The iPad—an EFL Revolution?

An exploratory study of the iPad in tertiary education in the UAE.

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I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature: …… RSPeel ……..

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This thesis is dedicated to my children Robert and Martin, who joined me partway through this doctoral journey.

"And the end of all our exploring
Will be to arrive where we started
And know the place for the first time."

T.S. Eliot, "Little Gidding."

ABSTRACT: The iPad: an EFL classroom revolution?

The motivation for this study was the 2012 launch of the iPad as the *de facto* delivery platform for Foundations-level students at all public universities in the UAE, the largest nationwide adoption of the device anywhere in the world. Not only was this of interest in terms of scale, it was also of interest linguistically, English being the language of instruction at all public universities, despite their student body being almost exclusively indigenous Arab nationals. It also presented the opportunity to examine the marrying of a cutting-edge emerging technology with an EFL tertiary education context, an uncommon occurrence.

Though eulogised by university management and the local press as an educational revolution, for some the iPad initiative was unusual, given the speed of its roll-out, lack of piloting or teacher training, and the linguistic level of most Foundations-level students. Thus the objective of this thesis was to examine the device in both a pedagogical and socio-cultural context, and assess whether it was the educational panacea promised, or the result of a successful marketing strategy. It was also hoped to establish the iPad's worth in terms of educating the UAE's youth for successful integration into the knowledge economy, a key government Vison 2021 strategy.

To address these issues, the research focus was on evaluations of the iPad by Foundations teaching faculty, at both a male and female campus at one of the UAE's public tertiary education institutions. A mixed methods approach was chosen, utilising both a questionnaire and interviews. The results revealed the iPad was regarded as a potentially useful supplementary pedagogic tool by faculty, although there were strong *caveats* regarding its sole use, its ability to distract, and its suitability for the level of student, as well as the larger knowledge economy.

This thesis adds weight to observations already extant in the literature, but also provides new insights, such as specific iPad classroom use in terms of apps at tertiary level in an EFL context, and consequent training and support requirements. Though not a longitudinal study, it does provide a longer-term examination of the device than much of the germane literature. What the thesis further posits, is that to understand ambitious and untested educational projects like the iPad initiative in the UAE, it may be necessary to understand the larger

socio-political context of the policies, rather than see such projects in a wholly educational framework.

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List of acronyms/terms

BBL – Blackboard Learn

BYOD – Bring Your Own Device

CALM – Centre for Applied Learning and Multimedia at HCT, dealing mainly with software and professional development

CBB – Creative Book Builder, a commonly used iPad application

CELTA - Certificate in Teaching English to Speakers of Other Languages

CEPA (Common Educational Proficiency Assessment [locally-developed tests for federal university entrance in the UAE])

DBM – Dubai Men's College

DBW - Dubai Women's College

DELTA - Diploma in Teaching English to Speakers of Other Languages

EFL – English as a Foreign Language

ESL - English as a Second Language

ELT – English Language teaching

FDNS – Foundations department (offering up to 2 years of pre-sessional courses in English/Math)

HCT – Higher Colleges of Technology

ICT - Information and communications technology

IELTS – International English Language Speaking Test

IT – Information Technology

MALL – Mobile Assisted Language Learning

MoE – Ministry of Education

MOHESR - Ministry of Higher Education and Scientific Research

MOOC – Massive Open Online Course

PD – Professional Development

PDF – Portable Document Format

PISA - Programme for International Student Assessment

Think Aid – the IT Support department at HCT, mainly dealing with hardware.

TIMMS - Trends in International Mathematics and Science Study

UAE – United Arab Emirates

UAEU - United Arab Emirates University

ZU – Zayed University

CHAPTER 1: INTRODUCTION

1.1 Background

This century, in what is commonly called the Information Age, the ubiquity of the Internet, computers, laptops, tablets and smart phones has ushered in a new era in human development. The Internet is the prime vector of this change, and has catalysed a social transformation (Castells, 2014): of work and economic activity (with the rise of networked enterprises and work processes), and culture and communication (a shift from mass media communication to mass self-communication based on the Internet). Even the structure of the family itself is changing, with increasing individuation. The sea-change in technology has also impacted the field of education. Books and conventional teaching are being challenged, and often replaced, by online texts and digital platforms to deliver lectures. Concurrently, new learning models are emerging, such as Massive Open Online Courses (MOOCs) and Mobile Assisted Language Learning (MALL), employing mobile devices.

The iPad is part of this new discourse of MALL, and arguably it has captured the interest of educators more than comparable devices (Burnett, Merchant, Simpson, and Walsh, 2017). As part of a new wave of small portable tablets, and smartphones, it takes the stage amidst the rise of mobile technology, which transcends historical educational paradigms of time and space. A traditional lecture can now be recorded and disseminated to an online student body, the only requirement being a suitable device and an Internet connection. The end user no longer needs a bulky laptop or computer; small hand-held tablets and smartphones can be used anywhere there is an Internet connection or data package.

With recent ideas such as the “flipped classroom” (Bergmann and Sams, 2012), mobile device learning has changed the concept of distance learning, making it immediate, synchronous, yet individualised—with students able to learn at their own pace. The iPad forms part of this mosaic of rapidly emerging technology, and this thesis adds to the body of literature examining the impact

of emerging technologies in education, specifically in an EFL/ESL tertiary education context.

1.2 Rationale

At the time of writing, the motivation and rationale to start this thesis was it offered an opportunity to examine EFL at the cutting-edge of an emerging technology, namely the largest adoption of iPads in tertiary education in the world. Having been immersed in the tertiary education system in the UAE for almost 20 years, and seen several technological initiatives come and go, it felt only natural that such a global event merited further examination. Education in this part of the world appears to go through constant changes, the iPad initiative being the latest of many. Yet, despite the regular re-iterative educational initiatives announced, notwithstanding the UAE being one of the wealthiest countries in the world, students' performance in the public sector schools is poor, as documented by academics such as Ridge (2014), and regularly commented on in the usually-non-critical national press (e.g. The National 16/12/13).

The UAE iPad initiative was heralded by an unprecedented level of hype. At its HCT launch at a conference at Sharjah Women's College in June 2012, Apple promised it would be an educational—and more specifically English Language Teaching (ELT)—revolution. Such a claim was already being backed in the literature. For example, Ireland and Woollerton (2010: 35) claimed the iPad "… will change and revolutionize the world of language teaching and learning", and "…that our concepts of education in general, including language teaching and learning will be changed forever… [and] those institutions that do not adopt [it] … will be left behind" (op. cit., p. 47). As Chapter 2 of this thesis hopes to illustrate, being "left behind" is not a position the UAE seeks, with its plethora of "world firsts" and superlative architectural achievements. Thus, an examination of the iPad initiative portrayed in such bold terms by Apple and academics such as Ireland and Woollerton seemed a research study of particular merit given the similarly hyped context of the UAE, particularly given the paradox of an under-performing education sector as noted by Ridge (2014) and others.

1.3 Significance

iPads have been rolled out in various educational initiatives around the world, but usually in primary or secondary educational institutions. Results have been mixed, with both positive and negative experiences being narrated in the apposite literature. For example, in Scotland, an in-depth evaluation by the University of Hull was generally highly positive (Burden, Hopkins, Male, Martin and Trala, 2012). In California, however, their launch is typically categorised as a debacle (e.g. Lepowsky, 2015, Nogushi, 2016). In between these polar extremes lie a number of other studies occupying differing positions.

In tertiary education, the impact of the device has been less commented on, and there have been no examples of a mass adoption of the device comparable to the UAE. Though there are some studies, most are impact studies, or research agendas. As some academics in the field of digital education have commented such as Walker (2015), research into digital technologies for learning is often short term, typically in the initial adoption phase of the emerging technology. There appears to be a dearth of longer term studies, something which this thesis seeks to address, albeit in a small way. At the time of data collection, 3 years after the device's inception at UAE public universities, faculty were well beyond the initial stages of the novelty of the iPad, and should therefore have a more nuanced evaluation of the device; many of the initial evaluations in the literature seem more excited by the novelty of the device, rather than how exactly it enhances the learning experience.

In EFL/ESL, likewise there have been limited numbers of studies carried out. Again, they are typically initial perceptions of the device, rather than in-depth analyses of teaching and learning practice in the classroom. These are discussed in further detail in Chapter 4.

1.4 Research Aims and Guiding Questions

Initially, the aim of the thesis was to ascertain whether the iPad had been the "educational revolution" it had been claimed at the HCT conference announcing the initiative in June 2012; this was the inceptive, primary aim of the research. Being exploratory in nature however, as the thesis progressed, it became clear several more research questions would enrich the study, and they became incorporated at later stages of the research. These focused on use of the device both inside and outside the classroom, how faculty evaluated the

device, and how they compared it to other content delivery tools, such as laptops or textbooks.

A further focus was to elicit the feelings and responses of teaching faculty on the technical support offered and professional development (PD) in terms of the device, and for them to assess its adequacy and suitability. Faculty were also asked to report how they thought students viewed the device, whether as a tool for learning, one for entertainment, or as a combination of both. Speaking personally, I was impressed by the iPad when initially adopted by our own institution, so much so that I used it exclusively—my laptop was locked away in a cupboard for several weeks. However, gradually I came to see it more critically—good for some learning activities and applications, but less so for others.

1.5 Structure and Organisation

Firstly, the role of context will be considered, which I believe to be critical, given a number of important factors: the style of governance in the country and (arguably) the consequent trickle-down management style of educational establishments; the EFL/ESL context of the students; and the generally low level of education. The thesis will then go onto examine the apposite literature, noting that although there is now considerable literature on the iPads in schools, this is invariably focused on native speakers, not on ESL/EFL contexts, such as here in the UAE. Literature on iPad use in universities is more limited, and even more so on EFL/ESL contexts in tertiary education. That literature most pertinent to the UAE and iPad use will be examined, conclusions drawn, and gaps in knowledge and research identified.

The mixed method methodology employed will be discussed and justification given for such a choice, relating it to the participants in the study: HCT faculty themselves. Findings will be discussed and analysed. Finally, the discussion chapter will identify the contribution to knowledge of the thesis, and reflect on the findings and suggested implications for practice. It will also discuss limitations of the study, mention the evolving nature of the institution as it moves into its “HCT 2.0” phase, and also identify areas for further research.

CHAPTER 2: CONTEXT

2.1 Background

The United Arab Emirates (UAE) is a young country, founded in 1971, consisting of seven emirates, each with their own ruler, but all ultimately beholden to the President, Sheikh Khalifa Al Nahyan, who rules the federation from the capital, Abu Dhabi. Federal higher education is comprised of three institutions—UAE University (UAEU) founded in 1976, the Higher Colleges of Technology (HCT) which was established in 1988, and Zayed University (ZU), opened in 1998. All three institutions are open only to UAE nationals, though recently students with national mothers may be granted admission under certain conditions, and the children of some teaching faculty are accepted at UAEU.

HCT is by far the largest of the three institutions, with over 22,000 students in 17 campuses across the country (HCT Factbook, 2017 – 2018: 4). It offers Bachelor's degrees in a variety of subjects, including Applied Media, Business, Computer Information Science, Engineering, Health Sciences and Education, as well as courses in General Studies and Arabic & Emirati Studies. Most students do not enter Bachelor's courses directly, as they do not have the required IELTS Academic Band 5.0, so spend up to two years in the Foundations (FDNS) programme, which is an English-immersion course to bring them up to the standard of the IELTS Band 5.0.

HCT claims its programmes are "… designed in consultation with business and industry leaders to ensure the students' skills are job-relevant and to the highest standards" (op. cit., p. 6), and with over 53,000 graduates in a population of less than 950,000 nationals (UAE Government Portal, 2017), the reach of the institution in the local community is significant.

As will be explored in the context chapter, the UAE is always keen to position itself at the cutting edge of technology, and tertiary public education is no exception to this. Thus it is unsurprising that HCT, with its eponymous title, should be at the forefront of the embracing of technology.

2.2 The UAE: a nexus of infrastructure and technological superlatives

For the visitor to Dubai, arriving at the gleaming airport via the state-of-the-art Emirates airliner, the architecture of the cityscape serves to impress,

from its “7” star [sic] hotels to the world’s tallest building, the Burj Khalifa. The increasing deployment of technology—from iPads to E-government—serves to cement the discourse of development initially provided by the country’s infrastructure. With the vision of its leaders, aided in no small part by its massive oil wealth, the country has catapulted itself onto the world stage, from being a little-known backwater in the recent past, to a country synonymous with breaking records and “firsts”. The dynastic government, unconstrained by the need to seek consensus, is able to forge ahead with development as it sees fit, and can pour money into state-of-the-art infrastructure, new initiatives and projects, and the very latest technology. The iPad initiative in public tertiary education is typical of this employment of cutting-edge technology. Indeed, the UAE is not merely the first country in the region to switch to iPad-only classrooms (ITP Net 6/9/12), but is the *de facto* centre of the largest mobile learning initiative in tertiary education in the world (HCT News, 24/09/12), which provided it with the opportunity to launch the First Annual Mobile Learning Congress 2012 in Dubai on September 25th, 2012 (op. cit.).

The implementation of the iPad was rolled out across all public tertiary institutions in the UAE in their respective Foundations (FDNS) departments in August 2012. It was the largest distribution in the world: three government universities distributed over 14,000 iPads to first year students in 2012 as a result of a mobile learning initiative (Gitsaki *et al*., 2013). For some, this was a surprising decision, both for its suddenness and lack of piloting (e.g. Gitsaki *et al*., 2013:13), and also due to the linguistic competence of the students.

As mentioned in the preceding section (2.1), entry level for Bachelor’s programmes is an Academic IELTS band 5.0 at all federal universities. Prospective students who fail to achieve this will spend up to two years in FDNS programmes to reach the target IELTS band 5.0. The students generally have a low level of English, around an IELTS band 4.0 (Gitsaki, 2012) and would be unlikely to fully utilise many of the iPad applications (apps) that are designed for competent English speakers. Similarly low levels of English competence amongst FDNS level students have also been documented at UAEU (e.g. Bielenberg and Gillway, 2007) and at ZU’s FDNS equivalent course, the Academic Bridge Programme (Zayed University, 2015).

At the time of the launch, no apps or e-texts were specifically tailored for students. Instead, teachers had to design their own materials via various apps

provided by colleges, aided by *ad hoc* in-house training sessions and conferences. However, the lack of professionally produced materials available on the iPad, combined with the removal of textbooks, raised concerns amongst some teachers and students that the iPad for FDNS students would not be the universal panacea as eulogised by management of the various institutions (The National, 24/9/12). Would the iPad be an expensive distraction, rather than a useful teaching aid?

This is the context in which the research question was originally framed. The research was exploratory, and therefore as it progressed, more specific research questions arose, such as how educators actually used the device in class, and whether there was sufficient support in its use, both technically and pedagogically. Overall, this thesis intends to evaluate the iPad's educational worth for UAE undergraduates in the tertiary public sector by canvassing the opinions of educators involved, and analysing the context of the decision to implement the iPad in FDNS programmes in the first place.

To understand the adoption of the iPad in the UAE as a world first in tertiary education, the thesis also aims to show that the adoption is not just simply that of a mobile device within the field of education, but rather part of a discourse of modernity, dispensed as a universal panacea, that serves to legitimise the dominant hegemony, both domestically and internationally. The image of a modern, progressive state distracts from some of the country's pressing concerns—under-performing government institutions, rising youth unemployment, and war—the UAE has seen military action in Syria and Libya, and is currently involved in the war in Yemen.

This chapter argues the adoption of the iPad needs to be contextualised in socio-political terms, not just the confines of the education system. Seemingly removed events—such as the collapse in the price of oil in 2014, or the war in Yemen from 2015 to the time of writing, have had a swift and dramatic effect on education budgets, student and faculty numbers—and teaching and learning. This chapter will, therefore, briefly examine the development of the UAE in recent times: its demographics, the education system, the political framework, and current social issues and the earnest adoption of technology, of which the iPad is just one facet. The chapter aims to show that there is a nexus between these perhaps seemingly disparate elements, and that technology is a useful aid in the portrayal of a modern and successful state.

2.3 The UAE—from pearl-diving to E-government

The study takes place in the United Arab Emirates (UAE), a small country on the eastern coast of the Arabian Peninsula, which consists of a confederation of seven emirates. Formerly known as the Trucial States, the economy depended on pearl-diving, fishing, animal husbandry and subsistence agriculture for its economy, until the discovery of oil in the middle part of the last century. Founded in 1971, the United Arab Emirates has undergone spectacular growth primarily due to the discovery and extraction of oil. From the dredging of the Creek by Sheikh Rashid in the 1960s and 70s, to the building of the world's largest man-made harbour, Port Jebel Ali in 1979, other infrastructure improvements have enfolded swiftly, such as the establishment of Emirates airline with its state-of-the-art fleet in 1985, massive infrastructure developments at the turn of the century such as Internet City and Media City (which has attracted branches of news agencies such as BBC, CNN and Reuters), and the futuristic metro system opened in 2009. "Build it, and they will come" has become the nation's mantra.

With the world-class infrastructure already in place for all to see, purchasing cutting-edge technology and establishing a modern knowledge economy for national youth to participate in has attained a new primacy as a sign of development (Ridge, 2014), and is documented in a published government policy paper, Vision 2021 (Section 3.3). In terms of technology, the rolling out of E-government, a system of digitised services, including national ID smart cards that facilitate a range of services from airport e-gates to banking, SALIK, a remote radio-frequency identification [RFID] road toll gate system, and a mobile-phone parking fee system serve two important purposes: to appear the sign of a successful and modern state, and also as a revenue tool—SALIK alone generates 2.3 billion AED annually (Khaleej Times, 18/7/18). A third purpose of the E-government system is security: citizens can be easily monitored. Security concerns are also a factor in the acquisition of military technology—despite being a small nation, the UAE has built up a huge stockpile of the most technically sophisticated weaponry (Davidson, 2011a: 6), with one of the highest military expenditures in the world as a percentage of GDP, 5.5%, considerably higher than the USA at 4.6% (World Bank, 2014a).

Abu Dhabi, the largest emirate, is also the location of the eponymously named capital city, and has by far the largest oil reserves of all the seven emirates, with its proven reserves ranking 7th in the world (US EIA, 2013). However, despite Abu Dhabi's great wealth, Dubai is a better-known city worldwide due to its tourism, high-profile sports events, superlative buildings, and its recent win of the Expo 2020 bid. Indeed Dubai, despite its troubles in the financial crisis of 2008/9, is remarkable for being the most successful non-oil economy in the region, with its financial services, real estate and tourism sectors enabling a 97% diversification away from a hydrocarbon economy (Davidson, 2011a: 1). Looking to the future, education and technology are seen as central pillars to the knowledge economy the UAE hopes to develop (Vision 2021: 2011), moving away from its historically oil-based economy.

The other five Northern Emirates—Sharjah, Umm Al Quwain, Ajman, Ras Al Khaimah and Fujairah are less well-known, have little or no oil reserves, and have not managed to diversify their economies like Dubai. Visibly poorer and plagued by water and power cuts (e.g. Oxford Business Group, 2012:19; Gulf News, 05/12/13, The National, 30/6/11), occasional public protests have resulted (Reuters, 6/7/11). With their development lagging far behind Abu Dhabi and Dubai, the Northern Emirates rely heavily on central government—i.e. Abu Dhabi—economic support and largesse.

2.4 Demographics

In common with other Gulf States, the country is mainly inhabited by expatriates, who constitute almost 90% of the population (IMF July, 2017); almost 60% are workers from the Indian subcontinent (CIA Factbook, 2017), but there are also substantial numbers of non-Gulf Arabs, Iranians and Filipinos. Thus the population of 9.9 million (IMF July, 2017) consists of just 1 million nationals, with nationals outnumbered by foreigners 10: 1. It can claim another "first", being the country with the highest number of immigrants globally (United Nations, 2015) and the heaviest dependence on foreign labour. From domestic servants to doctors, the vast majority of the labour force is imported, doing the jobs the indigenous population are disinclined to do.

Though small, the indigenous population is increasing rapidly, with a birth rate far higher than non-nationals (The National, 22/4/12). 45% of nationals are under the age of 15 and the population growth is 4%, one of the world's highest.

As increasing numbers of young nationals are entering the labour force, many are unable or unwilling to find work, which is being seen as increasingly problematic (Braxton, 2011: 66).

Sunni Islam is the country's official religion, but especially in Dubai, with national citizens hugely outnumbered by expatriates and its plethora of Western-style shopping malls, beach clubs and bars, it can be easy to forget this is a Muslim country. This is a situation not all nationals are happy with, and the post-oil transformation has caused many nationals to feel threatened by an overwhelming foreign demographic, a loss of national identity and cultural degradation (e.g. Al Dabbagh and Gargani, 2011; Szuchman, 2012; Vision 2021: 6).

2.5 The ruling bargain

The government has been generous to its small indigenous population in terms of benefits and opportunities, with its "rentier" or distributive state paradigm (Beblawi and Luciani, 1987), by which the government obtains the loyalty of citizens through lavish state benefits (free medical care, free education from primary to tertiary, subsidised/free housing and utilities, and until recently, almost guaranteed highly-paid public sector jobs (Minnis, 2006; Abdulla & Ridge, 2011). As a result, most national citizens appear happy with their lot, and the country has not been affected by the recent political upheavals in the wider Arab World, which has affected other Gulf States such as Bahrain and Oman. However, this "loyalty-through-largesse", which effectively trades patronage for productivity, could be viewed as a paradox given the image of modernity and progress the country wishes to portray.

2.6 The modern UAE—a nation of superlatives.

From the Burj Khalifa (the world's tallest construction), to the Burj Al Arab Hotel, ("the world's most luxurious" [Jumeirah group, 2014]), and the perhaps somewhat more architecturally grounded feat of the world's largest sandcastle (Gulf News, 25/12/13), superlative constructions can appear the self-styled core measurement of choice to reflect the UAE government's innovative and progressive image, the quintessential *sine qua non*. But being "the best" is not only limited to architectural triumphs—the national press is replete with other superlatives, such as the world's first Ministry of Possibilities (Arabian Business,

23/4/19). The list of achievements includes perhaps less spectacular records, such as the world's largest shopping trolley (Guinness World Records, 2014), the record for the most people wearing paper hats (Gulf News, 03/03/13), and some more offbeat—the world's longest "wheelie" on a quad bike (performed by Dubai Police), and the largest human image of a coffee pot, for example (The National, 24/12/18). Indeed, Dubai now has its very own Guinness Book of Records office (The National, 01/09/12), which documents records such as the world's biggest kebab, heaviest gold ring, and—perhaps ironically for a Muslim state—not just the world's most decadently decorated Christmas Tree, but also the world's most expensive alcoholic cocktail (The National, 1/9/12), and heaviest Christmas bauble (The National, 24/12/18).

The desire for being "the best" can appear a monophagous obsession, which risks passing from trope to cliché, as some have commented. For example, Arabian Business, the UAE's pre-eminent business magazine, has adopted a critical stance (unusual for the national press) and suggested it has gone too far, and is detracting from Dubai's image (Arabian Business, 4/7/13). The National (24/12/18) has categorized some of the records as "pointless." Nevertheless, the "world firsts" covered by the national press serve a twofold purpose: to give the impression of a modernist, dynamic state, and help disguise some less desirable "achievements". These include the UAE having the world's biggest environmental footprint (The National, 14/10/10), the worst air pollution in the world (World Bank, 2015: 219), one of the highest per capita numbers of political prisoners (Ulrichsen, 2017), and the city of Dubai being one of the world's biggest supplier of counterfeit goods, second only to China (Arabian Business, 10/12/13).

In addition, despite the usually positive press, some public sector institutions have been identified as underperforming, such as the health service (The National, 10/10/12), judiciary (UNHR, 6/10/14) and state school education, widely branded as failing (e.g. The National 4/10/11; The National, 6/12/11; The National 16/12/13; Freimuth, 2014, Warner and Burton, 2017). As the noted Gulf expert Christopher Davidson, who worked at ZU succinctly states (2011b: 27): "Unfortunately the [UAE] education system is failing badly … and the knowledge economy … had actually shrunk since 2005, with the blame placed on the domestic education system."

