Replacing Hard Copies of Text Books with eBooks in

Bahrain: Effects on Nursing Student Learning.

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RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

Ireland

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Disclosure and Learning Objectives

- Authors: Seamus Cowman and Eman Fateel

- Learning Objectives-
- The Learner will be able to:

I. Describe the educational practices in supporting student nurse learning in Bahrain;
II. Describe the introduction of eBooks;
III. Critique the use of eBooks in nursing education;
IV. Discuss the strengths and weaknesses of eBooks in nursing education.

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- No commercial sponsorship was requested or obtained.

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Changing Educational Context

- The acceleration of educational technology - once considered to be just a trend has given rise to specific tools for education and student learning (Kirkwood and Price, 2014).

- Within one month of launching iPads, Apple announced that 1.5 million eBooks were downloaded (Smith, 2010).

- In the Arab countries, eBooks are considered "a game changer" especially for young population facilitating access to learning materials through the use of electronic devices (Wischenbart, 2014, p. 82).

- In spite of the technological revolution which has influenced educational systems across the world, the use of digital textbooks versus paper textbooks remains debatable (Berg et al, 2010; Chen et al, 2012; Marques, 2012; Lai and Li, 2013; Gueval et al, 2015).

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Technology Enhanced Learning (TEL)

- eBooks present the potential for a new learning dynamic in nursing education, to a generation of young student nurses of a digital age, who more than any other generation have exploited technology for information and socialization.

- With eBooks students can access learning materials on their laptop, smartphones, tablets and other personal devices.

- Using technology in the workplace may present a risk to professional image (Blocker et al, 2015)

- TEL is being utilized for lifelong learning and to enhance education, facilitate reflective practice and aid research advancement
  - (Doran et al, 2010; Doswell et al, 2013; Pimmer et al, 2014).

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Context

- Since the foundation of the School of Nursing and Midwifery at RCSI Bahrain in 2006 - student nurses have been provided with:

  - textbooks.

  - laptops - upgraded to a MacBook Air in 2015

- Educational incongruity with school philosophy espousing student centred learning & independent learning

- high level of usage of IPhones and social media among students, potentially could be harnessed in teaching and learning for nursing students

LEARNING IS CONTEXT DEPENDENT

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Introduction of eBooks

- A school strategic policy decision

- Internal processes – policy procedure and planning for the change

- Staff education

- Student orientation and instruction

- IT support

- Specialist support from eBook provider including planned problem solving seminars

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Aim and Project Plan

- To examine the impact of a change from hard copes of textbooks to eBooks on undergraduate nursing students learning behavior.

  N1 (year 1): eBooks.
  N2 (year 2): paper textbooks + eBooks.

- Research Ethics Approval obtained

  – (A Digital book, also known as Electronic Book (eBook), is defined as "an instructional book in an electronic format" (Doswell et al, 2013, p. 102).

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Methodology

- A descriptive non-experimental mixed methods research design.

- Four data collection approaches were used in the study

- eBook survey questionnaire) – online (N1, N2).

- Focus-group interviews (N1 & N2).

- Documentary data on students engagement with eBooks - technology platform   records by eBook provider.

- Participants assessment results and performance.

Respondents

Table 1: Gender Distribution

	Male		Female		Total	
	n	%	n	%	n	%
Nursing 1	18	16.2%	33	29.7%	51	45.9%
Nursing 2	13	11.7%	47	42.3%	60	54.1%
Total	31	27.9%	80	72.1%	111	100.0%

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Results

Table 1

		Nursing 1		Nursing 2		Total	
		n	%	n	%	n	%
Prior to Nursing degree programme, have you ever used an eBook?	Yes	27	52.9%	23	38.3%	50	45.0%
	No	24	47.1%	37	61.7%	61	55.0%
How much of an eBook do you typically read?	Entire book	7	13.7%	2	3.3%	9	8.1%
	Scan for keywords	5	9.8%	7	11.7%	12	10.8%
	Single page	9	17.6%	16	26.7%	25	22.5%
	Nothing	10	19.6%	21	35.0%	31	27.9%
	Chapter/article	20	39.2%	14	23.3%	34	30.6%

