disadvantages of e-books and qualitatively analyzed (Table 13).

Table 13: Reasons for E-books or Printed Books Preferences

| Preference | n | Percent | Reasons |
|---------------|-----|---------|--|
| Printed | 225 | 65.98% | Easy to flip pages Sentimental value Improves learning and increases retention Clear font size and easy to read Eliminates distraction by other applications Healthier/ doesn't cause sight problems Comfort Writing notes on the book Not owning a proper device to access e-books No specific facilities needed such as a device, power, and internet connection Touchable Poor design or conversion of e-books Learning style preference Don't impose specific setting such setting on a table Credible Risk of losing e-books because of device failures Familiarity |
| E-books | 60 | 17.60% | Convenience Ease to access Ease of navigation Search features and highlight tools Saving time and effort Environment friendly Copying content to use in other applications Flexibility Supported by multimedia for deeper understanding Scarcity of clean printed text books |
| No preference | 56 | 16.42% | None of them is suitable to all subject areas Printed books for making notes and e-boos for searching features Each one serves a purpose Printed for learning/ more permanent use E-book for research/ temporary use Depends on availability Depends on ease of displaying and clarifying content Importance of content regardless of format |

Another critical question for students was when they were asked to rate their overall experience using e-books provided by the college/program. Again the response was mixed. Over a third (38.13%) responded with a good

or very good rating, over a third (39.88%) with an average, poor, and very poor ratings, and nearly a third (21.99%) didn't know or respond (Table 14). When asked how important they feel instruction and training by their instructors is on the use of electronic resources in their studies, most students reported they feel that that it was either fairly important (44.19%) or very important (33.72%) (Table 15).

Table 14: Rating Experiences with E-books

| E-book Experience Rating | n | Percent |
|---------------------------------|----------|----------------|
| Very Good | 30 | 8.80% |
| Good | 100 | 29.33% |
| Average | 96 | 28.15% |
| Poor | 28 | 8.21% |
| Very Poor | 12 | 3.52% |
| N/A | 75 | 21.99% |

Table 15: Importance of Instructor Training/Instruction

| Importance of Training/Instruction By Instructor on E-book Usage | n | Percent |
|---|----------|----------------|
| Very Important | 29 | 33.72% |
| Fairly Important | 38 | 44.19% |
| Not Important | 19 | 22.09% |

Discussion

The present study aimed at identifying the uses and perceptions of e-books by students, particularly in academia, at Sultan Qaboos University. The discussion about e-books at SQU is timely as universities worldwide are often compelled to consider e-books as a viable replacement for print books (O'Hare & Smith, 2012; Lim & Hew, 2014; Mulholland & Bates, 2014,). There are convincing reasons why universities want to replace print books – ease-of-access, relevancy, convenience, search supports – which were also the most often cited reasons reported by SQU students in the survey. In addition, publishers point to the reality already experienced by SQU students as shown by this survey, which is students already use e-book in academia and many have positive experiences using them (Berg, Hoffmann, & Dawson, 2010; Grenina, 2012; Huang, Liang, Su, & Chen, 2012; Muir & Hawes, 2013). The pressure to use e-books will probably continue to increase at Sultan Qaboos University as it has at other universities, but some critical concerns raised by SQU students are worth considering.

The presence of e-book materials are already in class use with nearly half the SQU students reporting that instructors currently use e-book materials in their courses and the majority of students report their instructors recommend or actively encourage their use. If this practice of using electronic materials in courses is highly prevalent, it appears that the choice of format of the instructors' use is also highly varied. Students report that there is a wide spectrum of e-materials formats made available in their courses – from the simple pdf formatted text passages, to the multi-media supported, stand-alone e-books. This may account for, in part, why students appear to struggle to define e-books and continue to attribute wide variations of characteristics to them. The flexibility of defining e-books is consistent with students at other universities, due in part, to the wide types of usage that exists in their classes (Tedd, 2005; Bennett, 2006; Vassiliou & Rowley, 2008; McLure & Hoseth, 2012). As their presence becomes more commonplace on university campuses, there may develop a clearer consensus for the e-book definition.