2.6.1 Press and academic freedom

Press restriction has resulted in a self-censoring media, and there are few critical articles in the press. External publications, news channels or organisations deemed critical are blocked, such as Al Jazeera, Middle East Eye and Human Rights Watch. Even home-grown publications which avoid controversy can find themselves subject to sanction—for example, when the leading business magazine Arabian Business published a story alleging some construction projects were cancelled in July 2017, both the magazine and its website were blocked for a month (The National, 27/7/17). Internet use is heavily restricted, and Safe Search is the default setting for all search engines in the country: it can only be overridden by purchasing a virtual private network (VPN), which is illegal. All Voice-Over Internet Providers (VOIPs), such as Skype, have also been banned (only Etisalat, the state-owned telecom provider's service is permitted, which both caller and receiver need to pay for and install). For researchers and academics, such censorship and restrictions also link to the issue of obtaining accurate information regarding the country itself.

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2.6.2 Statistical shortcomings

For a nation that loves being "number one" (e.g. Khaleej Times 25/11/16, Gulf News 01/12/18) other numbers are less forthcoming—namely statistics and official figures. Even the Federal National Council (a federal authority partly elected, and partly chosen by the rulers) has expressed frustration at the lack of accurate and up-to-date statistics on fundamental issues such as unemployment (there have been no official figures since 2011) and health (The National, 18/4/15). Dubai itself has caused concern in the business community by not releasing key economic data—such as GDP, retail and car sales—for two years, whilst its 2018 stock market performance was the worst in the world (Ismail and Pacheco, 7/3/19). On the international stage, the discourse is the same. Standard & Poor and the International Monetary Fund have mentioned the UAE's statistics on subjects as mundane as population are "not realistic" (Arnold, 2014), and government institutions have been criticised for "weakness" in terms of providing timely and accurate data (op. cit.), and in need of improvement (IMF, 2017: 8, 13). As noted earlier, self-censoring journalism and the obfuscation of official statistics can make research in the area a challenge.

2.6.3 Discontinued initiatives

Though the UAE is adept at grabbing “world firsts” in terms of headlines, many are then quietly forgotten. Some of the records noted earlier could fall into this category, but there have also been multi-billion-dollar initiatives that have never materialised. The hubris of the property market collapse in Dubai (and other Emirates) in the financial crisis of 2008/9 is perhaps the most visible example, with a myriad of projects abandoned including massive offshore constructions such as the Palm Deira, Palm Jebel Ali, the Waterfront, the World and the Universe.

In terms of education, headline-grabbing superlatives such as the world’s biggest educational fund of $10 billion (BBC, 19/5/07), announced in 2007, have similarly yet to bear fruit. The FDNS programmes in public tertiary education have also seen many new initiatives announced in its long history: an array of iterations based on project-based learning, skills-based learning, business simulations, virtual experiential learning, laptop learning, a “house” system, the “flipped classroom”, and now the iPad. These initiatives seem to have had little effect on students’ academic progress in the FDNS years, with significant percentages of students failing (e.g. The National, 2/8/11) and frequent calls for the abandonment of the FDNS programmes over the years (e.g. The National, 4/2/14). Whether the iPad initiative would suffer the same fate or usher in a positive learning experience was a fundamental aim of the research, as discussed in Chapter 1.4.

2.7 The importance of technology

In pushing technology as a principal symbol of progress and development (Vision 2021), the government’s policy has dovetailed with the perspective of its own citizens, who mirror the government’s keen appropriation of technology, Smartphone penetration is the highest in the world at 82% (Newzoo, 2018), Internet use at over 80% is amongst the highest in the world (Statista, 2018), and mobile subscriptions at 215 per 100 people, the second highest in the world, almost double that of the United States (World Bank, 2016). The UAE’s ICT infrastructure (per capita number of telephone lines, computers and Internet users) is by far the most developed in the Arab World (World Bank, 2018). Given the extremely high number of low-income

expatriates employed as labourers/domestic helpers (the number of domestic workers alone is double that of the indigenous population [Sönmez, Apostopoulos, Tran, and Rentrope, 2011]), this invites the conclusion that amongst the generally well-off national citizens, these figures of ICT penetration are even higher.

Harnessing the latest technology gives the impression of modernity and progress, and added to the many “firsts” and “records” noted earlier, combine to form of the image of a modern and dynamic state. Though the iPad is only a small part of this mosaic of modernity, nevertheless it still strongly aligns with the progressive vision the country wishes to portray, exemplified by its Vision 2021 policy document, and distracts from the shortcomings of the public education system. The iPad initiative could effectively be considered a microcosm of the country in the manner in which new projects and initiatives are continually announced, whether completed and successful or not, as part of a rolling discourse of progress and development.

2.8 Recent regional developments and their educational effect

In the past 4 years, a number of significant events have occurred—a dramatic fall in the price of oil starting in 2014 (The Economist, 8/12/14), the war in Yemen (2015 to now), and the diplomatic crisis with Qatar in 2017 to the present day, closing land borders and air space.

Such economic and political events might be thought beyond the focus of such a study, but have had an impact on education. The fall in oil prices (late 2014/2015) occurred at the same time as a change of senior management at HCT, and ushered in a raft of austerity measures, alongside a rebranding—“HCT 2.0” becoming the new name of the institution. In the last 3 years, my own current department (General Studies) of 28 faculty has seen 18 teachers resign or not been offered new contracts, and the FDNS department has similarly suffered a loss of faculty. Not one faculty member has been replaced, resulting in far larger class sizes. On my campus, both the library and IT Support departments have been cut to a single staff member each, whilst previously employing over 20, with a consequent impoverishment of service to both faculty and students. Meanwhile, the war in Yemen and the policy of drafting young men into the military has seen a precipitous decline in student enrolment at Dubai Men’s College (DMC), and other male campuses, with many teachers

being moved at short notice to teach at the HCT's Women's Colleges—or their contracts not renewed. The Qatar crisis has had no such apparent effect on education apart from some difficulties for students with Qatari family members, though it risks further destabilising the region, breaking up the Gulf Cooperation Council (GCC), disrupting the economy and businesses (many companies here are Qatari-owned) and detracting from the Dubai 2020 Expo, Qatar being Dubai's wealthiest neighbour.

These events have been foreshadowed by the regional picture, with the "Arab Spring" and wars in Syria, Iraq, and Libya combining to create an atmosphere of anxiety in the country, and extensive security screenings of those entering the UAE for employment purposes. Obtaining security clearance for teachers (and other guest workers) typically takes months (personal interview, 2018, HR officer, HCT). Security clearance required for any guest speakers at HCT has now become lengthy (Appendix 7, from HCT internal email, 27/1/17).

2.9 Future uncertainties

The Qatar conflict which allegedly arose from Qatar's support of "Islamic extremism" (e.g. Trager, 2017, The Qatar Crisis, 2017) remains ongoing, and a source of concern for the region, as does the war in Yemen. On the domestic economy front, the introduction of VAT in the UAE from January 2018 (5% on all goods and services) has pushed up prices, and reportedly caused the closure of many businesses; at the luxury end of the consumer spectrum, iconic malls such as the Burjuman Centre in Bur Dubai and Sunset Mall in the exclusive Jumeirah district have swathes of empty shops (Ayesh, 26/6/18). "To let" signs are all over Dubai, for both residential and commercial property, and the spectre of mass reverse migration—i.e. expats leaving—is clearly causing concern (Arabian Business, 19/6/2016, The National, 15/5/18). In response, the government has frozen school fees for the 2018 - 2019 school year, overstay fees for visas are being waived, and the government has introduced a new 10-year visa for certain skilled professional expatriates.

Whether this is too little too late remains to be seen, but the effects of reverse migration by expatriates could be highly damaging to the economy, considering the money poured into the economy by a typical middle-class family with two (or more) children. The cost of living is high: the rent of a small villa is

typically at least 150,000 AED in Dubai or Abu Dhabi, and school fees similarly high (over 71,000 AED per child in year 12 at my children's school, Dubai International, Academy, which is by no means the most expensive). Given that a family home and education costs alone can run to 300,000 AED, after adding on other living expenses, even a relatively small family can easily have outgoings of over 400,000 AED per annum (approximately 80,000 GBP at the current rate of exchange). Should there be a flight of expatriates, as there was in 2008/9, the economic consequences could be severe, and there is evidence it has already started (e.g. Khaleej Times, 5/7/17). Economically, a lot seems to be pinned on the 2020 Expo that Dubai will hold, although with less than two years to go, the local economy appears to be in the doldrums (Buller, 26/3/18), with some even doubting the continued viability of Dubai's economic model (Financial Times, 1/4/19).

2.10 Higher Education—its role in the nation

Producing an indigenous skilled labour force to replace the large expatriate population has long been a key government policy, with tertiary education seen as the means to achieve this aim. As Findlow declares (2006: 24), higher education "… has always been central to the UAE's … immediate needs: to train an indigenous skilled workforce." This has been relatively easy in the public sector, where jobs, once guaranteed due to the largesse of the state, are well-paid and working hours short, but much harder in the private sector, which is dominated by the expatriate population, with Emiratis comprising less than 0.5% (Forstenlechner, Madi, Selim, and Rutledge, 2012). As Ulrichsen (2011: 91) comments, there are "… deeply-embedded notions of entitlement amongst many Emiratis that the easier, lucrative public sector jobs are theirs, and that the private sector is the domain of expatriates." Despite the massive skewing of the demographics in terms of expatriates, the fact that there are no longer sufficient public sector jobs for Emiratis is causing some nationals to start questioning the feudal system of family allegiances which can stifle merit-based social advancement—whereby the right connection carries more weight than being the most suitably qualified candidate for the job, as Al Ali (2007: 368) notes.

As mentioned in earlier in this chapter (2.6.2) accurate statistics can be elusive in the UAE, and in terms of unemployment, differing figures are given.

Salem and Dajani (2013) writing in The National cite official government figures of 40,000 (15%), whilst Trenwith (2013) writing in Arabian Business the same year gives a figure of almost double that, 28%. Whichever is accurate, the potential "unemployment tsunami" brewing in the country (Braxton, 2011: 66) is a concern for the government, with the possibility that unemployed youth will become disaffected. Ulrichsen (2011: 91) cites a Gulf Minister of Labour describing the issue of unemployment amongst the indigenous population (amongst a paradoxically huge expatriate demographic) as "… a time bomb … that has already gone off", and that the current status quo "… contains the seeds of considerable future discontent" (op. cit.). The declaration of compulsory National Service for male Emirati youth (Khaleej Times, 20/01/14) may be a way to engage Emirati youth and avert security issues, such as the sedition trials of almost 100 UAE nationals (BBC News, 04/03/13).

2.11 The population of the study—the public tertiary education system, its students and teachers

The following section discusses the UAE public tertiary education system, which is comprised of three universities. The United Arab Emirates University (UAEU) founded in 1976 is the nation's oldest university, and is based in the city of Al Ain, in the Emirate of Abu Dhabi. The Higher Colleges of Technology, established in 1988, initially had four campuses in Abu Dhabi Emirate; it has since expanded across all other Emirates bar Ajman and Umm Al Quwain, with 17 campuses. Zayed University, with campuses in Abu Dhabi and Dubai, opened in 1998. It also examines the use of technology in public universities, and contrasts their linguistic and technological differences with those in public (meaning state) schools.

2.11.1 Technology and the higher education system

The UAE higher education system is generally considered to have been derived directly from Western models (e.g. Burden-Leahy 2009, Godwin 2006), and all courses at the three main public universities are delivered in English, with the exception of Arabic and Sharia Law at UAEU, and Arabic and Emirati Studies at HCT. Central to the model of higher education in the UAE is the drive to adopt technology, with all public tertiary education facilities being, or claiming to be, state-of-the-art. Indeed, this study is conducted in a national tertiary

system of 17 colleges, the Higher Colleges of Technology, whose very name shows the primacy that technology holds in the national psyche. Since its inception, the HCT has adopted cutting-edge technology at the earliest opportunity, such as the laptop initiative of 2003 - 2005 (all students were given laptops and all campuses fitted with Wi-Fi), and the more recent iPad initiative (2012 – 2017), the focus of this thesis.

However, despite the impressive technology and facilities of campuses in the public tertiary sector, the public school system is a stark contrast, with a traditionalist Arabic curriculum and methodologies, limited use of technology, and sub-standard facilities; it is regularly branded as a failure in the national press. The poor standards of its public schools explain why the UAE, despite its wealth and impressive tertiary level university campuses, is ranked 90th out of 125 countries for the quality of its education by the Education Development Index (Davidson 2010: 72). The students it produces are typically weak academically, hence the need of FDNS programmes at all tertiary institutions to raise their level of English and other skills to cope with the Bachelor's programmes in English.

2.11.2 The public education system

In many ways, the public education system is something of a "tale of two cities", and the linguistic bifurcation of English and Arabic between the public school/college levels is reflected in its two ministries. The Ministry of Education (MoE), which controls government schools is "… traditionalist [and] largely Egyptian-run" (Findlow, 2006: 27), with Arabs the main EFL teachers. The latter serves to endorse national identity at the primary and secondary level via teaching in Arabic, and with courses such as Islamic Studies. In contrast, the Ministry of Higher Education and Scientific Research (MOHESR) operates in English and oversees tertiary education. Historically, it has employed largely Western native speakers (Mouhanna, 2009: 12), and embraces "modernism" via instruction in English and state-of-the-art technology, with the primary goal of instigating employment. For example, the HCT Mission Statement declares: "Our programmes are designed to meet the employment needs of the UAE and support Emirati students in becoming innovative and work-ready." (HCT About, Overview, n.d.).

Specifically, the HCT and ZU use Graduate Outcomes (Higher Colleges of Technology, 2010) developed with employers and industry and incorporating vocational skills to guide their teaching philosophy, in the hope that graduates will enter the labour market seamlessly.

2.11.3 Students

At HCT and ZU, the students are Emirati nationals, an entrance requirement (with occasional exceptions as mentioned in section 2.1), while UAEU has a slightly different profile, with 20% of students being non-nationals—typically non-Gulf Arabs—though there are other nationalities represented (Harb and El Sharaawi, 2007). At HCT, most are school-leavers in their late teens, though at some campuses which offer evening classes, there are significant cohorts of more mature, working students—at DWC, approximately 30% of FDNS students fall into this category. Campuses are single sex, though there are some campuses which have mixed classes in certain programmes. At my own campus, DWC, the Paramedic and Engineering programmes have mixed classes, largely due to the relatively small number of students studying these subjects, though this can vary from semester to semester.

Whilst the students at the HCT and ZU (and the majority at UAEU) are all Emirati nationals, many have non-Emirati parents (usually mothers). Some are from non-Gulf Arab states such as Egypt, but a large number are from the Indian sub-continent and other non-Arab countries (Peel, 2004, Troudi and Jendli, 2011: 32). Marriage to a non-Emirati is increasing rapidly, from 32% in 2010 (Dubai Statistics Centre Yearbook 2010), to almost 42% in 2013 (Dubai Statistics Centre Yearbook 2013 [the latest available figure]). Children are often looked after by housemaids or nannies, who again tend to be Indian or South East Asian. Indeed, a monolithic all-Arabic speaking Emirati household seems rare. There is evidence the linguistic home environment impedes progress in Arabic, the students' own language (e.g. Troudi, 2009, Troudi and Jendli, 2011), but neither are they proficient in English, resulting in what Troudi (2009) terms a "cognitive burden", as they struggle with studies in the English-medium UAE public universities.

Despite the modernity of the larger cities such as Dubai and Abu Dhabi, most students wear traditional dress—a black "abaya" (a loose cloak-like over-

garment) and “shayla” (headscarf) for women, with some choosing the full face covering (“niqab”), whilst men dress in a “kandura” (white robe) and “gutra” (headscarf). Some have adopted Western-style clothing, men more than women, but they remain in the minority, especially in more rural locations. New “HCT 2.0” rules started in 2016 have stipulated that traditional dress (i.e. “shayla” and “abaya” for women, “kandura” and “gutra” for men) must be worn by students on campus.

2.11.4 Students’ academic levels and technology

Students’ poor performance in English at government schools is often blamed on their Arab teachers, but English is only part of the problem, as many students also perform poorly across the board in other subjects such as Maths and Arabic (The National, 23/2/10), and suffer from a lack of general knowledge (O’Sullivan, 2004). Indeed, current Arabic language instructors at HCT frequently comment on their students’ poor grasp of their native language, as Davidson (2008: 202) found at ZU: “… a common complaint from instructors in Zayed University is that their [UAE national] students can barely punctuate a sentence in Arabic.” Though outdated methodologies such as rote-learning and uninspired teachers are often blamed for this, there are other reasons which combine to explain students’ low academic levels.

One factor often cited in the literature is a lack of reading in Arabic (e.g. Kandil, 2001; Shannon, 2003; Taylor, 2008: 4, Al Khoury and Duzgun, 2009: 27 -28, Freimuth, 2014). Several reasons are posited for this, such as the dearth of Arabic reading matter (Arab Human Development Report, 2003: 4). Freimuth (2014) focuses on the specific problem of print-poor homes in the UAE, and low levels of “facilitative” mothers who read to their children, thereby fostering good reading habits—though why “facilitative” fathers could not play a part is something she does not address. The diglossic nature of local Arabic (e.g. Ferguson, 1959: 348 – 355; Ayari, 1996: 243 – 252; Arab Human Development Report, 2003: 7), with spoken language acutely different from its written form is regarded as another factor, as is illiteracy (10% of the adult UAE population is illiterate [World Bank, 2014b]). In addition, a further contributory factor may be the widespread phenomenon of children being raised by housemaids whose literacy may be poor both in Arabic and English. Other factors that have been raised in the literature are some students’ immaturity, ill-preparedness for the

rigour of higher education, and absence of a work ethic (e.g. The National, 5/2/14 [Editorial]).

Thus the iPad, an exclusively English platform with no applications (apps) in Arabic, must be quite a daunting device for less academic students as typified by the vast majority of FDNS students. As has already been noted by a number of scholars in the field, students' low academic level both in English and other skills, combined with an incomplete mastery of Arabic, can lead to an educational environment where many students appear to struggle (Hatherley-Greene, 2012; Troudi and Jendli 2011: 32). Initial opinions from colleagues at the start of the iPad initiative indicated a device which provides considerable scope for distraction may not be the most conducive aid to progress in the classroom.

2.11.5 The HCT teaching and learning environment

Despite its modern image, an external educator visiting one of the public universities such as HCT might be surprised by the structure of delivery, as the learning environment is far more reminiscent of a high school than a university. Classes at HCT are typically of 25 students, often more, with the new austerity measures of HCT 2.0 and consequent shrinking of faculty numbers. Students sit in rows and face the teacher and the whiteboard. Though there is some project work and online research by students, this is typically done in class. Students have large amounts of class time, and little free time for research. There are no lectures or tutorials. Teacher-lead classes are the norm, and based on personal observation, teacher talking time is lengthy—there is little evidence of a communicative or any other modern pedagogical approach to the classroom. It is essentially a high school environment, with classes of an hour, up to 6 hours per day. The lengthy time students spend in class is reflected in the workload and attendance policy for faculty. They must be on site 40 hours a week, typically with 20 contact hours per week, and need to scan in and scan out.

In terms of educational management, from almost two decades of personal observation at HCT, its educational approach is one of constant change, almost a microcosm of the "firsts" and initiatives of the country itself. It possesses a management approach that, rather than maintain the *status quo* and organically refine and hone curricula, instead declares a new initiative or innovation almost every academic year, the previous approach being

abandoned altogether—again, mirroring the discontinued initiatives noted in section 2.6.3. Such initiatives have included task-based learning, project-based learning, skills-based teaching (i.e. faculty teaching only grammar or only lexis in specific grammar or vocabulary classes, in several reincarnations), the "Flipped classroom", "Practicing the Future", "Learning by Doing", Wi-Fi/laptop learning, pronunciation-based courses, M-Reader (an online extensive reading programme), HADEF (HCT Academy for Developing Emirati Faculty, aiming to recruit 217 Emirati faculty by 2017), and Blackboard Learn (BBL), amongst others. The latter is the only initiative to have lasted due to licencing agreements, the others having been abandoned or mothballed. Recent developments in management at the HCT also seem to be increasing the piecemeal approach to education.

New management took over in 2015, and immediately embarked on a number of new initiatives. The first was to drop the earlier HCT slogan of "Learning by Doing" which reflected the HCT's original vocational approach, replacing it with "HCT 2.0". Shortly afterwards, all books were removed from HCT libraries as part of a digitisation initiative, the libraries being rebranded as "Innovation Spaces". Three years on, however, these new spaces still appear to be a work in progress.

2.11.6 EFL teachers

EFL teachers in UAE universities typically have a relevant Master's degree, which is the minimum requirement at the three public universities: UAEU, ZU, and the HCT (UAEU Academic Personnel, 2013; ZU Careers, 2015; HCT Recruit, 2015 [though ZU and HCT will now accept faculty with a postgraduate diploma in EFL/ESL for their respective Foundations programmes, but not their Bachelor Programmes]). Many also have the RSA Certificate in English Language Teaching to Adults (CELTA) or RSA Diploma in English Language Teaching to Adults (DELTA), with some holding doctorates. The teachers are generally highly experienced, with a minimum of 3 years teaching at tertiary level, and most having decades of experience. Many have also published papers in peer-reviewed journals, presented at international conferences and written textbooks. Most EFL teachers are Western-educated, but there is a wide variety of nationalities and backgrounds represented. In the DWC FDNS department for example at the time of conducting the research,

there were 27 EFL teachers—of these, 14 were native English speakers, the other 13 being Indian, Pakistani, Emirati, Bahraini, Sudanese, Kenyan and South African. All but two have Master's degrees, almost all a CELTA, five the DELTA, and four have doctorates/are doctoral candidates. Faculty have three year renewable contracts, with an initial probationary year and annual professional appraisals.

2.12 Summary

The focus of the thesis is that of the merits of adopting the iPad as a means of curriculum delivery across all public tertiary institutions in the UAE, given the context. As this chapter has attempted to show, the latter is that of a student population with a relatively low academic level, coupled with a state-of-the-art academic environment staffed with highly experienced teachers and employing cutting-edge technology—even if, in the case of the iPad, this technology is tailored more to native speakers/proficient users than EFL learners. This chapter has aimed to show the UAE has adopted the iPad in tertiary education for several reasons: most obviously, because it has the wealth to do so, and—less obviously, but certainly no less importantly—as part of its modern and progressive image, legitimising the dominate hegemony, and serving to draw attention away from the shortcomings of its education system and other institutions. Finally, it might be appropriate to regard this thesis not merely as the study of a single device, but as an interpretation of emerging technology in the field of education in the UAE, and indeed the larger socio-political system.

CHAPTER 3: REVIEW OF THE LITERATURE

3.1 Introduction: language learning from CALL to MALL

Technology and language learning has been in evidence since the middle part of the last century, with the iPad one of the most recent iterations of a continuum from computer assisted language learning (CALL) to mobile assisted language learning (MALL). Though mainframe computers were used for language learning in the 1950s, it was not until the 1980s and the development of microcomputers (now known as personal computers) and attendant CALL packages that the technology became increasingly apparent in educational institutions (Davies, Otto, and Rüschoff, 2013). Spelling, multiple choice and cloze-type programmes of the time were augmented by multimedia and Internet-based activities in the 1990s (Levy, 1997). Since the early 2000s, Internet-based activities have multiplied to include virtual learning environments such as Blackboard Learn (BBL), virtual worlds such as Second Life, multiple user domains, social networking sites and platforms, wikis, blogs, podcasts, telecollaboration, online and distance learning courses, amongst others (Thomas, Reinders and Warschauer, 2013).

Some academics have defined historical periods of CALL based on their pedagogical and methodological approaches, such as and Warschauer and Healey (1998). They termed the first phase Behaviouristic CALL, conceived in the 1950s and implemented in the 1960s and 1970s, and consisting largely of grammar and vocabulary tutorials, drill and practice programs, and language testing instruments. Communicative CALL followed from the 1970s to 1980s, a more task-based and collaborative approach. The third phase was Integrative CALL from the 1990s onwards, an eclectic blend composed of previous approaches, multimedia and the Internet.

Despite the huge learning potential of CALL, there have been a few *caveats*. Though there has been a continuum in the development of CALL materials, this has not always been linear, nor have some materials improved beyond the early days of CALL—“reinventing the wheel” often occurs as “…materials designers are often either teachers with limited technical skills or competent technicians with no experience in teaching” (Beatty, 2013: 12). Macaro, Handley and Walter’s (2012) systematic review of CALL in English as a

second language since 1990 similarly found research to be too diffuse and did not build on previous work to provide better contributions to language learning theories.