Results

Table 2

		Nursing 1		Nursing 2		Total	
		n	%	n	%	n	%
Given a choice between print and electronic versions of the same book, which would you choose?	**Always electronic**	8	15.7%	0	0.0%	8	7.2%
	Always print	8	15.7%	46	76.7%	54	48.6%
How do eBooks compare with print books on the ease of use	**eBooks are better**	21	41.2%	4	6.7%	25	22.5%
	Print books are better	18	35.3%	47	78.3%	65	58.6%
How do eBooks compare with print books on the ease of reading	**eBooks are better**	10	19.6%	2	3.3%	12	10.8%
	Both formats are equal	21	41.2%	4	6.7%	25	22.5%
	Print books are better	20	39.2%	54	90.0%	74	66.7%
How do eBooks compare with print books on the pleasure of reading	**eBooks are better**	10	19.6%	2	3.3%	12	10.8%
	Print books are better	20	39.2%	52	86.7%	72	64.9%
Are your study methods better with the use of eBooks?	**Yes**	20	39.2%	3	5.0%	23	20.7%
	No opinion	18	35.3%	8	13.3%	26	23.4%
	No	13	25.5%	49	81.7%	62	55.9%

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eBook usage per device for N1 & N2
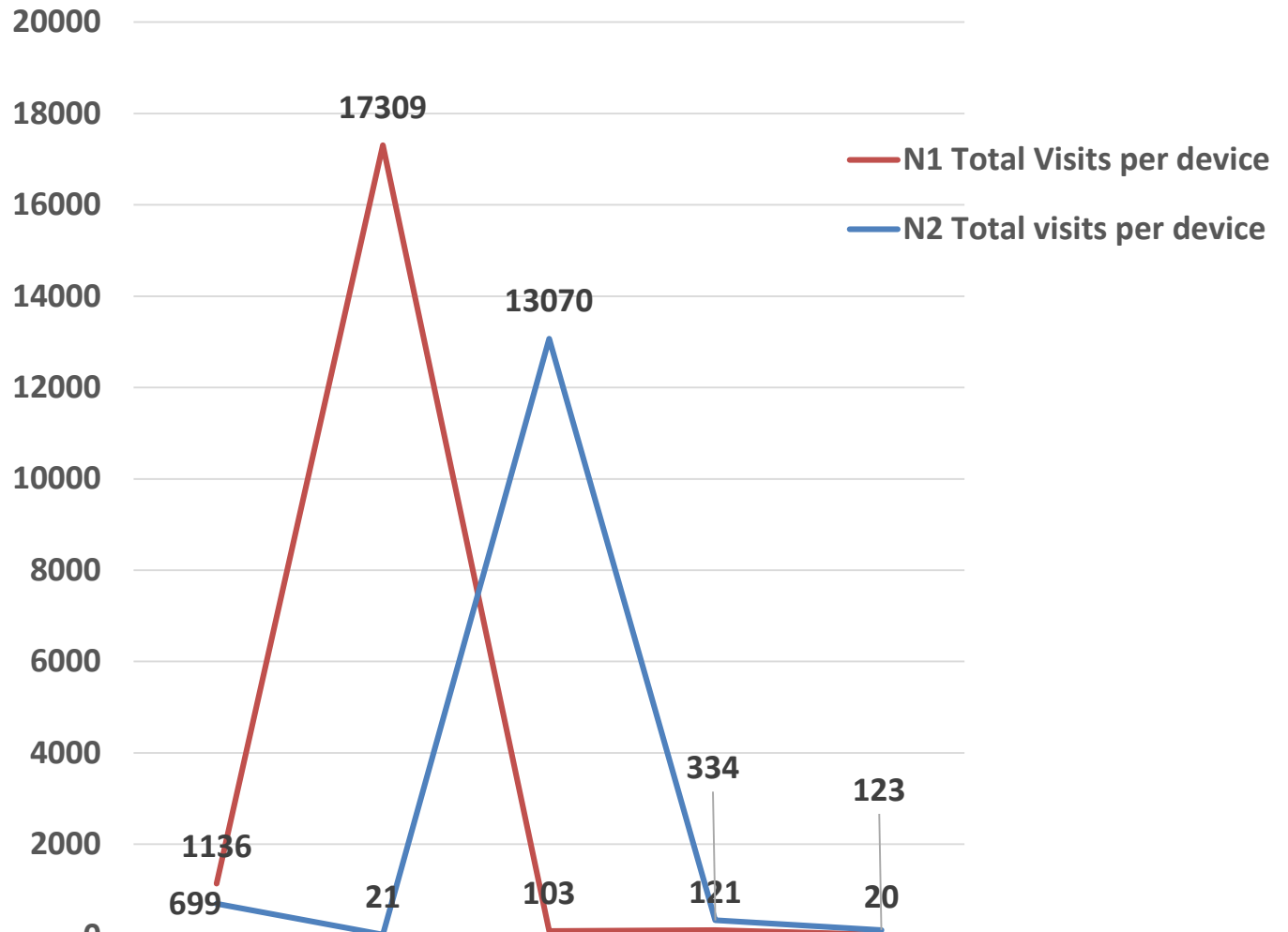
	Online visits	Mac Downloads	Windows Downloads	iOS visits	Android visits
N1 Total Visits per device	1136	17309	103	121	20
N2 Total visits per device	699	21	13070	334	123