In spite of their relative wide-spread use, most SQU students believe that it's important that faculty provide instruction and training on the use of e-books for their students. This suggests that many students perceive their use of e-books is somehow lacking or can possibly improve with the support of their instructors' guidance and training. Perhaps they imagine more can be done with these electronic formats that they may not be aware of doing. Perhaps some students have experienced more varied use in some classes. In any event, this perception by students highlights the need for university managers to plan and perhaps prepare faculty and students in their use before jumping on the e-book bandwagon.

As e-books are enthusiastically embraced as the next sustainable step for streamlining academic resources, the survey results highlight that students still prefer print books over e-books. Even in a technology-rich country such as Oman, students value the traditional printed paper books over the electronic format in both their academic and general use. Access, convenience, choices, familiarity, tradition – are most cited by students who prefer print books. Perhaps the ubiquitous connectivity issues on campus interfere with e-books access to be dependable enough for exclusive e-book use. Perhaps the lack of widely-available choices in Oman and in the Arabic language interferes with its extensive usage. Perhaps more importantly, is Oman's long standing tie to

written words and their sacred place in the culture that reinforces students' relationship with print books. What remains clear, however, is that Omani university students' preference to print is consistent with the results of studies elsewhere that shows the continued attachment university students have with print books (Woody & Baker, 2010; Rockinson-Szapkiw, Courduff, Carter & Bennett, 2012; Cumaoglu, Sacici, & Toron, 2013; Walton, 2014).

This strong relationship does not appear to be changing when looking ahead in time, even among 21st century Omani students. When asked to predict their future use, most SQU students envision a dual option of using both print and electronic in the future. The findings of this study concur with others (Gregory, C. 2008; Aaltonen, Mannonen, Nieminen, & Nieminen, 2011; Noor, Embong & Abdullah, 2012; Walton, 2014) that students are willing to make room for digital learning but are not willing to envision their future devoid of print books.

CONCLUSION

The results of this survey indicate that SQU students have diverse experiences with e-books and varying preferences for their format of classroom texts. These results corroborate with similar studies that stress students' unwillingness to exclude the text format from their studies. This survey provides only a partial view however, as these researchers prepare to survey SQU faculty and staff on e-books. The patterns identified in this study may change with additional feedback from other university stakeholders. Further investigation can be done, perhaps to look more closely at individual colleges and customize their needs more closely to their field goals and preferences. The purpose from this survey is to inform a sustainable solution for providing sound educational resources in the digital age and the need to refine our models when looking for those solutions. Perhaps a more comprehensive approach that provides variety and choice of formats is called for that better reflects the inclusive preferences of our digital age students and the changing nature of future textbook delivery systems.

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Appendix
SQU Students Use and Perceptions of E-Books

Introduction:

Thank you for agreeing to take part in this important survey. We are currently considering the use of e-books in some of our programs throughout Sultan Qaboos University and would like your opinion to inform the process. We are seeking your input as to the perceived role of e-books and their current use in your college experience.

This survey should not take more than 4 – 5 minutes to complete. To begin, please click ‘Next’.

1. Gender: Male Female

2. How many years have you been studying in SQU?
 1 2 3 4 5 6 7 more than 7

3. What is the degree that you will earn from your current studies in SQU?
 - a. Diploma
 - b. Bachelor
 - c. Master
 - d. PhD

4. Which College do you study in?
 - a. Agriculture
 - b. Arts and Social Studies
 - c. Economy and Political Sciences
 - d. Education
 - e. Engineering
 - f. Law
 - g. Medicine
 - h. Science
 - i. Nursing

5. How do you rate your skills in using computer technologies? (including ipads and smart phones)
 Poor Average Good Excellent Expert

6. How often do you access the internet?
 Several times a day Daily Every couple Days Weekly Rarely

7. What is an e-book from your point of view?
 - a. Preferred Choice 1: an electronic version of a printed book that can be read on a computer or handheld device designed specifically for this purpose
 - b. Preferred Choice 2: a dedicated device for reading electronic versions of printed books.
 - c. Preferred Choice 3: digitized text in pdf file format
 - d. Preferred Choice 4: a digitally presented format of information with embedded enhancements that includes multimedia published by an authorized distributor.
 - e. Preferred Choice 5: I would consider all of the above an e-book to me.
 - f. Other:

g. I don't know how to define an e-book.