In addition, ongoing teacher training and professional development is a critical component of successfully harnessing technology in the classroom (Bax, 2003, Koehler and Mishra, 2014), as is IT and management support, as many in the field have noted such as Tomei (2003), Shin and Son (2007), Levy and Stockwell (2013). Another issue that has arisen with the rising prevalence of mass ownership of laptops, heightened by the ubiquity of Wi-Fi networks, was the potential to distract (e.g. Fried, 2008; Sana, Weston and Cepeda, 2013).

Though there is considerable literature on CALL in EFL and education in general (Thomas, Reinders and Warschauer, 2013), the bulk of literature on the iPad linked to pedagogy has been based on primary and secondary school education; salient literature on iPad use in higher education is limited, and for EFL/ESL students, even more so. For that reason, this chapter draws largely on studies done at schools in discussing the pros and cons of the device, whilst examining the specifics of the iPad in higher education, in EFL/ESL contexts, and in the UAE in particular. The first part of the chapter briefly outlines the pedagogical appeal and rationale behind adopting the iPad, before outlining the search strategy for the literature, including the databases employed, key words used, and the results pertinent to this thesis. It will then consider how it is being currently used in education, and examine both how it has been received and implemented in the classroom, from the perspective of both educators and students. Finally a rationale for the study is examined, along with a consideration of the knowledge gap, and contribution to the literature that this thesis hopes to present.

3.2 Technological and pedagogical justifications to adopt the iPad

At the time of carrying out the research (2015), the iPad was very much at the cutting edge of technology: visually appealing, lightweight and fast, whether in connections with the Internet or apps. It was at the zenith of the wave of information and communications technologies (ICT) that have become part and parcel of our daily lives over the past twenty years or so. Livingstone (2012) states that technologies have changed our lives, echoing the words of Prensky (2001: 1) writing over 15 years ago who saw "… the arrival and rapid

dissemination of digital technology... [as] … an event which changes things so fundamentally that there is absolutely no going back."

With technology playing an increasing role in classrooms world-wide, the iPad is one of the most successful and widely used devices on the market, according to Apple. The company claim that the iPad "… is transforming the way we teach and learn. Powerful creative tools, interactive textbooks and a universe of apps and content make for endless learning possibilities. All on a device everyone already loves to use." ("Ignite the creativity in every student", Apple, 2019).

In 2015, at the inception of the research, the iPad with its million-plus apps was arguably the most technologically advanced device on the market (King and Bass, 2013), with that number having now increased to almost 2 million (Statista, 2019). Apple claims their products "… have helped teachers unleash the creative potential ... with tools, inspiration and curricula to create magical learning experiences" (Apple, 2019). For learners, Apple states "iPad is simple enough for anyone to master right from the start, and flexible enough to let students go wherever their ideas take them ... giv[ing] students a canvas as limitless as their imaginations" (Apple, 2019).

Certainly, the education market responded well to Apple's marketing. Eulogies came from some quarters of the education community—Profitt (2010) considered its potential "limitless", and Huber (2012) suggested similar unlimited potential. The iPad was by far the most extensively used device in schools worldwide at the initial time of writing, having captured over 75% of the global market (Karsenti and Fievez, 2013: 3). Recently, however, this has changed: in the U.S., for example, iPad sales have dropped to represent less than 20% of the schools market, whilst Chromebooks has increased its market share to almost 60% (Singer, 2017, Norris and Solloway, 2018).

This chapter presents advantages and drawbacks of the device in its application in education. No matter how persuasive the technology, a nuanced critique must examine its pedagogical benefits, and in doing so be neither technophile, nor technophobic, but rather techno-reflective in assessing the worth of the device pedagogically, in the teaching and learning context. The first

step in such an assessment is an examination of the pertinent literature, and the following sections outline both the systematic literature search, and its analysis.

3.3 Search strategy for the literature

The electronic databases utilised were the University of Exeter core databases ERIC, the British Education Index, and Education Research Complete, in addition to Google Scholar. To increase reliability, the platforms for educational databases ProQuest and EBSCO were also included, as were JSTOR and JISC, the latter specialising in digital technologies and higher education. Key words used initially were “iPad”/“tertiary education”/“EFL”; subsequently variants such as “higher education”, “ESL” were employed, as well as adding/deleting search terms, and adding hypernyms such as “education” and “language learning.” The initial search was conducted in late 2014 at the start of the writing of this chapter, and revisited and updated throughout the thesis, up to June 2019. As an example, using ERIC and the key words “iPad”/“tertiary education”/“EFL” resulted in 203 results from 2010 (the iPad’s launch) to 2014 (the inception of the thesis); and from 2015 to 2019, 340. However, close examination revealed that the majority of these publications were not of EFL/ESL or tertiary/higher education contexts.

In reviewing the literature, there was an awareness that there are tiers of research quality—both in journals and books—in terms of peer-reviewing and self-publishing. Nevertheless, all germane publications on the specific iPad/ESL/EFL/ tertiary/higher education context were examined, irrespective of research quality, and, where appropriate, included.

3.4 The iPad in education

Linkens (2012: 5) noted the lack of research on iPads and their impact on education, comparing this to the wealth of data on computers/interactive technology in education. A Google Scholar search from 2010 (the iPad’s launch) to 2012 may appear to contradict Linkens’ assertion, with over 16,000 results revealed using the key words “iPad” and “education”. However, the vast majority of publications were initial appraisals, or merely mentioned the device as part of a discussion of mobile learning/educational technology in general.

By 2014, the starting point of this thesis, the same Google Scholar search using those identical key words resulted in 25,700 results from 2010 to

2014; yet, again, there were still relatively few academic texts specifically addressing the iPad in education, beyond initial appraisals. Using specific educational research platforms and databases such as ProQuest, EBSCO and ERIC produced 3,567, 87, and 18 results respectively for the same time period (2010 – 2014), yet most were similar in content to the Scholar searches, lacking specific studies of the iPad in education. Further searches with the same key words “iPad”/ “education”, using the database JSTOR revealed 901 publications; searches on JISC, which specialises in digital technologies and higher education revealed just 9 publications. Again, the results were similar to the Google Scholar searches.

Important exceptions were two studies of the iPad in primary and secondary schools, the largest being the Karsenti and Fievez (2013) study in Canada. It involved over 6,000 students at 18 elementary and high schools, and over 300 teachers. This study found many benefits of the device, such as increased motivation and portability, as well as disadvantages such as distraction and difficulty in writing lengthy texts.

The earlier iPad Scotland Evaluation (Burden, Hopkins, Male, Martin and Trala, 2012) was another extensive study of multiple primary and secondary schools, but with a smaller research sample of 365 students. Like the Karsenti and Fievez (2013) study, it painted a positive evaluation of iPads in the primary and secondary schools under investigation. In particular, they noted classroom dynamics had changed, with more opportunities for student learning, and with teachers exploring new activities and forms of assessment. Personalisation of the device—i.e. students having their own iPad—was considered the most important factor in the use of the device, increasing motivation, interest, learner autonomy, with augmented levels of collaboration both between students and students and teachers, as well as increased parental engagement in their children’s learning. Clark and Luckin (2013) also reported similar findings in a global appraisal of iPads used in schools in Europe, North America, Australasia and South Korea. Overall, however, as Gitsaki and Robby note (2016), few iPad evaluations in terms of learning extend beyond short-term considerations of student motivation.

Further studies have emerged since the inception of this thesis in 2014, with a number of books now addressing iPads in primary and secondary

education (e.g. Burnett *et al* [2017], Dezuanni *et al* [2015], Gillispie [2014]), which is the focus of the vast majority of studies on the iPad. For that reason, in the discussion of the specific advantages and disadvantages of the iPad discussed in detail in sections 3.8 and 3.9 of this chapter, much of the literature examined is on research in schools. During the writing of this thesis, the literature has been constantly examined and updated, and the following section which explores the iPad in tertiary education details updated database searches up to June 2019.

3.5 The iPad in EFL

Literature on the iPad in the field of EFL is limited; again, many of the studies are impact studies and initial appraisals (e.g Meurant, 2010). Those that attempt to evaluate the iPad in terms of EFL do so in rather imprecise ways, as in some of the literature on schools. For example, the device is considered motivating for students by Ockert (2018), or engaging Pellerin (2018). However, vocabulary acquisition is an area where specific evaluations of the iPad have been made in EFL, and some such as Wang, Teng and Chen (2015) and Qian and Sun (2019) have reported students' improvement in vocabulary/pronunciation, although their studies were short term, conducted over just one semester.

3.6 The iPad in tertiary education

At the time of the inception of this thesis (2014), the dearth of literature on the iPad's implementation at the tertiary education level in the field of EFL was striking. For example, a Google Scholar search employing the key words "iPad"/"tertiary education"/"EFL" from 2010 (the year of the iPad's launch) to 2014 revealed just 108 publications. Substituting the key word "ESL" for "EFL" revealed 93. However, close examination revealed that of the 108 EFL publications, 96 of these dealt with schools, mobile learning in general, or simply mentioned the iPad in their list of references, with no actual discussion of the device at all. In addition, two of the 108 publications discussed only French language learning via the iPad, and another examined foreign language learning in general. Just 9 publications were actual examinations of iPad use in tertiary education EFL settings. Without exception, all were impact or initial

appraisals of the device. Only two pertained to the area of this thesis, with an article written about the adoption of the device in Qatar, and one in Sharjah, UAE, at the HCT.

Searches via education-specific database platforms such as EBSCO, for publications concerning the iPad, EFL/ESL and tertiary education revealed no direct results from 2010 to 2014. Via “smart text searching” over 200 related results were found, but, again, most were not publications concerning the iPad in an EFL/ESL tertiary context. Instead, those of any relevance were of iPads used for other subjects, such as the Cochrane, Narayan, and Oldfield (2013) study of small scale projects featuring business, music and engineering undergraduates.

On the educational database platform ProQuest 7 publications were found from 2010 to 2014 searching with the key words “iPad”/ “EFL”/ “tertiary education”, of which 2 were relevant: one by Gitsaki *et al* (2013), and another by Johnston and Marsh (2014), both initial appraisals of the HCT iPad initiative.

Searches on other databases such as JSTOR and JISC, the latter specialising in digital technologies and higher education, produced even fewer publications. A JSTOR search with the keywords “iPad” / “EFL” / “tertiary education” produced just 2 publications up to 2019, neither of which were relevant (the first merely mentioned the iPad once, the second was a study of iPads in kindergarten classes). Searches using variant terms such as “ESL”, “higher education” produced up to 16 results, but no publications of relevance.

Revisiting the literature from 2014 to 2019, using the same databases/platforms and key words and variants discussed earlier, did result in some relevant articles. An EFL study of 196 students at a university in Taiwan by Wang (2017) found levels of satisfaction high with the self-paced iPad classes, and reading scores higher at the end of the semester than students on a regular text-based course. However, the study was only over one semester. Two preliminary studies at colleges in Saudi Arabia were relevant—one by Lawrence (2016) which examined the acceptance of the iPad by Saudi male students after 5 months’ use, and another by Albadry (2015) which examined females perceptions of language learning using iPads for one semester.

One article emerged written by two university instructors from Ecuador: Auquilla and Urgilès (2017) addressed the iPad and English Language Teaching (ELT), though it was unclear if this was a study at university level.

Despite being a general appraisal of the device and making the oft-repeated remark in the literature that it could increase student motivation, it did make suggestions for classroom apps such as Puppet Pals, Evernote and Keynote in class, and others such as Dropbox and Google Translate outside the classroom. However, these were just suggestions, and the authors did not advise on use of the apps, or provide evidence as to their usage or utility.

To sum up, it was evident that studies that emerged of iPad use in higher education were rarely in an EFL/ESL context such as public universities in the UAE. Rather, they are subject-based (e.g. Souleles *et al*, 2014, van der Ventel and Newman, 2014, Nguyen, Barton and Nguyen, 2015). Such literature tended to paint a rather vague picture–for example, the iPad was being used for taking notes and distributing lecture materials (Mang and Wardley, 2012), and for presenting and videoing lectures (Manuguerra and Petocz, 2011). Other studies, such as the qualitative study by Churchill and Wang (2014) of 9 teachers in a Hong Kong University, revealed teachers were using the iPad for content-based uses, employing e-books and PDFs. A JISC report (Barrable, 2018) from Portsmouth College by its deputy principal reported increased faculty innovation, and that students' engagement, digital proficiency and male grades in particular had improved. However, it was unclear how these conclusions had been arrived at, and it was acknowledged that some teaching faculty were still at the replication stage—i.e. "transposing paper handouts onto the screen" (op. cit.).

The Nguyen, Barton and Nguyen study (2015) provided a useful summary of the literature regarding the iPad in higher education, finding some benefits to learners and educators such as reported increases in student motivation and collaboration, and negatives such as distraction and unclear results in terms of improving learning outcomes. How to manage use of the device and integrate it into curricula was also seen as a work in progress. The literature focuses on what can be assumed to be linguistically adept learners (either native speakers or non-native but proficient students, rather than those situated in an EFL/ESL context, such as the lower intermediate level L2 native Arabic speakers who are the focus of this thesis).

Importantly, they also confirmed that only two large-scale iPad initiatives had been conducted globally in higher education. The UAE iPad initiative that is the subject of this thesis is one, the only other being at the University of

Minnesota. There, Link, Sintjago and McCay (2012) explored teachers' perceptions of the device, and the subject was revisited two years later by Williams, Lee, Link, and Ernst (2014) who looked at students' perceptions. The latter reported student satisfaction in using the device, although it was essentially an initial exploratory probe into the device's usage, with recommendations for further research—like the bulk of the UAE research. No established teaching and learning practice was reported, nor examination of long-term faculty experiences of the device, nor classroom use, in either large-scale study. Souleles (2017: 2), revisited the literature on the iPad in higher education two years later, conceded it to be limited, stating "…there is a noticeable shortage of empirical studies on the use of this tablet in H.E.", with no large-scale adoptions of the iPad in higher education identified. As the UAE initiative was conducted in an EFL environment amongst non-native speakers, it can thus be considered unique, and this thesis, in examining long-term usage of the device, addresses a gap in the literature.

3.7 Research on the iPad initiative in the UAE

In terms of the three federal universities in the UAE, Gitsaki *et al* (2013) noted the lack of piloting and preparation, and the danger of "technology driven pedagogy" (Herrington, Herrington, Mantei, Olney, and Ferry, 2009). Of the three federal universities in the UAE, Gitsaki *et al* (2013) considered ZU to have been the best prepared, spending 3 months training staff for the iPad adoption, whereas UAEU and HCT had little, or nothing. In contrast, some private universities such as the University of Wollongong (Dubai campus) had 4 semesters of preparation for iPad implementation.

Despite adopting the largest roll-out of iPads in terms of tertiary education in the world, the germane literature on the UAE initiative is sparse. Gitsaki *et al* (op. cit.), Atallah, Tamim, Colburn, and El Saadi (2015) provided initial impressions of the device and called for more research. Three short related papers by Alkaabi *et al* (2015, 2016, 2017) were the only other notable academic papers addressing the initiative at the initial time of writing. In addition, there were several short articles by Hargis, Cavanaugh *et al* (2012 - 2014), which focused on initial perceptions of the device by faculty. The latter praised the device and the initiative despite using small sample sizes of 4 – 16 faculty, many of whom had been hand-picked by management as early

adopters of the device, or “iChampions” as they were christened. The fact that these articles were all penned by senior HCT management, charged with the successful implementation of the HCT iPad initiative perhaps renders the positive findings understandable. However, these articles did acknowledge the need for further research, and the suggestion of using two educational technology models for future evaluations. The first is the Technological Pedagogical and Content Knowledge (TPACK) model (Koehler and Mishra, 2014), which considers contemporary teachers in the digital age to require not just subject and pedagogic knowledge, but also technological knowledge to teach effectively. The second is the Substitution-Augmentation-Modification-Redefinition (SAMR) model, which is examined in Section 3.12, and re-examined in Chapter 7.4.

Three articles by Alkaabi, Albion and Redmond (2015, 2016, and 2017) looked at problems of the iPad initiative at the federal universities in the UAE; the first considered issues such as distraction and the difficulty students had writing on the keyboard, whilst the latter two focussed on the problem of social networking/media, and its consequences of distraction and cheating. The earlier article by Alkaabi, Albion and Redmond (2015) on iPad use at the three federal universities using male student focus groups was circumspect in its appraisal of the Hargis-Cavanaugh articles, noting they were written early in the launch of the device, when it was embraced with excitement, and that they did not take into account student feelings, but rather (a select few) teachers’ perceptions. Some digital technology academics, such as Walker (2015), have noted the typically early analysis of technological innovations, where enthusiasm is often high and appraisals therefore positive, rather than more nuanced considerations via longitudinal studies. The Alkaabi *et al* (2015) study was published at the same time as data collection was done for this thesis, in the third year of the iPad initiative, and came to very different conclusions to the earlier Hargis-Cavanaugh research. There are several possible reasons for this. Firstly, that the research was conducted in the early days of the iPad initiative. Secondly, the Harvis-Cavanaugh studies were senior management appraisals of the success of the initiative; thus, the researchers themselves were accountable for the initiative’s “success” and employed hand-picked participants, resulting in potentially overly positive responses.

Alkaabi *et al* (2015) found that though students considered there were positives to the iPad, such as easy Internet browsing and e-textbooks, the device garnered more negatives: it could be de-motivating, beset by technical problems and unsuitable for academic writing in particular. Most students found it distracting, using it for games and social media, and in some cases this lead to academic failure (Alkaabi *et al*, 2015). In contrast, five brief articles by Grigoryan (commenting on the iPad at HCT) were largely positive, the most relevant being her 2018 study, although again, like much of the literature, she focused on generics such as students' positive attitude to the device and increased motivation, and it was a short-term impact study of less than one semester.

One longer-term study of the iPad at HCT has emerged (Ali, 2019). It was a mixed methods case study which included observations and short interviews with teachers, though its main data collection instrument was a survey, completed by 192 students and 14 teachers. It looked at the affordances of the iPad, and also the challenges in its implementation. Ali found the device was used for a variety of activities and tasks the most frequent being collaborative learning, independent learning, multimedia activities and online searches. Though recognising some of the attractive features of the iPad, and noting its affordances, he also highlighted some issues in its implementation—difficulty in writing on the iPad, the substitution of activities (i.e. tasks being done on the iPad that could be done on a laptop or paper just as easily) students' poor English and technical skills and distraction. Noting the "revolutionary" teaching and learning nature that had been touted on the iPad's launch, he held doubts regarding such a large claim. Though he acknowledged its attractive features, he called for more longitudinal studies, most explicitly teacher evaluations, which he acknowledged were limited in his own study due to time constraints.

3.8 The rationale behind the adoption of the iPad

As often with any emerging technology, plaudits and paeans are not slow in coming, and the advent of the iPad was no exception, with a number of writers offering up eulogies dedicated to the device. Johnston *et al*, for instance, writing in the New Horizon Report (2013:15) considered it to have captured the imagination of educators in higher education and been "an incredible success".

Proffitt (2010: 4), writing about its use in business, claimed this to be "…limited only by your ingenuity". At HCT, similarly vague, unquantified yet euphoric reasons were given for the iPad adoption: it was "new and exciting", and would "motivate" students. However, despite some of the imprecise definitions of the iPad in the field, the device has some specific and quantifiable advantages as a learning device. It is perhaps pertinent to list these advantages, starting firstly with attributes of the device itself, before examining the perceived benefits of the device in terms of stakeholders' opinions, and teaching and learning outcomes.

3.9 Benefits of the iPad: hardware and software features

The iPad has a number of advantages over its competitors. As some have detailed (e.g. Hahn & Bussell, 2012; Martin, Berland, Benton, & Smith, 2013, Jain and Luaran, 2016), the iPad is faster to access the Internet than laptops, but more user-friendly than other devices/smart phones for reading, etc., with its larger screen. In content terms, the iPad expedites rapid access to information, as well as information management, via apps, e-textbooks, online courses, podcasts etc. With over a million apps, most available free or very cheaply, there is an enormous amount of educational material to cater for all ages and types of learners. Not only does it provide fast access to information, it also excels in capturing information. The various capture devices—in-built camera, audio, iMovie, GPS etc., are high quality and easy to operate and share with others. Some, such as Murphy & Williams (2011), Sullivan (2013), and Drennan and Moll (2018) claim this nurtures students' creativity, enabling them to make versatile and vivid multimedia presentations. For example, the camera can be used in a wide variety of ways both to capture images and record videos, and it is easy to insert these files in a wide variety of apps—Puppet Pals and Creative Book Builder being two used widely in my own institution, along with more specific video-based apps such as iMovie.

3.9.1 Portability and touch screen benefits

The iPad is a lightweight, compact device, and this portability makes it a more attractive proposition to users in terms of carrying around content materials—whether laptops or textbooks—but also ideal for use in fieldwork, recording observations, or quickly accessing references (Johnson, Adams, and

Cummins, 2012, Atallah *et al* 2015, Welsh, Park, France, Mauchline, and Whalley, 2018). For school or college students in particular, the need to carry large numbers of textbooks—or even a comparatively heavier laptop—has been eliminated (Henderson & Yeow, 2012). Due to the iPad's comfortable size and weight, its video/audio capabilities and its ease of presenting text and images, there are claims of significant benefits for students with special needs/learning problems (e.g. McClanahan et al., 2012). Touch screens are much easier to use than pen and paper for students with fine motor difficulties, restricted physical movement strength, etc., and for those with speech difficulties and looking at the apps available, some even help with special needs such as autism—a number of studies have identified this (e.g. Johnson, Adams and Cummins, 2012: 6, Clark and Luckin 2013: 26, Fletcher-Watson *et al,* 2016). Other writers such as Reid and Ostashewski (2011) and Alhajeri, Anderson, and Alant (2017) have highlighted the example of non-verbal students who were able to participate via Speak It! and other apps, rather than the specialised, expensive equipment previously required.

Linked to this are claims that the iPad, with its fast Internet connection, can also cater for different learning styles (auditory, visual) better than laptops via the extensive audio-visual media—e-books, movies, music, games, and web content that can be accessed via the platform. As Clark and Luckin (2013: 2) describe, the device can also allow seamless learning, as learners can easily switch learning contexts from formal to informal or academic to social. They claim this can encourage students to take control of their own learning: for example, by doing additional research or making digital notes, and the 24/7 web connection means learning can take place anywhere, at any time—though presumably identical claims could be made for laptops/smartphones, and such claims are dependent on Internet connections. A further fundamental physical advantage of the iPad over other devices and laptops is its long battery life—generally claimed to be 10 hours for the Air 2 iPad, far longer than the average laptop.

3.9.2 Students' positive perceptions

As detailed, the hardware and software of the iPad offer a number of advantages to learners. What is also pertinent to note is favourable stakeholders' perceptions. For students, there have been a number of benefits

described in the literature. Firstly, there is no shortage of evidence that students like iPads (e.g. Burden *et al,* 2012, Johnson, Adams and Cummins, 2012, Heinrich 2012, Clark and Luckin, 2013, Johnson, Adams Becker, Cummins, Estrada, Freeman, and Ludgate, 2013, Kontkanen *et al*, 2017, Hilton, 2018, Retalis, Paraskeva, Alexiou, Litou, Sbrini and Limperaki, 2018) and this has been linked to increased motivation to study (e.g. Kinash, Brand, & Mathew, 2012; Wainwright, 2012, Krontkanen *et al*, 2018). Specifics of the iPad that students praised included easy Internet access, use of iBooks, access to translation tools, easy access to educational games and apps to support learning, and easy access to apps that support reflection, e.g. digital mind mapping and annotation of texts (Heinrich, 2012). Burden *et al* (2012: 10) in their study "The iPad Scotland: Evaluation report" found over 90 per cent of students believed that iPads had helped them to learn more, and to grasp difficult concepts better.

Neither are such findings unique: a large number of studies had similar findings, with parents reporting that students were motivated to study with the iPad, and preferred them to textbooks (e.g. Johnson, Adams and Cummins, 2012, Heinrich 2012, Clark and Luckin, 2013, Johnston and Marsh, 2014, Cumming and Strnadová (2016), Retalis *et al,* 2018). A number of other benefits of the iPad cited by Karsenti and Fievez (2013) include its fostering of a wider range of teaching strategies (Fernández-López, Rodríguez-Fórtiz, Rodríguez-Almendros, and Martínez-Segura, 2013), that it improves the quality of pedagogical support (Murray & Olcese, 2011), facilitates student assessment (McKechan & Ellis, 2012) and also aids students learning how to write (Murray & Olcese, 2011), as well as improving their computer literacy skills (Huber, 2012).