Use of eBook - Monthly Breakdown

Examination Results

N1 & N2 (2013/14) and (2014/15) assessment mean

Marks

67
66
66
65
65
64
64
63

66

64

65

66

2013/14

2014/15

Academic Year

■ N1
■ N2

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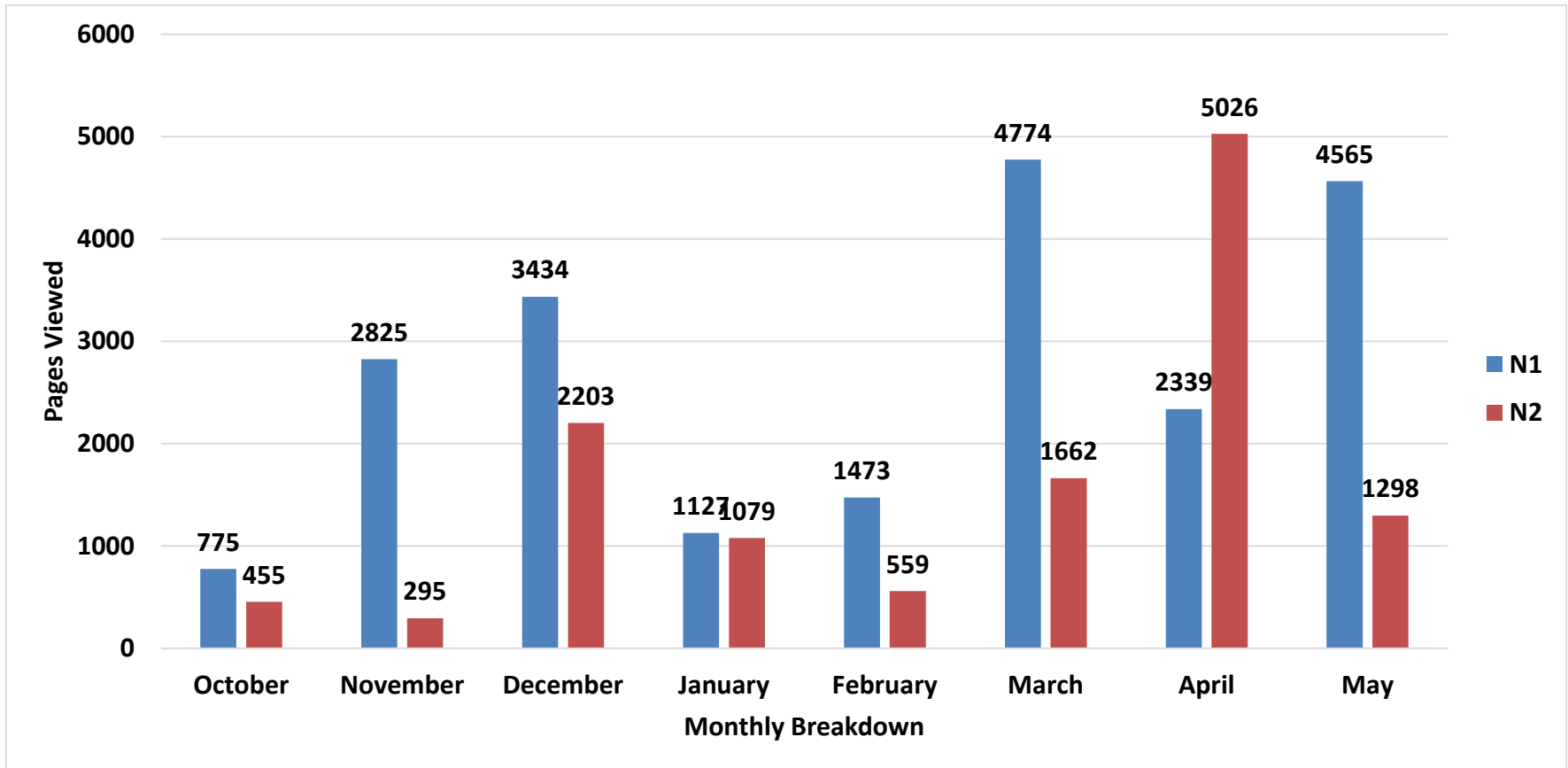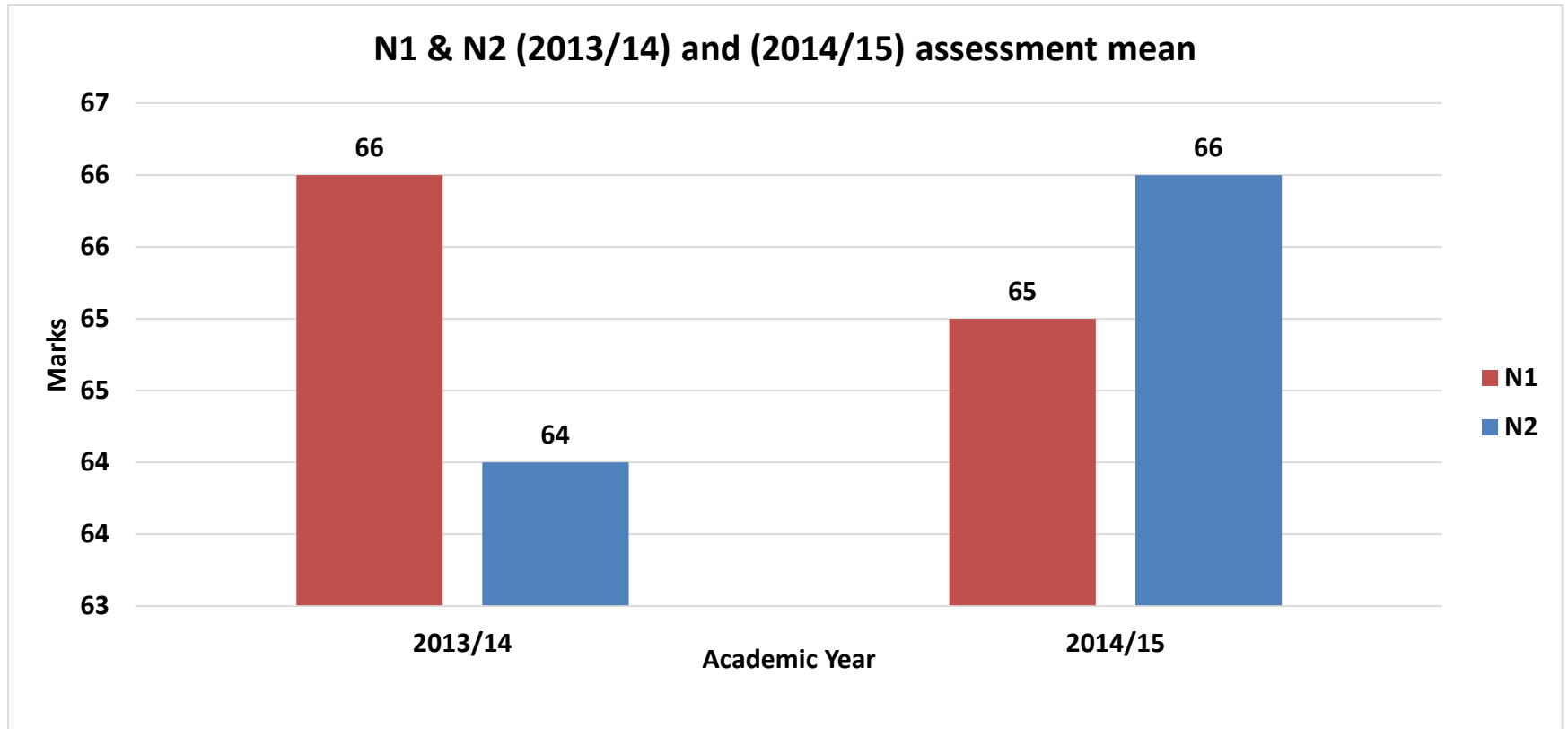
Learning Culture