8. Have you ever used an e-book?
 Yes No

If yes, please proceed to Q9. If no, please proceed to Q21.

9. For what purposes do you usually use e-books? (please tick all that apply)
 - a. _____ In my classes for reading resources
 - b. _____ In my classes for designing resources

- c. _____ In my research
 d. _____ Other areas of interest (Leisure)
 e. _____ Others (state them: _____)
10. What are your sources of e-books? (please tick all that applies).
 a. _____ University e-library
 b. _____ University course materials
 c. _____ Social Networking Sites
 d. _____ Sharing applications
 e. _____ Moocs (free online courses) or other websites
 f. _____ iTunes U
 h. _____ Others (specify _____)
11. In a week, how long do you usually spend using e-books?
 a. less than 30 minutes
 b. 30 minutes–1 hour
 c. 1–2 hours
 d. 2–5 hours
 e. 5–10 hours
 f. 11+ hours
12. In a typical session, how long do you spend reading an e-book from the screen?
 a. less than 3 minutes
 b. 3–5 minutes
 c. 6–10 minutes
 d. 11–20 minutes
 e. 21+ minutes
13. How do you normally use e-books? (please tick all that applies):
 a. Browse through the chapters
 b. Read entire chapters
 c. Use the search tools to identify key words within the books
 d. Scan information quickly
 e. Search through the contents page
 f. Annotate (highlight) text that was useful
 g. Copy and paste text into MSWord or other computer software
 h. Print out pages to read in print
14. On a scale of 1–5 (1= lowest, 5= highest), how much do you depend on e-books for your learning/research?
 1 2 3 4 5
15. Does your instructor recommend or actively encourage you and your classmates to use e-book materials? (please tick all that applies):
 a. Yes, e-books are sometimes included in *Moodle/Blackboard* resources
 b. Yes, e-books are on my reading list or handouts
 c. Yes, e-books are included as course material
 d. No
16. What are the advantages of using e-books? (please tick all that applies):
 a. Ease of access — ability to access books anytime/anywhere (24/7)
 b. Usefulness of search tools and other available features
 c. Automatic referencing/citations
 d. Off campus access (remote access)
 e. Convenient/fast and easy
 f. Good range/selection of titles
 g. Others (specify _____)
17. What are the disadvantages of using e-books? (please tick all that applies):
 a. Discomfort/difficulty reading from the screen

- b. Lack of choice of e-book titles for the subject areas relevant to my study area
- c. Could not gain access off-campus
- d. Lack of choice of e-book titles in Arabic
- e. Pages take too long to navigate/too slow
- f. No facility to have the text read out loud
- g. Others (specify _____)

18. Thinking about the required texts required for learning your course(s), would you prefer to use an e-book or a printed book?

- a. E-book
- b. Printed book
- c. No preference

19. In response to Q18, please use the space below to explain why you would prefer to use either an e-book or a printed book.

20. How would you rate your overall experience of using the e-books provided by your college/program?

- a. Very good
- b. Good
- c. Average
- d. Poor
- e. Very poor
- f. N/A

21. Only answer this question if you answer No to Question 8. Why have you not used e-books? (please tick all that applies):

- a. Never knew about them
- b. I prefer to use printed books
- c. Had difficulty accessing them/couldn't find them
- d. I find it difficult to read e-books from the screen
- e. I was unaware of relevant titles for the subject I study

22. How important do you feel instruction/training by your instructor is on the use of electronic resources to your studies?

- a. Very important
- b. Fairly important
- c. Not important

23. How do you envision the role of e-books in your life within 5 years' time?

- a. For some books, I will prefer to read print books, for others I will prefer the e-book.
- b. I will mostly read print books
- c. I will mostly read e-books
- d. I don't know

Why?

24. Please add any other comments you might have in relation to e-books.

Thank for participating in this survey.