Some studies showed parents were highly supportive of iPads in schools. For example, in "The iPad Scotland: Evaluation report" (Burden *et al,* 2012:10) found "…80 per cent of parents considered the pilot project to have … significantly changed their child's enjoyment of and attitude towards school [with] greater motivation, interest and engagement of their child with learning have been the single largest benefits." They also state that 75 per cent of parents felt that their children were more willing to complete homework, and talk about their school work.

3.9.3 Teachers' perceptions

A number of writers such as Quinn (2010) and Henderson & Yeow (2012) claim that another important feature of the iPad is allowing the learner to communicate and collaborate with both other learners and the teacher, sharing information. For example, Reid and Ostashewski (2011) cite the example of students' micro-blogging, discussing what they were learning, aiding student comprehension and reducing teacher-centred questions. Though this could be claimed to be equally true for laptops, the iPad allows a more subtle approach to collaborative learning through its various apps, and students who are shy can participate more (both with peers and the teacher), through online polling and real time classroom quizzes via various apps such as Edmodo etc. It is claimed the touch screen iPad interface can motivate and engage students, and collaborative work is easier as groups can interact with the device simultaneously. This enhances opportunities for face-to-face interaction in ways that far heavier desktops/laptops could not do (Clark and Luckin 2013: 2).

Some, such as Quinn (2010), have also mentioned that advanced learning management system apps on iPads allow the teacher to coordinate and quantify learning by tracking the students' progress, and prescribing the appropriate learning activities for the learner as necessary. For the educator, the iPad also serves as a useful way to keep track of administrative tasks such as recording attendance, recording achievements in classwork, recording student participation and to design seating plans, again via various apps. There are also claims the iPad improves the reading experience (e.g. Huber, 2012; Fernández-López et *al*., 2013), and the huge array of e-textbooks are now a significant resource used at our own institution, and indeed have been adopted worldwide. Though as noted earlier there are few studies of the iPad in tertiary education, nevertheless some concur with the findings of increased student engagement/motivation reported in primary and secondary schools. For example, Professor Corey Angst, speaking of a pilot study of iPads at the University of Notre Dame, considered the iPad a valuable tool in the classroom:

"A statistically significant proportion of students felt the iPad made class more interesting, encouraged exploration of additional topics, provided functions and

tools not possible with a textbook and helped them more effectively manage their time" (Chapla, 2011, para. 6).

Mang and Wardley (2012) in a higher education study also found positives about the iPad, citing increased collaboration and interaction, and considered it most useful for taking notes and doing classroom research. However, it is apposite to consider that many of the benefits listed above by stakeholders are largely assumptions based on the capabilities of the technology. As Karsenti and Fievez (2013: 7) point out, there is very little evidence or empirical data to support some of these assumptions, and despite concluding that the benefits of adopting the iPad in education outweigh the negatives, nevertheless there are *caveats*, principally that of proper teacher training in its use (op.cit., p.1).

A final consideration of the device for some stakeholders is cost. It is a salient but often overlooked fact that the iPad is considerably cheaper than comparable laptops, which increases its appeal (Wardley & Mang, 2015). However, a perhaps hidden cost factor that should also be taken into consideration is that in order to effectively use the iPad in the classroom, teachers require continuous training and support (Pearce, 2011). Though this is also the case for computers as noted in section 3.1, the iPad is markedly different from a personal computer, both in design and operation.

3.10 Criticisms of the iPad in education

Despite the many benefits and attractive features of the iPad, it is not without its detractors, and there are shortcomings of the iPad—both in terms of educational theory and the device's construction itself—that cannot be ignored. Probably the biggest criticism of iPads (and indeed any new technology) is the lack of evidence it supports learning. Karsenti and Fievez's (2013) literature review of 359 academic works on the topic found little empirical evidence of the device's benefits in educational settings. Rather, they found vague statements such as "...they are ideal tools for sharing content, videos, images, and presentations because they are easy for anyone to use, visually compelling, and highly portable" (Johnson, Adams, & Cummins, 2012: 15).

As a new media, the iPad has attracted an array of plaudits, but as Hiltzik (2012) states "the media you use make no difference at all to learning … and the

evidence has been around for more than 50 years". Though in the earlier section some authors claimed iPads motivate students to learn, as Karsenti and Fievez (2013) pointed out, there is no evidence that the device itself motivates students: "We begin with a reminder that neither the iPad nor any other technologies can foster motivation or learning in young people" (2013: 2). Such criticisms indicate that despite the device's initial rapid adoption in education, there already appears to be a backlash against iPads—for example, in the U.S. several school districts have abandoned iPads and adopted laptops instead such as Chromebooks (Murphy, 2014). The following section identifies some of the key problems of the iPad in education.

3.10.1 Digital natives?

Prensky's (2001) concept of "digital natives", suggesting those born in the digital age have innate ability in ICT, and those born before it are more "challenged" as "digital immigrants" has been contested by academics in the field for well over a decade. In terms of EFL/ESL, Hubbard (2013) expands one of the first challenges to learning via technology by Barrette (2001)—namely that, though students appear familiar with the technology, this should not be seen as a translation to effective language learning, which others such as Barrette's contemporary Prensky (2001), had seen as a consequence of them being digital natives. Other experts in the field, such as Helsper and Eynon (2010) and Simpson and Walker (2014) have also contended that mere access to digital devices does not imply mastery, and as ICT is now so ubiquitous, this resonates more than ever. Simply using ICT should not be seen as an automatic sign of digital enlightenment or knowledge; instead, the key component is "digital competence".

As Karsenti and Fievez (2013) note, the "digital divide" that was previously understood as unequal access to technologies is now starting to be understood as inequalities that perpetuate a digital underclass. Such an underclass is not iPad specific, it could equally apply to laptops/tablets/smartphones. Though possessing the technology, some users merely submit to it, spending much of their time on social media and entertainment, lacking the skills to use emerging technologies for learning. In other words, to just "have" the technology is not necessarily an educational benefit. Indeed, misused, it could be the opposite.

Speaking specifically of iPads, others such as Peluso (2012:126), have also cautioned against assuming all young people are highly capable when it comes to learning via these devices, reinforcing earlier observations by Jenkins (2009). Peluso (2012: 126) questioned the adoption of technology without a clear evaluation of its benefits candidly: “It is not clear where the line of demarcation lies between what is educationally beneficial, and what is simply a demonstration of allowing technology in the classroom.” She then gave a pointed critique of the hype surrounding iPads, stating that: “The media-driven sensationalism and rallying about the importance of iPads and technology as definitive ways to develop innovation and creativity have led many to be enamoured by the frenzy of buzzwords such as “engagement” and “innovative learning”. As Park (2013) observes: “This mass acceptance of a technological revolution has been propelled to epic proportions, where digital media and video games have been lauded on many occasions as the perfect future method to completely transform the educational environment (e.g. Gee, 2003; Kenny and McDaniel, 2011; Prensky, 2011)”.

3.10.2 Issues of distraction

The iPad (along with other devices as noted in section 3.1) has been criticised as a distraction to learning by a wide array of academics (e.g. Linkens, 2012; Ally, 2012; Isaacs 2012; Clare, 2013, Bluestein and Kim, 2017), particularly for the ease with which students can move from study material to entertainment and social media etc.. In several studies, students themselves recognise this drawback— for example, the 2017 Bluestein and Kim study of 78 US journalism undergraduates found the device did not increase student engagement, and as Alkaabi *et al* (2015) found in the UAE, could instead cause distraction, using the device for social media and entertainment in class.

There are also other aspects of the device which can be a distraction. For example, the number of apps (regarded as a positive in the preceding section, 3.8), has been criticised by some such as Linkens (2012: 6), claiming there are simply too many—confusing students and educators alike. Other problems include connectivity issues, and getting Apple TV to mirror (i.e. project onto a screen or whiteboard), as Pund (2012) notes.

Despite the iPad being billed as cutting edge technology, it does not support Flash or JavaScript. This is another disadvantage that a number of

authors have drawn attention to (e.g. Clare, 2013, Horton and Prambe, 2017), which makes navigating many websites—often ones specifically designed for language learning, such as Spelling City—difficult, or indeed impossible.

In the UAE, Atallah *et al* (2015) also criticised the use of the iPad in education, claiming it is not specifically designed for education, and cautioned against its use for content, engagement or "Edutainment" without a clear pedagogical strategy. They characterised the iPad as a "high speed/short term" device, and warned of the dangers of "… force-fitting an educational experience to the device, or conversely, a failure to maximise the opportunities available. There could be unanticipated consequences for early-adopter teachers trying to create learning experiences" (Atallah, *et al*, 2015: 1578). After interviewing students, they cautioned against the iPad for reasons of distraction, echoing some of the sentiments above (e.g. Linkens, 2012; Bluestein and Kim, 2017, etc.) that it was not a device specifically made for education.

3.10.3 Academic writing on the iPad

Another specific problem with the iPad is extensive writing. Though Steve Jobs is quoted as saying "typing on the iPad is a dream" (Shaw, 2010), many in the field (e.g. Woykes, 2011, Gilksman *et al*, 2011, Weider, 2011, Pund, 2012) have noted the problems of extensive writing on the keyboard, as Atallah *et al* (2015) also found in the UAE, highlighting it as a key problem of the iPad for academic work. Some, such as Linkens (2012) remark that this can be countered by purchasing a keyboard, though that erodes one of the iPad's attractive features, its portability and compact design. Another issue is its predictive text feature, which can hamper learning either by auto-correcting words or substituting incorrect ones, which FDNS-level students may not pick up, unlike fluent, high level language students. After documents/files are created, students can encounter problems transferring files, due to the lack of a USB port or any other file-sharing device to interface with PCs, or even iPads themselves, as several have remarked, such as Marmarelli and Ringle (2011) and Hart-Davis (2017). In fact, overall, though the iPad is a great content viewer, as some writers such as Quinn (2010) have noted, for content creation a PC is typically far easier to use when designing presentations or creating documents. Indeed, some have labelled it a device for consumption, rather than creation (e.g. Murray and Olcese, 2011: 45).

Linked to the above is the difficulty that some have reported in taking notes. Though there are apps such as iAnnotate, some students find it distracting, and prefer to take their notes by hand or by typing (Pund, 2012). Although digital/e-textbooks are now widespread, studies show that 75% of students still prefer paper textbooks (ibid). Early issues, such as lack of multi-tasking (multiple windows/files cannot be kept open side by side) have been addressed by the "Side By Side" app and by features of the iOS9 launched in September 2015, yet there is evidence many students prefer traditional note-taking in text books (Weider, 2011). Despite the recent addition of a stylus to write on the device, some academics consider it of little help (e.g. Franklin, 2012). As Benson (2013: 43) notes, iPads were designed to be personal devices—i.e. for a single user. Without the capability to enter logins, each student needs their own device, and it becomes difficult for multiple users, unlike PCs. In addition, digital textbooks are generally non-transferable, offsetting any money that might be saved through purchasing digital texts as opposed to textbooks (Marmarelli and Ringle, 2011).

3.10.4 Problems for FDNS-level students

Finally, in the UAE, there is a very important consideration that does not apply in iPad adoptions in educational contexts such as North America and the UK—some of the educational "positives" of the iPad are questionable when examined in the context of FDNS-level students, who are typically low-level non-native English speakers, generally around an IELTS band 4. At this level, language learners are classed as "basic users", only capable of understanding simple texts (Common European Framework for IELTS, n.d.). Thus the language of many apps and non-graded texts on the Internet can only be assumed to be inaccessible for our students.

3.10.5 Technical issues

Technical problems with any device are an everyday occurrence. Common problems include connectivity issues, forgotten/mis-typed passwords and IDs, etc., and are discussed in detail in Chapter 5.6.3. Such problems could be argued to be compounded by students' generally low levels of English, combined with the potential *caveats* of their digital proficiency mentioned in 3.10.1, and a new all-in-English emerging technology. In the classroom, a

technical issue with a device used for pedagogy typically causes an immediate and acute problem, necessitating a swift remedy if teaching time is not to be lost. As Eraut (2002: 53) argues, of all professional practitioners—lawyers, doctors, architects etc.—the teacher is the one who must react most spontaneously to any eventuality in their daily praxis, as in the classroom environment:

"The pressure for action is immediate, and to hesitate is to lose. People have to develop habits and routines to cope."

3.10.6 PD and IT Support

The need for PD and IT Support is not something peculiar to the iPad, and is also very much a feature of CALL, with both students and teachers needing to be trained in the technology to optimise teaching and learning. Teacher training is seen as "critical" in successful CALL (Son, 2018), as is IT support (Levy and Stockwell, 2013). In UAE public universities, technology-related PD occupies a prominent position due to the technological emphasis of these institutions (Jafri, 2012). As noted in the previous section, technical competence is vital for pedagogic success, as is attendant support; failure of technological competence can lead to pedagogical failure. Like CALL, teacher training and IT support are seen as critical for the pedagogic success of the iPad (Karsenti and Fievez, 2013, Engin and Donanci, 2015).

In addition, as some academics have noted (e.g. Basak, Wotto, and Bélanger, 2016), managerial support can be critical to successful implementation of emerging technologies in the classroom. Without that underpinning, and its attendant concerns for teacher training and technical support, technology-based classes can be compromised. One example is management support in fostering the relationship between teachers and technical support, a critical factor in facilitating technology in the classroom (Levy and Stockwell, 2013).

3.11 Rationale for the research

The aim of this thesis was to ascertain how effective the iPad was as a teaching and learning tool for students in a FDNS programme at HCT. The rationale was wider, however, as there appears to be no established documentation of teaching and learning practice of the iPad reported at tertiary

level, nor in the EFL/ESL context. Neither does there appear to be an examination of long-term faculty experiences of the device, as some have already mentioned, such as Nguyen *et al* (2015) in section 3.6. Thus, there is a gap in the literature.

At tertiary level, beyond note-taking and generic evaluations, there seemed to be little in the salient literature that examined exactly what teaching faculty were doing in class with the iPad—if they were using apps in delivering classes, which apps they were using, or other uses of the device. Neither was there any detailed evaluation of use by EFL/ESL teaching faculty outside the classroom, nor faculty-based evaluations on support and training needed. At HCT itself, no research had been carried out prior to—or after—the device's launch as to its effectiveness for teaching and learning for the target students and faculty, despite this being the largest rollout of iPads anywhere in the world in tertiary education.

3.12 Evaluating the iPad initiative with the SAMR Model

As mentioned in section 3.7 of this chapter, Cavanaugh *et al* (2013) recommended evaluating the HCT iPad initiative via the SAMR Model (Puentedura, 2010). This model tracks adoption of a technology into pedagogy: from merely a substitute for the earlier medium (a textbook for example), to increased functionality, then pedagogic change, and finally a different learning model which could not have been done without the new technology. It consists of the following four classifications of technology use for learning activities, with a continuum from mere substitution to redefining the learning experience:

• Substitution: The technology provides a substitute for other learning activities without functional change.
• Augmentation: The technology provides a substitute for other learning activities but with functional improvements.
• Modification: The technology allows the learning activity to be redesigned.
• Redefinition: The technology allows for the creation of tasks that could not have been done without the use of the technology.

The Cavanaugh *et al* (2013) recommendation to evaluate the iPad in the local context echoes more general endorsements of the SAMR model to

evaluate mobile technologies and their integration in education (e.g. Romrell, Kidder, and Wood [2014], Hilton [2016]). However, it is important to note the SAMR model has also been critiqued for its theoretical nature and lack of research (e.g. Green [2014], Hamilton, Rosenberg, and Akcaoglu [2016], Lacruz [2018]), in addition to prescribing over-simplified hierarchical categories for pedagogy.

There are several specific issues and challenges that Hamilton *et al* (2016) address. Firstly, not only is there a lack of evidence to support the SAMR model, but research that has critiqued it has actually been used by Puentedura to support the model. Hamilton *et al* (2016: 6) cite Mueller and Oppenheimer's (2014) study of students switching from writing by hand, to writing on a computer. Puentedura cited this study as a positive example of "substitution", though the researchers found the change actually had a negative effect on student learning.

Hamilton *et al,* (2016) also criticised the model for its failure to address differing educational contexts, including such rudimentary factors as technical infrastructure and resources, teachers' technical knowledge and support, and student needs. They give the example of ten students doing an activity sharing a single computer: despite the activity ranking "higher" on the SAMR model than a non-computer activity, it could be challenged as educational best practice.

The rigid hierarchies of the model, and the notion that "moving up the hierarchy" of the linear four levels by employing more educational technology leads to better learning outcomes, is one that is not borne out by the research, nor takes account of the dynamic and complex nature of the multi-varied aspects of teaching and learning. Furthermore, (Hamilton *et al,* 2016: 9) also note putting product before educational process and associated learning objectives and outcomes is contrary to best practice.

Hence, with both wide endorsements and *caveats* in the literature, the SAMR model will be revisited after data analysis, in Chapter 6.4. The intention will be both to assess whether the iPad initiative could be situated on the SAMR model, and to examine the model itself in terms of its applicability.

3.13 Summary

The iPad has brought in new dimensions to education that have excited some educators, but not all. There are many advantages to using the iPad in

terms of portability, accessibility to a huge range of educational apps, the attractiveness of e-texts, connectivity to the Internet, ease of photography/filming and recording, and of course its “novelty”. However, with both the device itself and the teaching and learning implications, there remain areas of concern.

Despite the huge potential of the iPad and associated technologies for education, it can be an enormous challenge to introduce them into classrooms (Karsenti and Fievez, 2013: 9). Moreover, it appears that in 2019 we have arrived at another phase: we now understand that it is not the technology itself that needs to be examined, but rather how the technologies are harnessed for education, and the teaching and learning contexts therein. So an appraisal needs to be made of which apps and e-textbooks can be successful in the classroom, the level of technical support required, and professional development of teachers. If the institution lacks the necessary infrastructure and support for a new digital initiative, it becomes what Tomei (2000: 32) terms “technology façade”. As a result, many writers such as Anderson and Dexter (2000), Slowinski (2000), Angers and Machtmes (2005), and more recently Sun and Looi (2018), and Cardullo and Clark (2019), have highlighted the importance of technology support and the need to discuss and invest time in its implementation as technology is rolled out and integrated into the curriculum.

Overall, the germane literature focuses on evaluations of the device: either positive, negative, or neutral. Despite this focus, however, very few studies seem to examine what practitioners are actually doing with the device in the classroom, instead focusing on generics, such as the device “motivating” students, or, alternatively “distracting” them. The literature therefore suggested the research questions to be asked: firstly, as per the literature, an evaluation of the device, though this time in a context unrepresented in the literature, namely ESL tertiary education; and secondly, to address the gap in the literature, by examining how the device was actually being used by practitioners in terms of apps, other software and hardware.

Therefore, perhaps most important of all is the need for teachers to detail their experiences, rather than “technical appraisals” or “initial perceptions” of the iPad—or any other device. In a small way, this is what this thesis hopes to do: to describe teachers’ experiences working with iPads in the classroom, their

perception and evaluation of the device and how they employ it, thereby arriving at a balanced examination of the device's uses and impact in the field of EFL. The role of the teacher has long-been recognised as a crucial role in the successful integration of technologies in the classroom, effectively a *sine qua non*, as a number of authors have noted (e.g. Hannafin et al, 1993, Angers and Machtmes, 2005, Goulding & Kyriacou, 2008; Norris, Hossain, & Soloway, 2012, Cviko et al, 2014). However, teachers' marginalisation in the institutions in question is stark and contextually observable: that the iPad initiative was instigated without any input from faculty is remarkable.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This chapter presents the research design and its appropriacy to the research questions. It places the research within a mixed methods paradigm, justifies this procedure against either a purely interpretive or positivist approach, and examines the advantage of employing both quantitative and qualitative methods. It also details the research methods used (a questionnaire and semi-structured interviews), and aims to set out the validity of the design chosen given the topic and context. Details of the participants, sampling and data collection instruments are discussed, and procedures in the research are detailed: namely the construction of the interview questions and questionnaire, piloting, data collection process analysis, and ethical issues.

4.2 The research questions

The aim of this thesis was to ascertain how effective the iPad was as a teaching and learning tool for students in a FDNS programme at HCT, taking into account the particular importance of the context. The initial research question was “The iPad—EFL classroom revolution or expensive distraction?” This coalesced into two research questions derived from the germane literature, one which was largely unanswered in the literature. The first concerned use of the device. As noted in section 3.13, there was limited literature discussing iPad use in the classroom beyond generic terms such as project work and collaborative learning. Certainly in the field of tertiary education, there appeared to be no record of how practitioners actually used the iPad in terms of apps and other features of the device. The second question was that of the pros and cons of the device in teaching and learning, namely an evaluation. This question was widely debated in the literature as documented in the previous chapter, albeit largely in primary and secondary education. The two research questions therefore were:

1) How do practitioners use the iPad?
2) How do practitioners evaluate the device as a teaching and learning tool?

In order to answer the research questions and to evaluate the effectiveness of the iPad in teaching, it was decided the best way to do this

would be to canvas teachers' opinions. They were the practitioners who would, on a daily basis, see the device's usefulness, its benefits, and any problems in the teaching and learning environment. The decision not to include students might be seen as unusual, but there were several reasons. Firstly, it was judged that due to the students' English (L2) language levels, typically around an IELTS band 4, it might be difficult for them to articulate their evaluation of the device realistically and produce rich data. Admittedly, data could be collected using their L1. However, it was felt most students lacked the maturity and necessary knowledge (as mentioned in section 2.11.4) to evaluate the iPad pedagogically, notwithstanding the need to interpret the data through a further layer of potential confusion—translation. A second issue is one of power—as a teacher at the institution, I may cause students to say what they think the researcher wants to hear or tokenism in terms of data (Cohen, Manion, and Morrison, 2011: 175). Thirdly, institutionally it is much harder to get approval for research with students than with teachers, and researchers have historically encountered "resistance and access problems" (Cohen *et al*, 2011: 174). The main reason appears to be a management fear that if approval is given, they can no longer fully control findings, and therefore the potential for a critique of the institution arises. Indeed, based on other faculty members' experience, on the rare occasions permission to conduct research with students is granted, management often seek to influence or control the research.

4.3 Research paradigms

In arriving at the research paradigm for this study, it is perhaps pertinent to mention the two major research paradigms, positivism and interpretivism, which were considered for this thesis. They differ in their major constructs: ontology, concept of reality (Denzin and Lincoln 1998: 201), epistemology, and in their research methods.

These paradigms' view of knowledge has been binary, occupying opposing cardinal points in several key areas. For the positivist, the world is independent of the individual, an external reality (Grix, 2004: 80), and ontology is seen as objective, structured, predictable and measurable. Its epistemology is founded on empiricism, objective knowledge and universal truth, and the focus is on observable behaviour (Crotty 1998, p. 5 – 6; Cohen, Manion and Morrison 2011: 7).

In contrast, the interpretive paradigm believes the world is socially constructed, and does not exist independently of us (Grix, 2004: 83). Knowledge and reality are subjective, multiple truths are possible, and bias is a feature, not an exception, of the paradigm. Research is subjective, and becomes a product of the participants' and researchers' perspectives and interpretations of the world. These two opposing paradigms have long been debated in academia, the "reality" of positivism versus the "non-reality" of interpretivism.

Both paradigms have particular strengths: positivism can be claimed to be more scientific, and more objective. Relying on quantitative data, which can often be gathered relatively quickly, this paradigm can facilitate a wide breadth of data. However, in the humanities, the researcher is confronted with an issue—applying a "scientific", objective approach to measuring human behavior is a dichotomy. Humans, by their very nature, are subjective and biased. To solve this conundrum, the researcher could turn to the interpretative paradigm. This approach can be seen as more subjective, but can allow a certain depth of data, via techniques such as interviews, albeit that such a technique of data collection can be slow, and subject to accusations of bias on the part of the researcher.

Traditionally, the social sciences researcher has been presented with a choice—use the "scientific" positivist paradigm despite its dichotomy of trying to measure human behaviour "scientifically", or use the "less scientific" interpretative paradigm, and risk being accused of subjectivity and lack of "scientific" rigour. Fortunately, a new approach has emerged which encompasses both earlier paradigms, the "pragmatic paradigm" as coined by Cohen *et al* (2011: 23), employing mixed methods, which was judged the most appropriate for this thesis given its context.