"some of the Lectures will not allow us to hold the mobile, so imagine if actually you don't have your laptop and you only have your mobile for eBook use"

"I always face that with my mother, she always shout at me, STUDY!"

"Patient is calling and (she is assumed to be on mobile phone texting) but, is using eBook"

"No one will believe we are studying!"

"It's about, touching and physically feeling the papers in a book"

Technology enhanced Learning

"it is much easier with an eBook as you don't have to carry big textbooks…"

"you don't have to carry tons of textbooks just a small file in your phone is enough to carry the entire eBook…"

you don't have to go through the index and search for the word, you can just type the word and it will show you exactly which chapters the word is available at and you can scroll through or highlight it.

Technology enhanced Learning

"also another advantage is multitasking, now when you're writing a paper, you need different resources so imagine having three books that you actually need to refer to and then searching from here and there, using eBooks I can just open three windows and then search".

Technology enhanced Learning

"it is a very good for pronouncing words because there is audio reader, so it will be easy for us to pronounce and remember how we can say the medical term correctly… which we find very difficult…"

Technology enhanced Learning

- "Insufficient knowledge of how to operate the system"

- Difficulties reported related to the artifact of the digital technology due to system unfamiliarity need for continuous technology support and guidance whilst using eBooks.

- "sometimes when I study and open one video and this video becomes like five six seven eight. websites are distractive, because yeah if I am reading using my laptop this is distraction is huge for me even like when you're reading and you know sometimes something pops [pop-up window] and you open it".

Technology enhanced Learning

"you're not supposed to read or look at the laptop in a dim light room"

"we can actually make the words bigger when you zoom-in this feature is what you cannot find in the textbook…"

"students of this generation and future generation are so accustomed to looking at smaller screens, they're just focusing all their time,

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Conclusions and implications

- Generally N1 students favored eBooks when compared to N2 students who used textbooks in year 1;

- eBooks facilitated the accessibility of wide ranging learning materials through different platforms at any time and any place;

- Stimulated peer-to-peer interactions and supportive learning

- Participants highlighted that prolonged use of eBooks without proper rest can lead to headache, eye fatigue and dryness due to the screen brightness and electromagnetic radiation of the device.

Conclusions and implications

- The most common place to use an eBook was at home, and out socially which represents a new opportunity for students in continuing their learning.

- Despite working in technologically advanced healthcare environments, participants also explicitly mentioned they have experienced misconceptions about using handheld devices to access eBooks while on clinical placements, which risked their professional image. This finding echoed what a previous study has found (Blocker et al, 2015).

- Since 98% of participants were Bahraini nationals; therefore for the majority English is not the native language. With such diversity of languages spoken, certain features offered in eBooks, such as audiobook and translation, developed their literacy by listening to a narrator, which enabled them to build a better vocabulary and improve pronunciation

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