4.4 Research Approach of the thesis: The Pragmatist Paradigm /Mixed Methods

The research approach of this thesis is that of the pragmatist paradigm, employing mixed methods as an approach. Mixed methods is a relatively new research approach which has gained traction in the last 15 years or so. Some have called it a paradigm in its own right, such as Johnson and Onwuegbuzie (2004), who declare it "… a research paradigm whose time has come" (op. cit.,

p.15), and define it as a " … class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (ibid). It rejects the polarity of positivist and interpretive approaches, and instead argues for their inclusion as complementary types of research, becoming the "third wave" of the research movement, a new paradigm that has combined interpretive and positivist approaches (Onwuegbuzie & Leech, 2005). It is considered a pragmatist paradigm (Cohen *et al* 2011: 23), which "gets straight down to the business of … enabl[ing] the researcher to find out what he or she wants to know, regardless of whether the methodologies are quantitative or qualitative" (ibid). The advantage mixed methods has it combines the "what" of quantitative data with the "how and why" of qualitative data (Cohen *et al*, 2011: 25), providing a more holistic understanding of the research issue.

4.4.1 Ontological and epistemological considerations

The pragmatic paradigm has broken new ground in terms of ontology and epistemology. Though differing from both positivist and interpretivist camps, it does not engage in what Tashakkori and Teddlie (1998) termed "paradigm wars". Rather, it provides a bridge between them. Its ontology is that there is indeed a "reality", though that reality is not "fixed", but in constant flux (Johnson and Onwuegbuzie, 2004). It thus provides a new perspective that does not denigrate earlier paradigms, but rather builds on their strengths. As Armitage (2007) states, though methods can be "mixed", ontology and epistemology cannot be—rather, the metaphysical constructs in the two earlier paradigms are respected and valued. As Denscombe (2008) and Morgan (2014) add, mixed methods shifts the focus from the metaphysical considerations of ontology and epistemology to choosing suitable methods for problem-based enquiry, practice and research. In this thesis, this was a fundamental reason to adopt a mixed methods approach to answer the research questions. For a social sciences researcher in the UAE, such an approach is eminent in its suitability for a country where one of the few constants is rapid change in almost every facet of life, from architecture to demography to education.

4.4.2 Rationale for adopting the Pragmatist paradigm

That mixed methods calls for the unity of the earlier paradigms, employing them in a complementary manner to enhance data collection and

research quality, was one factor behind its adoption. Mixed methods avoids biases intrinsic to single-method approaches and can strengthen initial findings by using contrasting methods, thereby triangulating the data. It was hoped that the result would be what Creswell (2007: 210) terms "concurrent triangulation"—i.e. that the qualitative and quantitative data complement and support each other, thereby strengthening the research.

A second related important factor in choosing a mixed methods approach was accuracy. As Denscombe (2008: 272) summarises, an important benefit of the mixed methods approach is as a means for researchers to improve the accuracy of their data, echoing Reams and Twale's (2008: 133) argument, that "… mixed methods are necessary to uncover information and perspective, increase corroboration of the data, and render less biased and more accurate conclusions." As this thesis deals with a number of participants known to me personally, it was felt that any research paradigm that maximised trustworthiness and credibility was valuable.

Finally, the pragmatist paradigm can be used to seek social justice (Morgan, 2014), and can thus be argued to be a transformative paradigm (Cohen *et al*, 2011: 24), and this is one purpose of this thesis—not merely to document faculty responses to the iPad as a teaching and learning tool, but to critique policy and make suggestions for the future.

4.5 The participants in the study

The iPad initiative at HCT was launched exclusively in the Foundations Department, which has over 5,600 students out of a total student population of 23,471 (HCT Factbook, 2016), and 284 teachers system-wide out of a total HCT Faculty of 1206 (ibid). The participants in this thesis were the EFL faculty from Dubai Women's and Dubai Men's College (DWC and DMC), the second largest female and male colleges respectively in the system (ibid), with 25 faculty at DWC and 22 at DMC. The EFL/ESL faculty at HCT are typically well-qualified with extensive experience, as noted in Chapter 2.11.6. The teachers in the FDNS departments at DWC and DMC are from multiple nationalities, just over half being Western, the other from nationalities as diverse as Indian, Pakistani, Chinese, Kenyan, South African, Sudanese, Egyptian, Bahraini and Emirati.

4.6 Data collection instruments and associated sampling

Two data-gathering instruments were chosen, a questionnaire and semi-structured interviews. The rationale for this choice was the combination of the former quantitative method, with its potential for gathering large quantities of "objective numbers", would be bolstered with the richer, deeper data of a qualitative method such as interviews. This was hoped to allow for a breadth of data in terms of quantity, and a potential depth in terms of "quality". For these data-gathering tools, probability samples were chosen, as they can be expected to be indicative of the larger population (Cohen *et al*, 2011), thereby enhancing validity. Two types of probability sampling were chosen, and will be examined in more detail in the following section—cluster sampling for the questionnaire and stratified sampling for the interview.

4.7 Sampling.

4.7.1 The questionnaire

The questionnaire population was almost the entire population of the FDNS departments of two colleges (DWC and DMC), consisting of 46 participants out of a total faculty number of 47. It was both a cluster sample—consisting of two colleges out of a system of 17—and a convenience sample simultaneously, being the most accessible and best-known population of my 284 colleagues in the FDNS department at HCT. Cluster sampling is an example of a probability sample, where, as Cohen, Manion and Morrison (2011: 112) state "... the population is large and widely dispersed … [and]…gathering a simple random sample causes administrative problems." This was the case in terms of the FDNS teacher population of HCT—they were spread out over 17 campuses hundreds of miles apart. Moreover, due to the system of HCT management at the time, permission would have been required from each directorate's research committee for each college involved in the questionnaire/interviews, an extremely time-consuming affair, and based on previous researchers' experience at HCT, a process that was likely to be refused by other directorates.

The sample could be argued to be representative of the larger population, given the HCT recruitment process: when new faculty are selected by Human Resources (in Abu Dhabi, where HCT is based), they are put into a

central pool and Colleges make their “bids” for candidates, who are then allocated system-wide. Thus, though there may be unknown variables that rebuff the suggestion, theoretically there should be little difference in faculty profiles across campuses: not only should faculty at DMC and DWC be very similar in terms of experience and qualifications, this should also apply across the whole system.

4.7.2 Sampling – the interview

Given the larger-than-expected numbers of volunteers for interview (29) amongst the questionnaire participants, I decided to select the 16 participants according to a stratified sample. Stratified sampling is a type of probability sample where the population is divided into homogenous groups with similar characteristics, and then randomly sampled. This was considered the best way to avoid questions of validity, ensuring that important sub-groups of the population were fairly represented, and to embrace the divergence and idiosyncrasies of the participants, which in many ways is the essence of its richness (Richards, 2003: 101).

Gender was a fundamental variable that could be eliminated, so the first stratification was to divide the population into males and females. Secondly, male and female populations were then stratified into native and non-native speakers; this was to guard against suggestions a particular ethnic profile of teachers was unfairly under or over-represented. The native speakers were a broad coalition from typical BANA countries–British, Australasian and North American, whilst the non-native speakers were from a wide background, largely South Asian but including Arabs and Africans. This done, a random sample of the four stratified groups was chosen, taking the *nth* teacher in each list.

The reason stratified sampling was preferred over a random sample was with a relatively small population, it guaranteed the widest possible inclusion of a range of socio-ethnic groups which might present new perspectives in the qualitative data. That said, a random sample could have been just as effective, given the population was exactly 50/50 in terms of gender, and nearly so in terms of BANA/non-BANA faculty (re: out of a population of 46, the gender split was 23/23 female/male, and 24/22 BANA/non-BANA). In fact, out of interest, a random sample was also conducted on the whole population who volunteered

for interview, selecting the *nth* number of the population based on surnames, and produced a near identical sample to the stratified sample.

The participants selected for interview were a sub-set of the 46 participants in the questionnaire. All but one have at least a decade of experience (with many having over 25 years' experience) and have taught in over 20 countries as diverse as China, Japan, Malaysia, Indonesia, Laos, Spain, Greece, the Czech Republic, Hungary, Mexico, the UK, the US, Ireland, Australia, Saudi Arabia and Kuwait, amongst others. Several of the teachers at DWC selected for interview were personally well-known to me from over 15 years of interaction in the field in the UAE, from research, professional institutions such as TESOL Arabia, and from the Ed. D. course in which I am participating. Those at DMC were not as well-known, but nevertheless I have interacted with many of them professionally over the years.

The first two interviews were designated as pilots, with one male and one female participant. However, as no changes in questions or procedure needed to be enacted, and rich data was produced, these two pilots were included in the sample. The final interview sample thus consisted of 8 faculty from DWC and 5 from DMC, plus the initial two pilot interviews, a total of 15 (one participant of the original 16 from DMC was unable to be interviewed due to scheduling issues). It should be noted the concept of designated faculty at each campus was becoming increasingly fluid, and there was considerable faculty movement between campuses due to flagging male student numbers at DMC (on account of the newly stated government draft policy of national military service, a response to the 2015-declared military intervention in Yemen). Management changes at the campuses also lead to a desire to rotate staff, so in some ways whether faculty sampled for interviews were from DMC or DWC was becoming an increasingly moot point, and further bolsters the earlier assertion that the probability samples of both the questionnaire and interview could be indicative of the larger population.

4.8 The Questionnaire

The questionnaire was designed to reflect the main areas of interest, namely how the device was used, technical support and training, and faculty evaluation of the device. The questions were grouped thematically into these three sections: B (use of the iPad), C (technical support) and D

(iPad evaluation), preceded by a demographics section (Part A) giving a total of four parts. It was felt grouping into such sections made the questionnaire more reader-friendly, which was felt important given its length, though at 5 and a half pages, it remained within the 6 page limit suggested by Dörnyei and Csizér (2011). Following best practice (e.g. Cohen *et al*, 2011, Cresswell, 2014), questions were arranged as far as possible in an "easy-to-more challenging" continuum.

4.8.1 Questionnaire sections and questions

The questions themselves were taken from a systematic review of the extant literature of iPad questionnaires in EFL/ESL, which revealed the majority of questionnaires focussed on specific areas of the device in EFL/ESL pedagogy, particularly use of the device, technological issues and evaluations of the device. Due to the lack of studies in iPad use in ESL/EFL tertiary education, studies into iPad use in schools were examined initially as they provided the most detailed examinations of the device, albeit in a different context to that of this thesis.

Karsenti and Fievez's (2013) study was one of the largest iPad studies carried out at the time of inception of this thesis, and its survey was deemed useful in structuring the questionnaire. Several of its questions were employed directly, such as app use in the classroom, and iPad usage outside the classroom. The relatively few studies in an EFL/ESL context utilising questionnaires provided additional questions, such as Leis's (2012) study in Japan, which asked for participants' attitudes to the device, and difficulties in its use.

Overall, however, in constructing the questionnaire, the aim was not to emulate any particular design, but rather to produce an eclectic and wide range of questions, which was deemed important given the exploratory nature of the research. Some researchers in the field such as Leis (2012) added comments sections to many of the questions, and this was considered a useful addition, hoping to elicit more detailed responses than the typical closed questions often typical of questionnaires. That many teachers provided lengthy responses could be considered indicative of an interest in the topic, and a desire to express their opinion of the device.

Part A asked five demographic questions to ascertain gender, age, and teaching experience, as well as the level participants taught in FDNS, both as a

“warmer” for respondents, and to get an overview of the sample population. Part B asked 11 questions to ascertain iPad use: how long the participant had used it, whether they used it outside class, for how long per week and for what purposes. It also sought to determine how often the iPad was used in class, for what purposes it was being used, and whether this had changed since its initial adoption in 2012, and for what purposes it was being used in class. It also specifically asked participants to rank the most popular apps and other uses in class. The rationale for this section was it would be able to focus precisely on the how the iPad was being used, and whether this use had changed in terms of time spent using the device over the 3 years since its launch at HCT. It would also be able to identify what teachers considered the most useful teaching tools, both in terms of more generic uses such as the Internet, e-textbooks, and Blackboard Learn (the HCT’s *de facto* course delivery tool when no e-textbook is available), and also specific apps.

Part C of the questionnaire examined technical support and training via 6 questions. It asked participants how confident and competent they felt using the device, and whether they felt further training was needed. It also asked participants to evaluate the level of technical support for the device, and to document the procedure. The latter was asked to see if there was commonality in the understanding of the procedure, and the former to see if technical support could be improved.

Part D comprised 10 questions to evaluate the iPad as a teaching tool, both by comparing it to textbooks and laptops, which had both been pre-iPad means of content delivery, and to elicit recommendations for the future for educators and educational managers. Specifically, it asked both for reasons to continue using iPads, reasons to discontinue using them, and an overall assessment. It also invited respondents to participate in an interview which was suggested would take around thirty minutes, for which they were asked to provide personal contact details if willing, as the questionnaire was totally anonymous. This reminder of anonymity was judged worthy of inclusion in order to enhance participant confidence in the ethical process of the data collection.

In the final version, 32 questions were employed of different types—multiple choice, ranking, open-ended questions—and participants were advised it would take up to 30 minutes to complete. Several multiple choice/ranking questions included a comments section should participants wish to include

additional information. Many of the questions allowed participants to give further comments (10, 14, 17 – 31 and 33) and there was generally a high feedback rate to this, with typical response rates of over 80%. Though comments could be considered qualitative data, it was decided to keep their analysis in the context of the questionnaire, as they were generally easily identifiable as positive, negative or neutral (or in the case of questions 20, 21, 23, 25 – 31, 33 and 34, easily classified) and could thus be quantified, and used to further illustrate and triangulate the Likert scale responses. Though not standard practice in qualitative data-gathering, it is not without precedent in the field (e.g. Young, de Leeuw and Takane, 1980; Chi, 1997; Shemmings, 2006). In mixed methods however, the chosen approach, it is perfectly admissible.

Following recommendations by Smyth, Dillman, Christian, and Stern (2006), the online design was as clear as possible, avoiding long vertical lists and sub-lists which were judged non-conducive to high numbers of responses, or invited “satisficing”, whereby the respondent chose a sub-optimal answer to save time. The questionnaire was carried out in June 2015, almost 3 years after the introduction of the iPad in September 2012. Though a cross-sectional questionnaire, conducted at a specific point in time, and not a longitudinal study which takes place over time (Cresswell, op. cit., p. 146), nevertheless it allowed participants to reflect on their use of the iPad, unlike many of the impact studies mentioned in Chapter 3.

4.8.2 Piloting of the questionnaire

After ethical approval by the University of Exeter and initial approval by Dubai HCT Ethics Committee, the questionnaire was trialled 5 times with 4 HCT faculty, not all being FDNS faculty. Utilising both FDNS and non-FDNS faculty for piloting was deemed to add a further perspective in overall determinations of the clarity the questions being asked, and ease of responding. Dubai Colleges (DWC and DMC) Ethics Committee was also active in reviewing pilots, and critical of several aspects of both the interview and questionnaire. These issues are dealt with subsequently in the Ethics section. Significant changes were enacted based on the feedback from piloting and the Ethics Committee, and there were a total of 6 versions (see Appendix 8 - 13). The first version of the questionnaire consisted of 14 questions, touching on the general area of the

research questions—usage, evaluation of the device and technical and PD support.

By the second version, this had expanded to 27. Three demographic questions had been added at the start of the questionnaire, and the questionnaire had been divided into 4 sections: participant profile, use of the iPad, iPad technical support and training, and evaluation and recommendations. Version 3 asked how technically competent faculty felt using the device, but this was later dropped as it was felt too vague, and the subject was addressed by a question in Section C, asking participants to assess how confident they felt using the device in class. Two new questions were included, asking participants how they used the iPad in—and out— of class. By Version 4, these questions were listing uses (e.g. for class use, e-textbook, apps, BBL etc.) and asking participants to rank them in terms of frequency. Version 5 added a question (q. 11), asking teachers to list the apps they were using in class by frequency, with 28 questions in total. The final version had four additional questions, for a total of 32, after further piloting. These were two more demographic questions: to ascertain what level of the FDNS programme participants were teaching on, and whether this was their "usual" level. In addition, the two questions asking about iPad usage each had a further question regarding "other use" added.

One of the local UAE-based Exeter tutors provided a useful critique of the questionnaire. She considered there were too many response option categories in some parts of the questionnaire, which were subsequently reduced and simplified. She was also critical of the amount of ranking questions, saying such types of close-ended format responses were difficult to analyse. As a result, this was also simplified, and her suggestion to count the number of times each of the ranked items appeared in the top 3 of participants' choices when it came to data analysis was adopted.

Overall, her general comment was that the questionnaire had too heavy a workload for participants—in particular, too many questions, and lots of open-ended response questions. These comments echoed Cohen *et al* (2011: 264), who advise against open-ended questions, citing the fact respondents often do not answer them, and adding that if open-ended questions must be included, this should be done in the latter parts of the questionnaire.

If this had been a population sample unknown to me, I would have agreed with the comments above. However, there were a number of very

important elements to mitigate these assertions and increase the likelihood of the questionnaire being completed. These are detailed in the following section.

4.8.3 Questionnaire preparation

Several factors were deemed important in the launch of the questionnaire process, and were hoped to facilitate a high response rate. Firstly, as all faculty involved are part of the iPad teaching initiative, the subject matter was highly salient to the potential respondents, which is often the most critical factor in terms of questionnaire response rate, irrespective of length (McColl, Jacoby, Thomas, Soutter, Bamford, Steen, & Bond, 2001). Secondly, the population sample was historically well-known to me either as colleagues, or in several cases as personal friends, and many participants commented they were willing to provide long responses to open-ended questions due to these reasons. Another crucial factor was timing (Cohen *et al*, 2011: 263). A non-teaching week was chosen, when most of the participants had, by their own admission, minimal work-related tasks to perform, yet had to spend 8 hours on campus, due to the new time "HCT 2.0" time management system—a finger-scanner for all staff to clock in and out that had just been installed by senior management. Cohen (op. cit.) notes that advance warning and follow-up increases the response rate to surveys, and both were adhered to before and during data collection.

4.8.4 Questionnaire procedure

The online questionnaire tool "Survey Monkey" was employed, utilising the paid Gold Version, as the more basic version allows only 10 questions. SurveyMonkey.com is a commonly used tool used in social science research, through which users can quickly create their own questionnaires, and analyse data. The questionnaire with responses is included in the Appendix (item 15), as per best practice cited by Cresswell (2009).

In terms of procedure, I did not send out a blanket email to potential participants, as is common with other questionnaires that have taken place at HCT. Rather, members of the sample population were approached individually, the research was explained, and potential participants were asked if they would like to participate. Typically, up to ten individuals were approached on a daily basis during the non-teaching week ear-marked for the questionnaire. All responses were affirmative, and participants were asked to sign informed

consent forms, and given a written research brief, as approved by the University of Exeter. A link to the questionnaire was then sent out for participants to complete via email ("bcc'd" to ensure confidentiality and anonymity). Once participants had completed the questions, there was a final item that asked if they would be willing to do a follow-up interview, and if so to leave contact details, preferably from a non-HCT email address or personal telephone, to aid confidentiality. Just over 60% of the 46 participants affirmed they would be willing to participate in an interview.

After discussion with the supervisor, it was felt two follow-up questions with participants—namely "Has the iPad been an EFL Revolution?" (which was the original research question) and "How do students view the iPad?" would enhance the data. These questions could have been asked via interviews or a questionnaire, and after consultation with research participants, it was decided the latter would be the most time-efficient method, and also the most comprehensive in terms of feedback. As in the initial questionnaire, quiet times after examinations at both Colleges were deemed apposite occasions to follow up with this two-question mini-questionnaire, which faculty were advised would take no more than a few minutes to complete. Again, teachers were individually asked if they would be happy to complete the questionnaire before it was sent out, and again Survey Monkey Gold was the data gathering instrument. The two questions sought specific quantifiable yes/no and multiple choice options respectively, whilst allowing for comments sections to elicit more details. This addendum of just two items was appended as Part E of the questionnaire. The complete questionnaire with responses is included in Appendix 16. In conjunction with the other questionnaire items, the responses are examined in Chapter 5, sections 5.8.1 and 5.8.2.

Once all participants had finished the questionnaire, the data were examined. In many of the closed questions, the data could be ranked numerically, and values/interpretations assigned. The responses to the open-ended questions required more interpretation on the part of the researcher, and thus their credibility and trustworthiness were more open to question, a theme to be addressed in the validity and reliability section.

Despite the misgivings of the UAE-based Exeter tutor that the questionnaire was too long, it had been felt salience and participant interest would override this problem (McColl *et al*, op. cit., Cohen, 2011: 263).

Response rates can also depend on personal liking and empathy with the researcher (Cohen, op. cit. p. 264), which it was hoped would apply, given my historically cordial relations with the sample population. That the questionnaire had a near 100% response rate (a 100% return rate was received from the 25 DWC faculty, and 21 from the 22 faculty at DMC) provides evidence that the sample population was receptive and interested in the research, as had been thought earlier, and its length did not deter participants from answering. There were some long responses and rich data in the open-ended questions, which the UAE-based local Exeter tutor had, in particular, doubts about, suggesting such open-ended questions be incorporated into the interview. In terms of response rate, several participants actually mentioned how much the personal approach had made a difference to their willingness to take part in the questionnaire, in addition to its germane timing.

4.8.5 Validity

For questionnaires to be valid, a number of factors need to be taken into account to demonstrate the research is of good quality. Firstly, as Cresswell notes (2009: 146), the purpose of the questionnaire must be identified and a rationale for the use of such a research tool over others be justified. In the case of this thesis, it was the speed with which a sample of almost 50 faculty could be quickly canvassed for their opinion with regard to the research questions.

The researcher's means of access to the population, such as mailing lists, student databases in institutions etc. should also be mentioned according to Cresswell (op. cit.), and in this case this was easily facilitated by email lists. Wherever possible, a pilot or field test should be administered before the actual questionnaire, both in order to establish content validity, and to improve questions, and again this was an iterative process in this thesis, being both piloted and checked by Ethics Committees, both at Exeter and HCT.

Creswell (op. cit.) mentions other criteria that should be addressed for the questionnaire to have validity. Variables in the study should be clearly identified for the benefit of the reader, and data presented in such a way that the research question can be tested. Regarding numbers, as Cohen *et al* (2011: 263) note, there is no optimal number for a questionnaire, but a high response rate is important, which was the case as already mentioned in section 4.8.4.

4.8.6 Questionnaire data analysis procedure

As Cresswell (op. cit., p. 152), notes, descriptive analysis of the data should include ranges of scores, and the data should be presented in tables and in such a way that the research question/hypothesis can be seen to be tested. Data was presented in a series of charts, percentages and tables, which was facilitated by using the software which is part of Survey Monkey Gold. By utilising the latter, the closed questions responses were displayed graphically with percentages shown, making their analysis relatively straightforward and transparent. Other questions which asked participants to rank items, for example number 15, which asked which apps teachers used most, were analysed by presenting them ranked in a table (see chapter 5, section 5.3.2.1 "App and other use in class"). Where respondents replied to open questions—and many respondents wrote long responses—these were coded as either positive, negative or neutral by putting the responses in a table of 3 columns. The above is discussed in detail in Chapter 5.

4.9. The Interview

4.9.1 Interview construction and piloting

Like the questionnaire, the interview questions were drawn from the same broad review of the literature. The questions were a reflection of those in the questionnaire, in terms of covering general themes related to iPad use. For example, the second interview question "Do you use the iPad out of class?" echoed questions 5 – 7 in the questionnaire, asking about iPad use out of class. The intention was to mirror the questionnaire in the hope of triangulating questionnaire data, whilst providing more depth and richer data.

The initial overarching research question, and the original title of the thesis had been: "Has the iPad been an EFL Revolution?" This question sought to provide an evaluation of whether the device was the sea-change in teaching and learning Apple marketing had promised at its HCT launch in 2012, through the lens of teaching EFL faculty on the ground. As data was gathered, this evaluation question remained, but evolved (becoming Research Question 2 [RQ2]), whilst other research questions emerged.

As shown in the appendix, the interview questions went through several iterations. The final version, in Appendix 13, was piloted with two teachers, one from DWC and one from DMC respectively. Based on the pilots, the conclusion

was the semi-structured interviews needed no further alterations, and the interview procedure was embarked upon.

4.9.2 Interview Procedure

Potential interviewees were informed of the nature of the research, confidentiality assurances given and documents distributed to participants outlining the purpose and methodology of the study, including the fact that the feedback sessions would be recorded but the data would be used anonymously. Participants were then asked to sign a consent form after being fully briefed and asked if they had any questions about the research.

Standard procedures and protocols of interviews were followed, such as suggested by Creswell (op. cit., p.182), with informal warm-up questions to “relax” the subject before the core questions and associated probing questions were posed, followed by a concluding statement thanking the interviewees.

Having selected the interviewees, they were given a hard copy of the questions a week before the interview to allow them some time to consider their responses. A mutually convenient time for interview was selected. Interviews were conducted in teachers’ own classrooms during non-teaching hours, as such a location allowed for privacy, and quiet. Guidelines recommended in the extant literature (such as Dörnyei, 2007, Cresswell, 2009 and Robson, 2011) to increase interview reliability and validity were followed, such as making participants feel relaxed and valued, asking them for permission to start recording, avoiding leading questions, and minimising interviewer talk time. The aim was to produce interviews with the two key features identified by Dörnyei (2007: 140): a natural flow, and richness of detail, the latter echoing Richards' (2003: 53) ‘golden rule’ of qualitative inquiry, to “always seek the particular.”

Interviews were recorded on a hand-held recording device, and on a personal computer as backup. The recordings were then transcribed. In terms of trustworthiness of the data, Gibbs (2007) recommends several procedures for reliability such as checking transcripts for mistakes and member checking – i.e. taking the analysis of the data back to participants and seeing if they concurred with the findings via follow up interviews, and this was done with several of the interviewees, running past them several key statements made in their interview and checking their validity.

4.9.3 Qualitative data analysis procedure—themes and coding.

Analysing interview data is, by its very nature, interpretive. A tension can exist between the holism of the interview and its fragmentation and atomization into small constituent elements as Cohen *et al* (2011), note. Nevertheless, as Cohen *et al* (2011) mention, in interpreting interview data it is typical to classify, categorise and order units of meaning. Utilising a mixed methods approach also allows for such units to be quantified; though this was not an aim of this thesis, nevertheless the chosen approach allowed for this possibility. Creswell suggests a general model for interview data analysis (2009) whereby transcripts are first organised for analysis, then coded; themes are drawn out from the coded data and identified, and their interrelationships are investigated and then interpreted, as part of a thematic analysis.

The aim with the qualitative data was to follow the 6 step process for thematic analysis as described by Braun and Clarke (2006):

1. Firstly, to become highly familiar with the data—i.e. listening to recorded data, and reading and re-reading the transcripts. This was achieved both by extensive listening to the interviews, including during my daily commute. Any initial emerging themes or observations of interest were later recorded in Evernote/my laptop. After transcription, the interviews were read and re-read several times.
2. Every data item would be coded.
3. Identifying themes (element in the data relevant to the research question) would be the next step, thereby developing a new hierarchical tier in the data, whereby initial codes are further coded, to reflect a theme relevant to the research question. The coded data relevant to each theme can then be collated.
4. Themes may need to be reviewed; some may be collated/subsumed, others may be split into two. Some may be deleted completely, and the process started again.
5. Themes need to be defined and named.
6. The data is written up as an analysis, with raw extracts to inform and convince the reader of its authenticity and reliability, contextualising it with germane literature as appropriate.

Originally, the intention had been to code using NVivo. However, after some attempts, this was decided against for several reasons. Firstly, from a pragmatic approach, it would take time to learn the software (Welsh 2002). Secondly, initial forays into trialling NVivo showed that though it would pick up relevant text, the latter was not always related to the theme, so had to be interpreted. It was thus decided it would be quicker and more appropriate to examine the data and colour-code emerging themes manually, especially given the relatively small amount of transcribed speech (just over 7 hours). A further reason was one of the objectives of software use is quantifying data (Basit, 2003); however, as that was not an objective with the qualitative data, it was felt such an approach was inappropriate.

4.9.4 Types of code

Before coding, some thought was given to the type of code, as there are several types (Strauss and Corbin, 1990). Open codes are the simplest, and are typically the initial code given to a piece of text. Another type which was considered are axial codes, which is a label given to a group of open codes deemed to be similar in meaning, thereby creating a meta-code into which a number of open codes are inserted. Axial codes could be contextual, based on causes or consequence, or on interactions between phenomena.

Selective codes are similar to axial codes, but seek to merge the other codes to advance a theory. Strauss and Corbin (1990: 116) describe it as the central category around which all other codes revolve. It is essentially a meta-code for axial codes, and by extension open codes and analytic codes. Analytic coding is a more interpretative type of coding which was also considered. In the example used above of the iPad, the descriptive code could be analysed in terms of teachers' feelings towards the device—e.g. that they found it useful, that students enjoyed it, etc. Such analytic codings are more interpretative and subjective and hence more subjective to researcher bias than descriptive codes, which is why in this thesis where there was ambiguity or doubt in analysis and interpretation of such examples in interviews, the interviewee was revisited and clarification sought.

In the case of this thesis, it was decided to keep the coding as simple and concise as possible. This decision was taken as an aid to clarity, notwithstanding the fact that with only 15 interviews, the quantity of transcribed

data was not unwieldy. Consequently, open codes were chosen, and a further hierarchy of themes teased out, as illustrated in section 4.9.6.

4.9.5 Selecting themes and coding

Miles and Huberman (1994) note that codes should be applied consistently, that no data is excluded. In the case of these interviews, all the iPad-relevant data were coded. New codes were generated during the initial coding operation of the research questions; others became redundant, or were subsumed into others as their usefulness declined, as happened with one category, the “revolutionary aspect of the iPad”. As Miles and Huberman (op. cit.) also note, the process of coding was iterative and was revisited several times.

Gibbs (2007) warns against “drift” in the assigning of codes and definitions—there exists the danger data may be coded wrongly, be ambiguous, or be judged to belong to two or more codes. As the interview transcript data were coded, this did not typically prove an issue, with participants’ data generally clear as to how a code would be ascribed, though occasionally there were responses that touched on multiple themes—each fragment being colour-coded appropriately.

Once data are coded, they can be analysed. Often this form of analysis takes on a positivist hue, as categories and themes can be counted and the numbers generated will form part of the linking of raw data to conclusions and theories. Miles and Huberman (1994) also cite counting the frequencies of ideas, themes and words as a starting point from transcription to “meaning”. In this thesis, ascribing positivist aspects to the qualitative data was avoided as much as possible, as there was already a body of quantitative data for this purpose, although there could conceivably be occasions when “counting” either themes and/or their recurrence might occur—and given the mixed methods approach chosen, this was not proscribed.

Following recommendations from Cohen *et al* (2011: 560), codes were derived from the data, essentially being responses, rather than pre-ordained categories. Codes should be a word or abbreviation that are clear when reviewed—in this case they were the research questions and their sub-themes—i.e. RQ1b, etc.. Miles and Huberman (1994) suggest up to 90 codes some of which may be modified later, and that coding should start as soon as

possible. In the case of this thesis, coding was not done immediately after interviews as transcription took some time. However, when listened to and checked after interviews, notes were taken of what were deemed to be significant parts of the interview and certain sections highlighted and given a preliminary code so the initial picture of the data was as fresh as possible. After transcription, these sections and all other parts of the interviews were later formally coded.

4.9.6 Coding procedure

Extensive listening to the interviews during my daily commute that were later recorded in Evernote had already helped form emergent themes, as noted earlier, and as these were scrutinised, it appeared logical to organise these around the research questions. Categorising responses into themes is typically recommended in the field of qualitative research (e.g. Richards, 2015, Saldaña, 2013, Cresswell, 2014, Cohen *et al*, 2011, Richards, 2003, Miles and Huberman 1994). The qualitative data would thus be categorised into the two research questions, and then themes teased out, and colour-coded. This colour-coding was done by simply highlighting the relevant text in Microsoft Word in the appropriate colour, and delineating the sub-theme after this colour-coding—this is exemplified below after the detailing of the research questions.

Nine themes were identified, and subsequently colour-coded. The breakdown of the research questions into the nine colour-coded themes is detailed below.

RQ 1) How do practitioners use the iPad?

This question was divided into two coded themes. The first, which was probably the most pertinent to the thesis, was:

1a) How do practitioners use the iPad to facilitate teaching?

This theme's focus was how the device was used by teachers as a learning tool. Specific usage of apps and other software will be examined in detail in the findings section, as will the related question of usage outside the classroom, which was coded in the data as:

1b) How is the device used by practitioners out of the classroom?

RQ 2) How do stakeholders' evaluate the device as a teaching and learning tool?

This question is the evolved version of the original single research question, and is essentially an evaluation of the device. It aimed to examine both the benefits to teaching and learning of the iPad, and its limitations. It also sought to examine how faculty evaluated the device for future stakeholders (students, teachers, management), and how it compares to other materials/devices (i.e. textbooks, laptops, bring-your-own-device [BYOD]). It was the research question that covered the most ground in many ways, and thus was divided into the most themes, namely:

2a) What benefits does the iPad offer to teaching and learning?

2b) Are there any limitations/disadvantages to the device?

2c) How do teaching faculty evaluate the device for future stakeholders, and how does it compare to other materials/devices (i.e. textbooks, laptops, BYOD)?

2d) Students' use and opinions of the iPad. This was an extra theme later added as an extension of 2c, as data emerged from the transcripts.

An example of a typical colour-coded interview is in the Appendix, Part 14. Once the colour codes were assigned referring to guidelines suggested by Saldaña (2013), sub-themes were then teased out which were not colour-coded (as it was believed it would affect clarity), but rather assigned a numbered code based on the initial theme code. For example, RQ1 was divided into two colour-coded themes, 1a (iPad use in the classroom) and 1b (iPad use outside the classroom), then in each of these sub-themes were identified (e.g. 1a.i) Generic software, materials and emails; 1a.ii) App use, etc.). The procedure above was repeated with all the research questions, resulting in a total of 7 themes, and 26 sub-themes. This is illustrated below for each respective research question.

Figure 1: Research Question 1, coloured themes, and further sub-themes

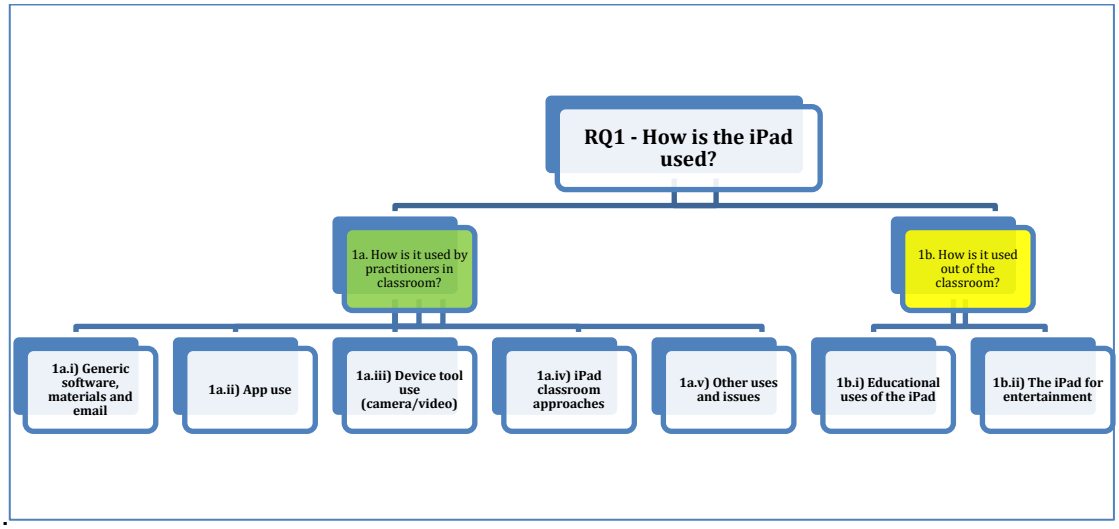

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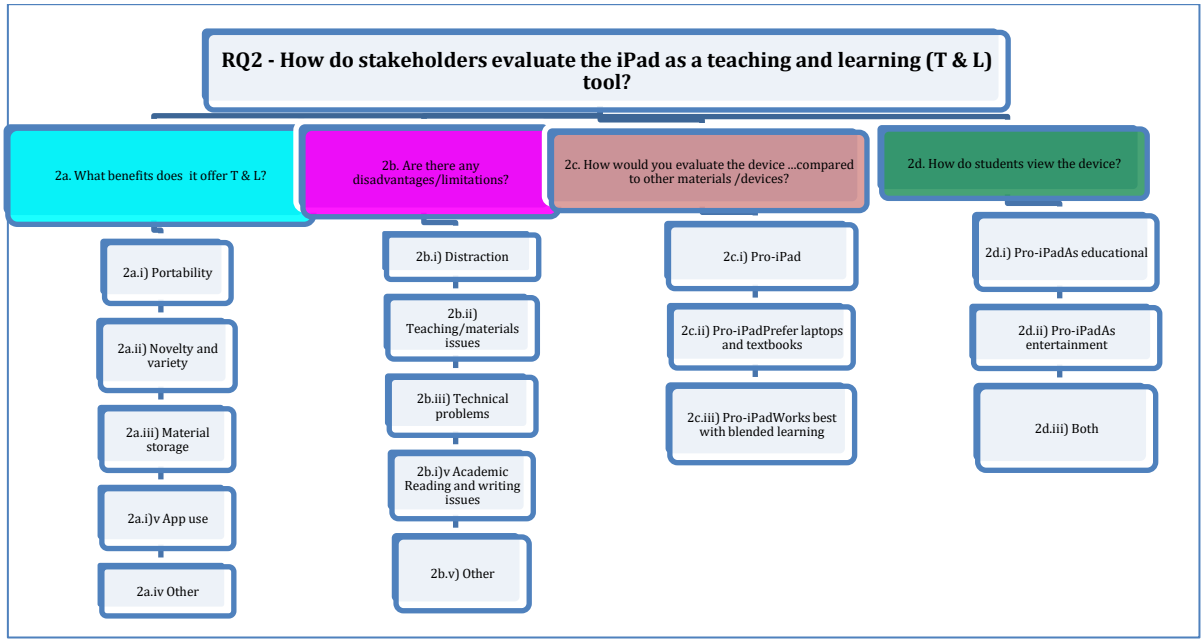
Figure 2: Research Question 2, coloured themes, and further sub-themes



Note: Sub-themes arranged vertically in this figure

At a later stage, it was intended to analyse the qualitative data with data from the questionnaire, with the goal either of commonality and data triangulation, or alternatively dissonance and a subsequent attempt at explanation.

4.10 Ethical issues

A number of ethical issues arose in the collection of data, and these were addressed according to British Educational Research Association guidelines (Wyse, Selwyn, Smith, and Suter, 2016), University of Exeter Ethical Approval Committee guidelines, and contemporary apposite literature (e.g. Silverman, 2006, Cresswell, 2009, Cohen, Manion, and Morrison, 2011). For qualitative research to be of a high standard in particular, a number of guidelines need to be observed. As Creswell (2009) observes, one of the most fundamental of these is the researcher identifying their personal background and possible biases, due to the inherently subjective process of the data and its analysis being viewed and interpreted through the lens of the researcher. As an HCT member of faculty, and a colleague of the participants, this was particularly important, and is discussed subsequently, along with other the issues of informed consent, beneficence, confidentiality and researcher reflexivity**.** A further consideration is that ethics in research is not simply following a set of procedures, or the recommendations of a research committee. Rather, it is to be mindful that the research process should be infused with care, beneficence and respect for the participants and their careers.

4.10.1 Ethical approval for research at the University of Exeter and HCT

The interview and questionnaire were initially sent to the University of Exeter for approval, and ethics and informed consent forms for participants to sign with guarantees of confidentiality and anonymity were also submitted (Appendix 1). These were approved by the Ethics Committee with the *caveat* of specifying the secure storage of both paper and digital data. Once this was done, the University of Exeter gave consent for the research to commence. The HCT Research Committee at Dubai Colleges (DWC and DMC) also vetted the research proposal, and ethics and consent forms were submitted before approval was granted (Appendix 2 – 7).

4.10.2 Ethical issues during data collection—informed consent, beneficence and confidentiality

Participants were made fully aware of the exact nature of the research, the voluntary nature of their participation, and the right to withdraw at any time, in accordance with principles of informed consent as outlined by Silverman

(2009) and Wyse, Selwyn, Smith, and Suter, (2016). Both qualitative and quantitative research was conducted under an umbrella of beneficence: though aspects of this thesis are critical of educational policy, the intention was not to harm. Rather, it was hoped to act as a means of engaging in debate over the important topic of education in tertiary education in the UAE, the iPad and use of technology**.**

Confidentiality and anonymity are a very important part of data collection ethics (e.g. Heath and Luff, 1995; Newell, 1995, McConnell-Henry, James, Chapman, and Francis, 2010), and such guarantees were given when consent forms were completed. These assurances of confidentiality were reiterated before both the questionnaires were conducted and the interviews themselves, in line with best practice principles as outlined by Seidman (2013: 65). In terms of anonymity, all participants' identities were kept confidential. Participants' names in this research paper have therefore been changed, and the names given are abbreviated nicknames. No reference is made to their nationality in the data analysis, as in some cases, this could cause them to be identifiable (e.g. in cases where there is only one faculty member from a particular country).

In the case of recorded interviews, data were de-indentified, as some (e.g. Petersen, 2012) recommend—no reference was ever made to the participants' real names in the raw data or at any stage of the data analysis process, only code names were used, so even in the unlikely event of a privacy breach, the participant could still not be identified. Storage of data was in two personal external disc drives inaccessible to the institution, and a personal computer.

4.11 Researcher role responsibilities and conflicts

As Creswell (2009) observes, for qualitative research to be of a high standard, one of the most fundamental factors is the researcher identifying their personal background and possible biases, due to the inherently subjective process of the data, and its analysis being viewed and interpreted through the lens of the researcher. As an HCT member of faculty, and a colleague of the participants, this was particularly important during the interviews, as conducting such research with colleagues presents potential risks.

That I was known to many participants, and had a track record of research and publications, was believed to enhance credibility and

trustworthiness. However, I was cognisant there are also potential downsides to knowing research participants, which could precipitate feelings of role conflict by the participant, and attendant issues, as McConnell-Henry, James, Chapman, and Francis (2010) note. For example, participants may be fearful that information they reveal may be used against them, or “over disclose”, giving information they regret later. Others may feel coerced into the research; some participants may give answers they believe the researcher wishes to hear, become emotional, or use it as an opportunity for venting. However, it should be noted the random selection of participants also helped mitigate such potential disadvantages—it was not a hand-picked sample that could be considered “agreeing” with me, nor were the preponderance of interviewees well-known to me. For 12 out of the 15 participants, the interview was the first time we had ever spoken at any length, and the great majority of the participants held views on the iPad that were unknown to me prior to the interview. Nevertheless, conducting research with colleagues made assurances of confidentiality and anonymity particularly important as Guillemin and Gillam (2004) note.

There are several other factors which are significant when conducting research with known participants. Firstly, data storage issues are acutely important, as there is a heightened risk of colleagues being identified, and, given the context, this might jeopardise participants’ careers in cases where their responses appeared critical of the institution. Secondly, as a topic that was highly salient to the participants, it risked provoking emotional responses (Corbin and Morse, 2003). This occurred in several interviews, though I considered it to reflect reality, rather than a consequence of the research process, or my own involvement. Simply put, some participants were not in favour of the iPad initiative, and felt uninhibited enough in the questionnaire/interview to express these feelings candidly. Thirdly, participants may have felt (consciously or unconsciously) obliged to participate in the research, especially as it was conducted in the workplace, with potential implications for meaningfulness and validity of the data (Orb, Eisenhauser and Wynaden, 2001).

One interesting emerging issue of the new “HCT 2.0” model has been that rapid staff turnover has partly mitigated some of the potential issues of confidentiality, namely identification of participants. Since the questionnaire and interviews were conducted 3 years ago, staff attrition has been swift and

extensive. At DWC for example, there have been 3 complete changes of line management in the FDNS and GS programmes, and over 60% of their teaching faculty have resigned or been terminated.

4.12 Summary: researcher reflexivity

The notion of reflecting on research as a part of the process itself (Guillemin and Gillam, 2004) was incorporated into this thesis in two major ways—firstly, in terms of my relationship with participants, and secondly, the research process itself. Regarding the former, the issue to consider was if being a colleague had the potential to affect responses from participants. It is important to acknowledge this as a possibility, though there are several factors to take into account which may mitigate such an effect. One is my own neutrality on the iPad question—I had not made public a position on the iPad. Though some colleagues knew I had presented at conferences and published a paper on iPad use, only one (a co-presenter) had attended, and I was not aware that any colleagues other than the co-presenter had read the paper. In both, my position was neutral, acknowledging it as a useful tool for some activities, and not for others. Secondly, participants presented a wide spectrum of opinions which I was already familiar with via immersion in the iPad initiative itself, ranging from colleagues who eulogised the device pedagogically, to others who regarded it as an imposition of limited classroom use. A further consideration was that though I did know my colleagues from DWC, the great majority of the participants from DMC were not known to me at all—prior to the research, I had only ever spoken to four of the questionnaire participants, and two of the interviewees. Additionally, though I was aware of some personal preferences regarding the device, I was not aware of the majority of participants' opinions of the device either at DWC or DMC, which precluded any *a priori,* presumptive conclusions being drawn prior to the research.

In terms of the research process, one of the primary reasons to choose a mixed methods approach is it reduces the affective nature of the research in employing the questionnaire, an entirely anonymous data-gathering tool. As the data was collected and analysed from both the questionnaire and interviews, I frequently considered whether it reflected the reality I saw around me in the professional context. My conclusion was the data did indeed reflect reality—the range of opinion regarding the iPad in the research process mirrored that of

daily observation in the field, over a period of three years. The data also reflected the limited literature on the subject, ranging from eulogies of the device from management (Hargis, Cavanaugh, Kamali, *et al*) to others highlighting the device's lack of appeal and failure in the classroom (Alkaabi, Albion and Redmond, 2015).

CHAPTER 5: DATA ANALYSIS AND FINDINGS

5.1 Introduction

This chapter will present and analyse the data from the questionnaire and interviews. The questionnaire results are tabulated where appropriate in this chapter, and the full questionnaire with all responses is in Appendix 16. Regarding the interview data, as discussed in Chapter 4, it was coded. Initially it was grouped according to the research questions, which were then coded into 6 themes, and 23 sub-themes. These are illustrated in figures 1 - 2 in Chapter 4, section 4.9.6. A sample coded interview is attached in Appendix 15.

In the sequential design of mixed methods, the quantitative phase typically comes before the qualitative data is collected (Ivankova, Creswell, & Stick, 2006), as was the case with this thesis. However, although the questionnaire was conducted before the interview, it was decided to present the qualitative data first, and support it with the quantitative data in answering each research question. The primary reason for this was that the qualitative data, was considered more substantive, and offered deeper insights (op. cit.) into practitioners' use of the iPad. As Patton (2002: 193) declares "qualitative data can put flesh on the bones of quantitative results, bringing the results to life with in-depth case elaboration." Another reason was clarity and conciseness: the interview data typically replicated the comments sections of parts of the questionnaire, so presenting the interview data first and then presenting only complementary quantitative data avoided this. Finally, the questionnaire itself, with its exploratory 34 questions, had questions that yielded similar results (e.g. the evaluation questions such as 24, 25, 26, 27 and 31). This, in large part, is due to the exploratory nature of the questionnaire, whereby questions originally hoped to bring out disparate and nuanced feedback, in practice brought out converging responses.

This chapter will first briefly examine the demographics and teaching profile of the sample. It will then discuss the research questions and themes that emerged from the data. The first research question was how the iPad was used by practitioners, both inside and outside the classroom. The qualitative data will be examined first, then complemented—or contradicted—by the quantitative data. Similarly, the second research question, teachers' evaluations of the device, will examine the perceived advantages and disadvantages of the

iPad in the teaching and learning context, with qualitative data discussed first and subsequently the quantitative data. Finally, the themes of training, PD and support teachers that emerged from both qualitative and quantitative data will be examined, before summarising the findings.

5.2 Sample profile

Before moving onto an examination of the data itself, it is perhaps pertinent to consider the demographics and teaching profile of the sample: age, gender, experience, and the Level they are teaching in Foundations (FDNS). There are 4 FDNS Levels, ranging from Level 1, which is the most basic, to Level 4, which is an IELTS preparation course. The exit point of Level 4 is an overall Academic IELTS Band 5, which is the requirement to proceed to the Bachelor's programme at HCT. As shown in Part A of the questionnaire (see Appendix 16, questions 1 - 5), the sample (n=46), consisted of 23 males and 23 females. The sample is mature, with only 1 member of faculty being 35 or under; in the 36 – 45 age category there are 14 faculty members, but the majority (n=22) are 46 – 55, with 6 in the over 56 and a further 2 over 65. Reflecting their maturity in age, the sample is generally highly experienced. 41 of the 46 respondents have over 10 years teaching experience, 18 of them have over 20 years' experience and 4 faculty members have taught for over 30 years.

In terms of the levels FDNS faculty teach, and there is a tendency for the higher levels to be most frequently taught. This reflects the placement test system, whereby the majority of students admitted to the FDNS programme are a little higher than the minimum level for acceptance, with a CEPA (Common Educational Proficiency Assessment) score of 150 (Higher Colleges of Technology, n.d.), roughly equivalent to an IELTS band 3.5 (Ministry of Higher Education, n.d.), though still not at the level needed for placement in the Bachelor's programme (Academic IELTS band 5.0). Teaching loads reflect the level of students' abilities, with fewer placed at the lower levels, hence almost two thirds (29 faculty) of the sample teach either level 3, or Level 4, the latter being a pure IELTS preparation course.

5.3 Practitioners' use of the iPad in class

Responses to RQ1, "How is the iPad used?" were divided into two themes—how practitioners used the iPad to facilitate teaching (RQ1a), and how

they used it outside the class (RQ1b). This section will look at the former; iPad use by practitioners outside the class will be discussed in section 5.4.

On analysis of participants' responses, iPad use with regard to teaching was initially analysed participant by participant, and then re-grouped into 5 sub-themes: generic software (e.g. Adobe, DropBox) and materials, iPad-specific app use, iPad-specific tool use (e.g. camera/video), iPad classroom approaches, and finally any other uses/issues. The data in these sub-themes of classroom use are discussed below, referring to individual participants' comments (page numbers given refer to the interview transcripts themselves; a complete coded interview is attached in Appendix 15).

5.3.1. Generic software, materials and email

With the iPad's millions of specific apps, this might have been thought of the primary use of the iPad. However, interview data did not support this from the majority of respondents. Instead, generic software, materials and email appeared the most frequent uses of the device. Most participants described using generic apps such as Adobe Acrobat or Dropbox frequently, with the former occupying a position of prominence amongst many teachers as the *de facto* means of course delivery—indeed, some participants described using PDF files/Adobe as almost the only way they used the device in class. In particular, participants C, F, BE, DS, P, L, M, HL and LK mentioned extensive use of Adobe Reader, Dropbox, and, to a lesser extent, Blackboard Learn. As LK declared, mirroring the approach of L in terms of PDF and projector use: "I mostly use it [the iPad] not to create material, but for projecting material, not for teaching, but showing material. Generally I hook it up to the projector, then I drag stuff from my Dropbox, and use Adobe Reader to show material. That's the main way I use it" (participant LK, p. 1):

This was echoed by other participants, even strongly pro-iPad proponents, such as F, who admitted she did not use apps, but rather PDF files as the teaching materials (p. 11 - 12), which students were able to annotate using Adobe Reader. Unlike other participants, she confessed she did not use the iPad at all—everything was created on her laptop and then shared with the students via their iPads. Participant C had arrived at a similar conclusion in terms of material creation—she had tried initially to design material on her iPad,

but found it easier to use the laptop for this purpose, and then disseminate the laptop-produced material for student consumption on their iPads.

Participant M at the Men's campus, though very much a technophile, again eschewed the use of apps, and was another keen user of PDF files, in addition to Blackboard Learn (BBL). Like participants such as F and C, she also reported creating classroom materials (giving the examples of Quizlet and Kahoot) on her laptop, as it was easier to do so than creating materials on the iPad (p. 4). As with F and C, students would then access the materials on their iPads.

BE, HL, DS, and CR mentioned using the device for reading practice or projects, which was either Adobe files, BBL, or the e-textbook. Some such as HL, admitted using the device for less than 10% of class time, and said much of that was for gamification or simply allowing students to go off-task, a "reward", he said, for having finished set tasks which were typically reading comprehensions on PDF files or paper-based, as he explained in a follow-up discussion after the recorded interview.

Participant P considered his primary usage of the iPad in class was to send emails and Adobe PDF files to students. RS also saw the devices primary use to be of sending emails and using the Outlook Calendar, which she observed students and herself did on a daily basis.

Other than Adobe/PDF files and Dropbox, several participants, such as L and P, mentioned using the iPad to show YouTube videos, with L giving the specific example of "Ted Talks" videos. LK also used these videos, describing it as a way "to generate ideas, because that's the thing about our students … they don't have any ideas, they're not very worldly" (p. 5).

Interviewee ZW made no secret of his dislike of the device in the class. He reported using iPads as minimally as possible in class, and only did so as their use was compulsory. He cited dictionary work and storing vocabulary as the only real uses he had found for the iPad in class. Participant C also stressed the former, dictionary work, as useful on the iPad, though noting some of the e-texts in fact block dictionary features.

In terms of the questionnaire data, as with the qualitative data, app use was not the predominant reported use of teachers. Rather it matched the more generic uses of non-iPad specific materials, such as the e-textbook, BBL and "the Internet" (typically defined as searches, online spelling/grammar/reading

practice, when clarified after interviews). This is exemplified by Question 13 which asked participants how they used the iPad in class. 42 out of the 46 participants gave responses, summarised below in Table 1.

Table 1: iPad use in class.

Use	Reported use (# of participants)	ranked as primary use (# of participants)
Apps	42	20
E-textbook	41	12
Blackboard Learn	41	9
Internet	41	1
Other	22	0

Though 42 respondents said they used apps in the classroom, other uses (E-textbook, BBL, Internet and Other) attracted a total of 135 responses, suggesting app use was not predominant. Similarly, 20 respondents (47.62%) chose apps as the main use of the device in class, though this was outweighed by 22 (53.8%) of respondents, who chose the e-textbook, BBL and the Internet.

5.3.2 App use

Although the majority of interviewees rarely used apps, there were five regular users amongst the interview sample. Four were female teachers who appeared very keen on app-based approaches to teaching. The one male, though a regular user of apps, was not a prolific user, and he did not use apps for regular classes. Rather, he used apps such as Quizlet and Socrative for the specific purposes of weekly vocabulary tests and practice. Whether there is any significance that more female faculty than males seemed to like teaching through apps may be of further academic interest, or simply be a coincidence/anomaly given the small sample size.

Participant S was an enthusiastic app user, and considered Showbie one of her favourite apps, and she used it to organise her own materials and those of students. She described it as “a classroom management tool” (p. 3), and added that it was also easy to correct work on Showbie and give feedback to

students. She mentioned its one drawback was the inability to use Showbie for collaborative work, so for that she used apps such as Padlet. She also mentioned using Pages (a word-processing app) a lot for writing, in marked contrast to most of the other participants, who felt the iPad was unsuitable for writing. Other apps she mentioned regularly using were iMovie, Popplet, Spelling City, Keynote (an app for presentations, interview transcript, p. 5), and Softchalk (p. 12). She also mentions using the iPad for surveys and as warmers/introductions for paper-based writing activities (p. 9).

Participant SJ, another pro-iPad user, used a variety of apps—Kahoot, Book Creator, Nearpod, Flipboard, Quizlet, Spelling City, Tellagami, Classdojo, Padlet and Popplet, as well as the e-textbook, M-Reader and camera. She said when students were “on board”, they would sometimes make their own quizzes on Padlet or Kahoot, which could be motivating. She had been an early adopter of the device, her husband having purchased iPads for the whole family when they first became available.

Participant CR used several apps such as CBB, BBL, Spelling City and Road to IELTS, but found it most useful when using Edmodo, which she used largely as a depository for all her (and students’) materials (p. 2). Students could submit work on Edmodo and also do quizzes etc., but what she especially liked was the ease of file management and the ability to see what her students were doing in class in terms of assignments/quizzes (p. 12). Problems with file management on the device was something several participants had mentioned during interviews, so Edmodo could be an app to remedy this. Like CR, C used the iPad for storing materials via Showbie and Edmodo, and used other apps like Nearpod and Socrative for various activities. She also reported using iBooks, CBB for reading projects (which she reported as very good), and Keynote for presentations.

Male participant B utilised several apps regularly in class, citing Showbie, Keynote, Edmodo, Quizlet, Spelling City, in addition to the e-textbook and M Reader. Though he considered such apps useful, his classroom use was largely concentrated in just two apps—Quizlet and Socrative—for weekly vocabulary practice and quizzes. He did not consider the iPad to have fundamentally changed the teaching of language (p. 3 – 5), and further noted a significant number of his class—30%—actually preferred to go to the library and read texts in books, rather than read them on the iPad (p. 6).

Many faculty barely used apps, and were frank in their failure to engage with them. RS, for example, mentioned her only real app use had been Creative Book Builder (CBB), which she soon dismissed as little more than an app to store documents. Likewise, LK said CBB was the only app he used on the iPad (p. 1). He had tried using other apps such as Socrative and Nearpod, but in his own words found “it difficult to use those apps and make the class interesting.” He felt his role “side-lined as the teacher”, as the students would only interact with the app (p. 3), so returned to his primary uses of the iPad for Dropbox and Adobe Reader in his classes.

Similarly, participant P mentioned limited use of some other apps, such as Active Reading; participant BE echoed this sentiment. BE and DS were also occasional users of apps such as Quizlet and Spelling City, but neither are exclusively iPad apps, and are available on any device. As BE remarked and was noted in Chapters 3.9.2 and 5.5.4, the iPad does not support Flash, so is not the best platform for apps which require it, such as Spelling City.

In the questionnaire, Q15 asked respondents which apps they used most in class, and asked them to rank them from 1 – 5. All 42 ranked the first two, though fewer participants ranked apps 3 – 5, with only 30 ranking a fifth app for example. Hence it appeared that either participants only used a couple of apps, or that some respondents lacked either the time or inclination to list all apps they used. A total of 51 apps were mentioned. Of these, 27 were mentioned by only one participant, and 24 mentioned by between 2 and 12 participants. The full list of all 51 apps can be found in Appendix 14. The more frequently-occurring 24 apps can be seen below in Table 2, with the most highly-used ones highlighted in yellow.

Table 2: Respondents' 5 most used apps—high usage apps highlighted in yellow.

Respondents' choice of app	**# 1**	**# 2**	**# 3**	**# 4**	**# 5**	**Total**
Active reading	0	2	0	0	0	2
Adobe Reader	2	4	1	3	2	12
BBL/Mobile Learn	2	1	0	3	0	6
Cambridge Bookshelf	0	0	0	0	2	2
Creative Book Builder (CBB)	1	2	4	3	1	11
DropBox	3	1	1	0	0	5
Edmodo	1	0	0	0	1	2
Educreations	0	0	0	3	1	4
Explain Everything	0	0	0	1	2	3
Free Spelling App	1	0	0	0	0	1
iBooks	1	2	2	2	2	9
iMovie	0	0	2	0	1	3
Kahoot	1	0	1	2	0	4
Keynote	1	5	1	2	1	10
NearPod	0	2	6	2	0	10
Oxford Bookshelf /Grammar	1	0	1	0	0	2
Pages	4	1	3	0	1	9
Popplet/Popplet Lite	1	2	1	2	2	8
Road to IELTS/Active reading	1	2	0	0	1	4
Quizlet	2	5	5	0	0	12
Showbie	10	0	1	1	1	13
Socrative	4	2	1	1	4	12
Spelling City	3	5	2	4	1	15
TED Talks	0	0	1	0	1	2
TenseBuster	0	1	2	0	1	4
Timer (Clock)	0	0	0	1	1	2

As can be seen from the data, there are a number of trends concerning app use. Firstly, Showbie was the most-cited primary used app by teachers, with 10 out of the 43 respondents saying this was their most used app, significantly ahead of its nearest rival in popularity, Socrative, with only 4 teachers citing the latter. However, Showbie rated much lower in terms of popularity as the second, third, etc. most used app, suggesting there was a cohort of teachers that used it as their primary app, though its use is less widespread through the rest of faculty. Other than Socrative, most used primary apps were Spelling City with 3 teachers citing it as their most-used app and Adobe Reader—much of the Level 4 FNDS material is on Adobe Reader, which might account for its popularity.

5.3.2.1. Most popular apps

Looking holistically at the list showing the five most-used apps by faculty in the questionnaire, there were a number of apps whose popularity can be accounted for, either due to aspects of the course, or, anecdotally, what faculty have shared with me. As already mentioned, Showbie was the most popular and from faculty accounts in the interviews, it is used largely as a repository for teaching materials in a similar fashion to BBL. Socrative is used largely for quizzes, and several teachers have mentioned this is how they use it in class.

Quizlet had the same number of teachers who ranked it in the top five apps they use, and was regarded by many faculty members as similar to Socrative in terms of function. Spelling City is one of the most popular apps and used by the widest range of teachers as spelling and vocabulary tests are frequent in all four levels of FDNS, especially Levels 1 – 3. Many teachers have designed their own quizzes and tests on Spelling City, both from designated vocabulary lists and the Academic Word List.

Eleven teachers listed Creative Book Builder as one of their 5 most-used apps, and this app allows students to create any number of texts—reports/journals /essays etc. —with graphics and pictures, and is popular amongst both faculty and students for writing assignments and projects. Keynote and Nearpod were both considered popular apps by 10 of the teachers in the sample. Keynote is the iPad version of Microsoft PowerPoint, and so is likely used for making presentations, which is a frequent classroom assessment tool. Nearpod is an app that allows presentation of multimedia teaching content

that can be shared with students, and they can be quizzed on the content via any mobile device and the results analyzed. In this way, it is similar to Socrative.

Other popular apps included Pages (cited by 9 teachers), which is used for taking notes and writing assignments, though it lacks the potential for creativity and attractiveness of Creative Book Builder. Popplet had a similar number of teachers who endorsed its popularity: it is an app often used for brainstorming and for group writing activities. The iBooks app was also cited by 9 teachers, probably to access their e-textbook, though whether this was actually the case was not explicitly tested. Apart from the 10 apps discussed above, there were 40 others that participants' included in their top five, showing there is some diversity in the apps faculty utilise in the classroom. Nevertheless, given the fact that there are over 1 million native apps for the iPad (Statista, 2017), that faculty have converged on a mere half a dozen for use in the classroom is notable.

5.3.3 iPad tool use (camera/video)

Two participants liked the high resolution camera and video of the iPad, and found it a valuable tool in the classroom. Interviewee C regarded the iPad as very useful for video work, pictures and recording audio—she considered it a far superior tool in these respects compared to the laptop. She mentioned students would often produce written work and oral and video projects via the iPad in her class.

CR also found the camera very useful, saying, for example, students could take photographs of board work and annotate them (p. 3). The voice recorder was also useful, she found, for students to record and playback practice interviews in preparation for the IELTS Speaking Examination. She considered it was easier for students to work together on the iPad than laptops, finding it "quick" and "fluid" in comparison (p. 6).

Questionnaire data supported this, with Q14 asking about uses of the iPad other than apps and generic uses garnering 7 responses. Three were off-topic, but significantly the other four respondents cited the video-making and photography options of the iPad, which one respondent was passionate about, defining it as follows: "Students frequently record, video, and photo work done

in class. This is EXTREMELY useful AND engaging for the students". The other three responses were off-topic.

5.3.4 Other uses and issues

CR reported sometimes students would be looking at their iPads but actually producing written texts in practice for the IELTS examination. She also believed students used their iPads at home more than might be thought, learning vocabulary and doing practice and revision at home, which she attributed to the device's portability and the tendency for the iPad to always be with them, unlike heavier laptops (p. 12).

Despite the positives of the device as mentioned above by CR, others cited negatives. C specifically commented on the fragmented nature of course delivery whereby disparate elements such as the app M Reader and Storyteller are tacked onto the course, with no clear plan or learning goal, describing (p. 18): "the frustration [of] navigating a path … a coherent path." As she goes on to say (p. 23), this issue is compounded with the iPad which "… gets in the way of learning outcomes, because the technology is **not** [her emphasis] in the background. The technology is foregrounded—with trouble-shooting and stuff like that. **So that's the issue** [her emphasis] and that's where it becomes a disruptive agent in the class. It's kind of frustrating."

5.4 iPad use by practitioners out of the classroom

Interview data where practitioners discussed use of the iPad outside class was categorised as theme RQ 1b. Before data collection, participants were assumed to use the device outside the classroom for educational purposes, and perhaps for personal use. How much it was used for each was the rationale behind the question, hoping to show whether usage reflected its perceived usefulness as an educational tool, or a personal entertainment device. As the responses will show, there was some deployment of the device for educational purposes, and an eclectic range of personal use.

5.4.1 Educational uses of the iPad.

Participant B was the only one who reported using the iPad out of class for teaching and learning purposes (though L initially reported using it for work, on further examination this was found just to be work-related email). He

said he used it for communicating with students, answering queries and setting quizzes. Two participants recorded using it for personal academic study. CR, for example, using it for academic reading—she stressed that the latter was an activity she did not enjoy doing on the laptop, but found it easier on the iPad. She mentioned using Adobe Reader to highlight text in academic papers, and to store them—she would do this while taking her children out, so as not to waste time in her academic reading (p. 4), as she was in the final stages of a doctoral thesis. Participant C also used it academically. She was chosen as an "Ed Tech Star" by her College and was given an iPad before the official launch of the iPad initiative. As an early adopter, she reported using the iPad for reading both news articles and professional journals (the latter as part of her Master's studies). This was supported by the questionnaire data (q. 9, see Appendix 16), where two respondents reporting using it for reading academic articles for study purposes, presumably the two in the interviews.

5.4.2 The iPad for entertainment

Participants widely reported using the iPad for entertainment purposes. For example, participants SJ and HL reported using the device at home to browse the Internet, read online newspapers, Skype and for online shopping, but not for any academic purposes. Participant DS had a similar profile in out-of-class-use of the iPad, describing using it for "search[ing] online, read[ing] newspapers, banking, TED talks … playing games" (p. 2). Participant L likewise used it primarily for entertainment and personal mail (p. 4). Participant M reported using the iPad entirely for entertainment, such as playing games—even email was done entirely on the laptop (p. 4).

Participant LK was another teacher who used the iPad out of class exclusively for entertainment and social purposes. He described using it for "Internet tasks I may have like checking emails, paying bills, FB [Facebook]. Also my two daughters are out of the country, so I chat with them on Messenger, or chat on Skype. For that the iPad is convenient" (p. 2). Participant BE described her use of the iPad in her free time as limited, utilising the device for little more than Skype and personal emails (p. 1).

Participant P reported using it extensively for varied activities: reading online newspapers, Facebook and watching online baseball games. He also considered it great for travel, because of its lightweight and compact design.

Participant S also used it for reading a variety of online reading such as newspapers and eBooks. Likewise, participant CR reported a variety of uses for the iPad in her free time, such as reading newspapers and doing crosswords. She preferred it to a laptop due to its portability, as P also mentioned. She reported her family would also use it together to search for information (p. 4). On a less academic note, she remarked that they also used the device while washing up to listen to music on YouTube (p. 5). Finally, participant ZW used it to control his Hi-Fi system and recording and replaying guitar lessons, but reported finding little other use for it other than what he termed “a little video machine” (p. 2).

Interestingly, two participants, F and RS, said they never used the device in their free time. F explained that her iPhone was the same, and preferred using that (p. 2). Likewise, RS said she did not use the iPad out of class at all—instead she also preferred to use her iPhone, which she said had all the functions of the iPad (p. 1 – 2).

As this section has shown, it is notable that participants rarely use the device outside the classroom for educational purposes. Indeed, only three participants (B, C and CR) reported the latter, and with the latter two participants, this usage was not related to teaching, but rather their own postgraduate studies. However, as the responses showed, there was a catholic embracing of the device for personal use and entertainment, which could reflect the view that teachers considered the device primarily for entertainment rather than education. To this end, I followed up with participants after initial interviews, and asked the majority of interviewees (12 out of 15, unfortunately I was unable to meet 3 at DMC) if this was how they viewed the device. For most of them, the response was clear, and they agreed it was an entertainment/personal use device. However, several others gave a more nuanced response: that they considered the iPad as primarily a “consumption” device (which included entertainment), and not a creative device, which limited their ability to use it in terms of making teaching materials.

In the questionnaire, almost 90% of respondents who answered question 8 (37 out of n=43), reported using the iPad out of class. Five categories of iPad use outside the classroom environment had been settled on (Question 9). Detailed below, these categories and their attendant percentages showed how

the iPad was used out of the classroom. The results corroborate the qualitative data, showing the iPad was largely used for entertainment and personal use.

Table 3. iPad use out of class.

Use	Reported use (# of participants)	ranked as primary use (# of participants)
Private email/social media	38	19
News/current affairs	32	10
Entertainment (films, YouTube, music, games)	37	4
Work-related use	38	4
Online shopping	23	0
Other	10	2

The highest-ranked use was private mail and social media use with almost half the respondents (48.65%) ranking it as their primary use of the iPad outside class. Second-ranked was news sites and current affairs media, with well over a quarter (27.78%) ranking it as their primary use of the device outside class, and a third (33.33%) ranking it as their second-most frequent use of the device. Work-related use (typically checking work email, though there was some lesson planning etc.) was the third most popular use of the device outside class, with 4 participants (just under 10%) reporting this as their main activity. Similarly popular was entertainment (watching films, YouTube, playing games), with over 29% of respondents reporting it was their primary (12.90%) or secondary (16.13%) use of the device. Online shopping was the fifth-ranked use of the device outside class, with no one using it as their primary use but just over 40% ranking it as their fifth or sixth use of the device.

The “other” category was the least popular, with 23 respondents not ranking it at all, but included some interesting data. Eight of these respondents specified in comments their use of the iPad in this category. Two respondents commented they used it for reading for pleasure, one specifying this was via a Kindle. Two mentioned using the device for photographs, with one specifying family videos—presumably this was for taking footage and/or editing, though this was not clarified. There were four more uses mentioned by single

respondents—Skype, watching sport, as a hi-fi remote control, and for games (the latter should actually have been included in category 3 [Entertainment] in question 9).

5.5 Evaluation of the iPad as a teaching and learning tool.

5.5.1 Introduction

Participants' evaluation of the device in terms of pedagogy was the second research question (RQ2). In the data, it was grouped into 4 themes (as in Figure 2 on page 80): benefits of the device to teaching and learning; limitations of the iPad; evaluations of the device and comparison to other materials/devices; and fourthly, how students view the device. 16 sub-themes emerged, more than any other research question, largely due to the breadth of the question. The following four sections consider these themes, and the 16 sub-themes which emerged. This section (5.5) will examine the benefits of the iPad to teaching and learning, 5.6 will examine its limitations, and in 5.7, data regarding faculty evaluation/comparison of the device will be examined.

Interviewees noted a number of interesting and engaging ways to use the iPad in class. Though app use featured in faculty responses, it was not the most-widely used feature of the device. There were other key factors that faculty found beneficial to teaching and learning—portability, novelty, and material storage.

5.5.2 Benefits of the iPad: Portability

The lightweight nature of the device was seen by several teachers as a pedagogical benefit. Participant F, despite not using the device, was one of its strongest advocates. Amongst positives such as saying it gave more options to teaching and was more interactive (p. 4), she highlighted its lightweight design and swift Internet access, and so believed "anything that they [students] need to check or that they want to know is there at their fingertips" (p. 15). She differentiated the device from a laptop, which she claimed was much more bulky and hence students were less likely to carry them round all the time, as she said they did with their iPads. Likewise CR (p.12), S (p. 7 and 13) and B found the portability of the iPad a boon to students. The latter participant mentioned students would sometimes neglect to bring books to class, but that was not the case with the iPad.

Participant SJ was a keen proponent of the device and said it could work well in class, highlighting the mirroring ability of the device [the mirror function displays the screen on a classroom whiteboard via a projector] used in conjunction with its portability, though she added the *caveat* that the students had to be "on board"—and that there were no technical issues (p. 15). As she stated: "If you mirror it, then of course you can walk around the classroom, you can have it really working well which is great. I think it just makes your lessons so much more exciting … and more interactive with the students, they can do things, if they're all fully on board" (p. 7).

Likewise, participant DS liked the variety of activities the device offered, and mentioned the benefit of moving around the class holding the iPad, whilst monitoring students' work (p. 2). He also found the portability of the iPad a benefit (p. 6), and described the device several times as "engaging" (p. 3 – 5, p. 9, p. 13), and that students could work on it anywhere quite easily. Participant P also found a number of positives about the iPad such as rapid Wi-Fi connection, but saw these as positives of universal convenience rather than its effectiveness as a teaching and learning tool. However, he acknowledged its portability to be a unique feature, and believed students liked it for that reason alone.

Participant RS said there were only a couple of benefits to using the iPad, portability (p. 2, 6) being one, and that students liked playing games on it (p. 2). She compared it to the students' Smartphones in terms of them liking it for portability and gaming, but she dismissed it as a serious tool for teaching and learning (p. 2).

5.5.3 "Novelty and variety"

Participant S was a strong proponent of the iPad for students, and considered the device's novelty as an attraction (p. 14), believing that the device "draws their attention" (p. 6). She also considered the device to be engaging for the students due to their perceived "tech savvy" (p. 13, 15) nature. DS also liked the device for its variety, in terms of activities that could be performed on the device, in addition to apps available (p. 4, 7), as opposed to a paper-based course.

Participant B commented positively on the variety the iPad offered, and participant L found students liked the device for similar reasons (p. 5, 8), and

claimed it provided a wide diversity of activities. He also found it made certain activities such as vocabulary learning easier in his opinion, and was a very good resource for listening (p. 12), with a wide resource of potential audio material. He argued that even if students drifted into entertainment, some such activities—like watching films—were often in English, so some of the entertainment available on the device could still be seen as enhancing language learning—especially listening—in a broad sense (p. 5). Participant M also commented on the potential variety of material, giving the example of online reading texts where you could also listen (p. 9), and also the various gaming options via Quizlet, Kahoot and Socrative, with vocabulary appearing to be the main gaming activity (p. 18 – 19).

Participant BE, though not a prolific user of the device by her own admission, nevertheless found a few benefits to using the iPad in terms of variety, finding students liked it "as an alternative to the standard lesson" (p. 3), and for some brainstorming activities. She also mentioned she thought some students might like it for anonymity, such as when doing project work via avatars (p. 4).

5.5.4 Material storage

Participant L found a simple benefit of the iPad was that students always had it and it was effectively self-contained (p. 5)—whereas paper copies were often "lost" (p. 4 – 5). Like L, Participant M liked the fact that the iPad used in conjunction with BBL offered "containment" —i.e. all the required materials could be uploaded (p. 7). Participant LK concurred with L and M regarding the ease of having all the materials "there" for the students, though employed Dropbox and Adobe Reader rather than BBL as his primary delivery tool. As LK said:

"It's all there with Dropbox and Adobe, and preloaded. And …that's … how it's beneficial. And if they've got a test, I can say look at CBB, look at the graph or whatever and check it out, look at Chapter 3 or whatever. Look at the readings or videos or Ted Talks we looked at to generate ideas, look at it review it for a couple of hours at home. And if they do, it will benefit them and [be] much easier to access than notes all over the place" (p. 5).

5.5.5 App use

Teacher use was concentrated in less than a dozen or so apps from the interview data, echoing the findings of the quantitative data, as illustrated in Table 2 section 5.3.2. As an example, participant C singled out Speak Selection, Socrative, Nearpod, Popplet, Showbie, Creative Book Builder as engaging apps for students—with the *caveat* that sometimes the Pro versions required licences (i.e. were paid, not free versions). These latter five apps—Socrative, Nearpod, Popplet, Showbie and Creative Book Builder—were amongst those most mentioned by other interviewees. These five apps also appear in the quantitative data as amongst the most frequently used by teachers. However, as already stated, app use appeared to take a back seat compared to other uses of the iPad, with many teachers admitting to limited use of them, or none whatsoever.

5.5.6 Other benefits—the e-textbook, self-study, gaming and dictionary work.

Though a feature that could likewise be accessed via a laptop or other device, several participants mentioned the prescribed e-textbook during interviews. However, its usefulness was not clearly delineated in interviews, it was merely “mentioned”. During follow-up interviews to clarify a lack of clarity/ambivalence to the e-textbook, most participants appeared unenthusiastic about its use. SJ was a keen iPad user (p. 20 and p. 22), and one of the few participants who liked the e-textbook, despite, as she said (and many others had commented), the difficulty of flicking through it. Features she liked included videos, and being able to check answers in comprehension exercises (answers were supplied). Participant B concurred, reporting students liked the videos embedded in the e-textbook, and the quizzes where they got immediate feedback. Ironically, this latter feature of the e-textbook was something in particular FDNS teachers frequently complained about, as they reported some students would often access the (supplied) answers without engaging with the text. Many teachers such as LK told me they would like to have this feature disabled, due to students bypassing the “comprehension” and immediately going to the answers, thereby “finishing” a long reading comprehension in a couple of minutes—and forcing teachers to come up with additional material.

Another participant, M, mentioned the e-textbook had a good layout, and was potentially less teacher-centred (p. 17), allowing for possibilities of self-study. Likewise, participant F also considered the device as suitable for autonomous learning (p. 5). HL described his own teaching approach as teacher-centred, which can often be the norm with HCT students (p. 3, p. 14), and said he liked the more student-centred aspect to iPad work. He seemed to use it as an option to give students a break from the typical teacher-centred class via gamification, using apps like Kahoot and Spelling City for spelling practice (p. 3). He also found the iPad encouraged the possibility of self-study due to its portability.

Like HL, participant C also describes enjoying grammar games on the iPad, but as a teacher-led activity. Her approach was as follows (p. 25):

"[It's] a sort of very teacher-centred … old-fashioned really approach ... but it's very engaging—Socrative or Nearpod—and a bit of a competitive element to it; the teacher controls exactly what's on every single iPad at that time, you can see who's going in and out and that can be fun … [and] … really engaging! I like to actually teach grammar that way – 'Is this sentence right or wrong?' 'Write the answer to this past simple question'. 'Change this from a traditional kind of grammar transformation activity'. 'Here's the negative; put it into the affirmative in the past, whatever'. They're working in pairs and that can be really engaging."

5.5.7 Quantitative data regarding benefits of the iPad to teaching and learning

In the questionnaire, questions 24 and 25 asked similar questions about pedagogical affordances of the iPad. Question 24 asked: "What three reasons/things would you cite to continue using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?" 41 respondents out of 46 answered, and there were 105 responses. Due to the number of responses, it was decided to group all the reasons given into categories and tabulate them numerically. 17 comments were judged either non-iPad specific or off-topic. The remaining 88 comments were coded and categorised as in the table below (See Appendix 16 for full list of coded comments):

Table 4: Reasons to continue using the iPad

CATEGORY	Number of responses ranked #1	Number of responses ranked #2	Number of responses ranked #3	TOTAL
Apps	6	7	3	16
Other materials	9	6	3	18
Easy to use/manage	7	5	7	19
Portability/mobility	7	7	3	17
Interactive	5	4	1	10
Student engagement	3	2	1	6
Recording scores/progress	1	1	2	4
Up-to-date technology	1	0	2	3
Saves paper	1	0	1	2
Independent learning	1	1	0	2

As can be seen, ease of use was deemed the most important aspect of the iPad in class with 19 respondents citing this reason. Though not a specific theme in the qualitative data, several participants imply ease of use in section 5.4.1; use of non-iPad specific materials (e-textbook, BBL, etc.) and portability were second and third with 18 and 17 endorsements, echoing the qualitative data. Apps were ranked fourth, with 16 responses, endorsing the qualitative data that illustrated apps were not used by teachers as much as had been thought. The iPad's interactive features were deemed important by 10 participants, as was student engagement, echoing the qualitative findings of the attraction of the device's "novelty and variety." This was further endorsed by three respondents who believed the device dove-tailed with the college policy of keeping up to date with the latest technology. In addition there were two further comment categories: four participants liked the ease of tracking students' progress (whether this was on BBL or an app was not clear), whilst two participants also noted its "green" credentials in saving paper.

Question 25 was “What other aspects of teaching/learning have been enhanced by the iPad (if any)?”, and garnered 29 responses. 8 respondents said “None”, but of the other 21 responses, many supported the qualitative data. For example, 4 cited ease of access to materials as a positive in terms of teaching and learning, and another 3 cited the variety of activities the device offered and the ease of playing games, and another two considered spelling and vocabulary may have improved, supporting the qualitative data in 5.4.6. Likewise two respondents also believed the iPad could assist in independent learning, with a further two respondents also mentioning its usefulness in saving—and students not losing—paper-based materials, reinforcing its value for material storage mentioned in 5.4.4. The same number liked Apple TV, citing the ease of moving round the classroom whilst mirroring on the screen, as SJ mentioned in section 5.4.2. Four other comments mentioned collaboration, ease of contacting students, “TED Talks” lectures, and the device as a language laboratory.

5.6 Limitations of the iPad

Interviewees noted a number of other issues and frustrations with the device, which are discussed in the following section. These were coded in interviews into five sub-themes (see Figure 2): distraction; teaching/materials issues; technical problems; academic reading and writing; and finally an “other” category for issues which did not fit into the other sub-themes. Not all are the “fault” of the iPad. Levels of students, institutional support or its absence, and connectivity problems could easily apply to any technical device, as could distraction via social media usage/gaming, which CR noted (p. 12), amongst others.

5.6.1 Distraction

Distraction had been probably the most frequently-heard complaint by faculty about the device, right from the time of its inception at the HCT. All interviewees highlighted the problem of distraction that appeared intrinsic to the iPad. Many emphasised it was a major problem. Though a number of faculty sought to limit iPad use for that reason, others had adopted a range of approaches to counter this. Participant C, for example, questioned the wisdom of “free” use of the iPad in some classroom situations, and considered a

lockstep approach (i.e. all students doing the same thing at the same time) to be better to keep students on-task when using some apps.

Participant F acknowledged the device offered considerable temptation for getting off-task, and avoided this constantly patrolling the class checking students were on-task (p. 6 – 7, p. 19). She described her approach to counter distraction was to provide lots of activities for her students to do, and to be, in her own words, "Eagle eye" (p. 7):

"I'm around and I see everything. I'm always watching and I'm always there. It doesn't mean that it [distraction] doesn't happen because I'm so good at controlling them [sic], but you have to be aware."

She was not the only participant to mention this need for vigilance when students were on the device—others such as DS also mentioned actively patrolling the classroom to ensure students were on-task when using the iPad, as did S and HL. Participant HL adopted a similar approach, despite admitting limited use of the iPad: around 10% of class time, largely for gamification of spelling via apps such as Spelling City, Kahoot and BBL (p. 1). Acknowledging the device's ability to distract, like F, DS and others, he patrolled the classroom to ensure students did not go off-task to social media, etc. (p. 3). However, paradoxically, he also reported allowing students to go off-task if they had finished their set work; as he admitted:

"If they finish the work that I've given them and they've got five or ten minutes over, I don't care if they want to just play around while they're waiting for the other guys to finish" (p. 3).

How he managed such a situation was unclear. When I asked him for clarification after the interview, he admitted this did cause some classroom management problems, but that did not seem to concern him. He basically said he allowed the students to go off-task once they had finished the initial activity he had set them, in his view offering an incentive to finish "the work" quickly.

Although distraction could quite conceivably happen in any classroom in the world (and as CR noted, with any online device), when coupled with the particular and peculiar context here at public tertiary institutions in the UAE, with second language learners of generally low levels of English, study skills, or indeed general knowledge and global awareness (e.g. O'Sullivan, 2004, Peel,

2014, Dhal, 2014, Abuelgasim & Daiban, 2017), the distractive nature of the device is exacerbated. It is perhaps not surprising that for many faculty, its distractive capacity became the nadir of the iPad's rollout, an anathema to teaching and learning. Either in interviews, follow-up interviews, or anecdotally, many faculty told me this was why they restricted the iPad's use. To do this, they used containment policies: whether with a lockstep approach such as participant C detailed in section 5.6.1, or on BBL such as participant M; others used the iPad as a projector for teaching material on Adobe or in Dropbox such as LK, in order to focus students' attention; and in some cases, such as HL, RS and BE, teachers reported barely using the iPad at all, due to its power to distract. The remainder of this section reports on some of the interviewee responses to student distraction by the iPad, along with attendant perceived causes and solutions.

Participants F, S and SJ were some of the keenest proponents of the iPad in the interview sample. However, all stated they had to patrol the class constantly to prevent students being distracted by the iPad and going off-task. As F succinctly stated:

"As soon as there's a bit of time or they've finished an activity, immediately it turns to social media, chatting and being busy with something else" (p. 6).

Her comment resonated through the entire interview sample, all participants noting the device's distractive element, and consequent problems of classroom management. Some, such as participant B, suggested an app to view all students' screens or lock them onto the desired app as others such as C had also mentioned. B also noted that even when on paper-based tasks such as writing, students kept their iPads on, and were often distracted by them (p. 3 – 4). Participant L was also very concerned about distraction, and noted "… because of that machine [the iPad], they miss a lot of what's being said in class, and what's going on" (p. 9). Students' obsession with the device, whether looking at it, sharing social media clips with friends, or charging it, caused in both SJ's (p.21) and CR's opinion (p. 8) , a certain lethargy in some students.

ZW questioned the whole ethos of forcing students to have iPads, contrasting this with the HCT policy of banning mobile phone use in class (even having them visible on the desk is proscribed) because of their distractive nature—he noted the irony of the iPad being potentially even more distracting

(p. 3). His dismissal of the iPad as an effective teaching and learning tool was candid and total: “I don’t think anybody creates anything useful on it … Nobody writes on them … It’s not designed for learning. A laptop is obviously better … in every respect, which is why it costs more. So it’s just a marketed tool, and… Silicon Valley executives don’t allow their children to use them … and Steve Jobs banned his kids from using them” (p.4). He went on to cite the example of his teenage children who did not consider the iPad was the “fun” it was claimed to be; rather they considered it “… rubbish for doing anything at school on. It’s no good” (p. 10).

Like all participants, LK found the iPad’s ability to distract a serious problem, seeing it as something inevitable due to the entertainment at students’ fingertips, as he light-heartedly observed “[Students go off-task] … because they can hook up straight to the Internet and find a million things more interesting than me and my boring lesson about the advantages and disadvantages of … whatever! [laughs]” (p. 3).

But rather than blaming the device exclusively as others had, he apportioned blame to the students themselves and their lack of study skills. As he said:

“They [students] are using it [the iPad] for entertainment. Exclusively for entertainment. And I have almost never seen a student … maybe I have NEVER seen a student … using the technology that is at their fingertips in a way that benefits them academically for more than a couple of minutes before they revert to a game or social media or whatever” (p. 2).

On being asked why this occurred, having spent decades teaching in the UAE he provided a long and detailed analysis of Emirati students’ lack of study skills. He summarised what happens in a typical class as follows (p. 3):

“… one guy does the work, and everyone else copies. And … even if I admonish them … that has no impact on them … It sounds obvious that they’re wasting their time, that they’re not learning—it is to us, it is to our kids. But not to them.”

The distractive nature of the iPad was a negative theme also mentioned many times by participants in the quantitative data. In question 26, it was the highest ranking reason to discontinue the iPad (along with technical problems), and this response was echoed in question 31, where the majority of

respondents cited the device's distractive nature, with several commenting that the device had shifted attention from the goals of teaching and learning.

As one commentator said, for example, the device was not just a negative in terms of distraction, but de-skilling students in their future careers: "Overall, I feel that the iPads have held the students back to a shocking degree. We blindly followed the Apple trend without reflecting on our students and our mission. We are striving to prepare our students for a Bachelor's in a vocational major, yet they can barely format a document, produce or edit a spreadsheet, write a professional email, use standard industry presentation software. We need to look beyond just teaching them English. We need to think bigger."

5.6.2 Teaching issues in material delivery

Interviewee C, as an early adopter of the device and an enthusiastic advocate of its use, nevertheless noticed a number of problems in the classroom early on, such as the top-down way it was adopted, which significantly disrupting teaching (p. 6 - 7) by removing choice from teachers in how they delivered materials. She also highlighted the problem of using new technologies for old paradigms. She specifically mentioned e-textbooks, which are essentially the same as the "old" paradigm of the textbook, but digitised, with the same reading and listening comprehensions, the same multiple choice and gap fill questions—and thus there is nothing really new or innovative about the technology, and therefore it fails to engage students. The publishers, as commercial enterprises, seek to control the content of the e-text and restrict any innovative ways to teach or deconstruct it. Indeed, she describes e-textbooks as "certainly nothing revolutionary" (p. 8).

ZW also expressed disappointment at the e-textbooks, mentioning they were little more than PDF files, with other participants disliking the e-textbook for similar reasons. Participant B highlighted another problem—students not being able to access e-textbooks for two weeks (p. 9) at the start of a semester, which as FDNS moved from a 16-week semester per level to just 8 weeks in 2016, was a significant problem (p. 8). HL also singled out the e-textbooks for being particularly problematic, noting slow turning of pages and students' work not being saved (p. 4 – 5). RS claimed there were several issues with the e-textbooks and "…they [the textbooks] can't do anything". She also said her students had reported visual problems using the e-texts, and two wrote to the

Supervisor to complain about their use (p. 3). Given the extensive dislike of the e-texts documented above, the large-scale migration of faculty to teaching via PDF files/Adobe may be seen as a logical extension of this phenomenon, whilst allowing teachers some degree of autonomy over the material, either through Adobe Acrobat or converting Word files to PDF format.

As noted earlier, significant numbers of those interviewed (e.g. L, F, LK, M) described using PDF files/Adobe Reader as their materials delivery system, or alternatively, BBL. These are dated means of programme delivery, and cannot be considered either innovative or particularly engaging—typically the material is delivered in a series of document files. It is simply, as C noted, an old paradigm seen through the lens of a new technology.

Participant C also considered the iPad as a poor fit to is the institution's view of students and the learning model, which she described as a "…lockstep, Industrial Age attitude … forc[ing] our students to sit in a classroom" for many hours, which she also believed encouraged students to seek distraction through the iPad (p. 24). In addition, many of the activities that can be done on the iPad—video, recordings, and listening exercises—created disruptive backwash in the classroom. She believed iPads would be used better outside the classroom in more student-centred settings, with project work and learning-by-doing approaches to teaching and learning (p. 26 – 27).

5.6.3 Technical issues

As with any emerging technology, technical problems are an inevitability. Good technical support is essential, but in the case of the iPad, IT support at HCT was largely for personal computers (PCs), and as a consequence, many of the IT support teams were, like the teaching faculty, new to the iPad. That faculty found a number of technical problems with the device is unsurprising; though from personal observation, colleagues quickly developed a skillset to deal with many routine issues. Nevertheless, technical issues and failures were an issue that, over the course of the iPad initiative, saw increasing numbers of teachers seeking alternatives to the iPad, whether by limiting its use, using simple software such as Adobe Acrobat, or having a cache of photocopied material as a standby. As participant SJ found, connectivity and other issues with the device were frequent, and she estimated that 30 – 40% of the time, something would "go wrong" , necessitating a Plan B to be in place at all times

(p. 5), a common sentiment endorsed by other teachers, such as L. As SJ put it: “You have to make sure it works before you go to the class, and even that doesn’t guarantee that it would work” (p. 5).

Other participants such as P and L considered connectivity a serious issue (some, such as SJ, p. 7, found this worse in the afternoon), whether due to Wi-Fi or other problems. P went on to mention the many “workarounds” that were necessary for technical problems, as also mentioned by interviewee C earlier. Many other participants made similar comments about connectivity issues (e.g. M, HL, ZW, HL, C, RS), in addition to the problem of screens freezing.

Another issue P mentioned was the time-consuming nature of app use when designing materials. Typically apps require content to be made for them, which he considered a difficult way of creating classroom material (p. 13). As he said of Nearpod “… you could probably set up a decent one [material on Nearpod] in about 40 minutes, but it’s something that they’re going to be through in 11 minutes, so where’s the payback?” (p. 14). SJ similarly noted that creating materials via the apps was extremely time-consuming, yet students would often work through this material very quickly (p. 6). Another time-wasting aspect of the device was downloading apps—like participants, ZW and C, CR also found the time to download/update apps or ensure everyone was on-task could often waste a lot of class time (CR, p. 10). When updating apps, there was another problem which participants C and S (p. 4) were critical of—the need to upgrade and pay for apps that were previously free, causing reluctance on the part of students (and some teachers) to update them.

Participant ZW also singled out another common problem, the difficulty of logging in with the Apple ID and password. Both are set by Apple, are very long (the username is over 20 characters), employ both upper and lower case letters, and also numbers and symbols—and are specific to each iPad. The iPad ID and passwords are immutable at HCT, and cannot be changed or simplified, neither by students nor faculty. ZW noted that by the time some students had typed the right password or username—or requested it from IT support—“…that might have used up half the [class] time” (p. 18). SJ concurred, as did P and L amongst others, mentioning students’ inability to remember usernames/passwords when settings etc. needed to be updated, was a significant disruptor and time-waster of classes. This was exacerbated if they

had to seek help outside the classroom at either CALM or Think Aid, which was often the case, as a forgotten ID or password cannot be retrieved by teachers, only by the aforementioned support departments. The fact (as several participants mentioned) it was not clear exactly what role each support service had (Think Aid was ostensibly hardware, with CALM educational technology), led to some obfuscation in receiving assistance, which some faculty thought was deliberate on the part of the support services, to reduce the latter's workload.

Participants C and BE found some technical programme delivery issues disruptive, such as aspects of BBL and Flash not working on the device. Participant C mentioned the number of "work-arounds" for processes such as online tests that were easily conducted on laptops through Respondus Lockdown Browser *en masse* (p. 7 - 11), but did not work on the iPad at the time of the research. This was endorsed by the quantitative data—as some participants highlighted in responses to question 26 in the questionnaire (section 5.6.6). Though the iPad alternative—Guided Access—could be used for online tests on the iPad, it was a far more difficult, complicated and time-consuming process than Lockdown Browser, and would typically necessitate extra invigilators during tests to set it up/deal with problems to guarantee test security, as it had to be activated on each student iPad, one by one, at the start of a test. She expressed frustration with the time wasted dealing with such problems, rather than actually teaching/invigilating. Workflow—in particular getting large files (such as projects) from teachers to students (and from students to teachers, usually with far more difficulty) —was also highlighted as a major issue and time-waster (p. 11 - 12). In addition, the lack of a USB drive port on the iPad was a problem some teachers such as BE found, as it necessitated large files being transferred via a Cloud or as a compressed file, which from teachers comments over several years, was something students were both unfamiliar with and often lacked the technical know-how.

Overall, several participants' frustration with the iPad was that rather than teaching being foregrounded, with the technology in the background, the technological trouble-shooting was foregrounded, and teaching and learning relegated to the side-lines. As participant C also noted, considerable time also had to be spent training students to use the device, particularly at the start of the semester (p.12). However, as iPads were not required for the Bachelor's

degree courses, and Bachelor's programme teachers were not trained in iPad use or even issued with the devices, this considerable investment of time in training students in iPad use at the FDNS level was essentially wasted. In her own words, she summarised the iPad in the classroom as "an agent for disruption … [and] … that's the kernel of the problem and its design" (p.7).

This foregrounding of technology, and time spent training students in the device's use effectively created new layers of distraction, in addition to the off-task entertainment/social media distractions intrinsic to the device. Several colleagues became alarmed by this, and with the high stakes IELTS examination being paper-based, started to return to the familiar context and permanent functionality of paper-based materials. They felt that the iPad, rather than facilitating the process of teaching and learning, was driving a wedge between the goals of teaching and learning, and increasing the likelihood of failure in the IELTS test.

Due to the reasons stated above, photocopies, though initially used as a back-up plan for technical issues, were observed to become increasingly the first choice of materials for a considerable number of teaching faculty. Indeed, with managerial sanction, Level 4 FDNS teaching materials became a set of photocopied materials designed by one of the team. Early in its academic career at HCT, the iPad was already being side-lined, with faculty resorting to photocopied handouts in class, a "back-to-the-future" scenario reminiscent of teaching practice in the 1970s/80s, "because it worked", in the words of many teachers. According to participant M, similar frustrations had caused Zayed University (one of the three federal universities in the UAE in the iPad initiative) to return to paper-based textbooks (p. 16), using the iPad just for vocabulary work.

5.6.4 Academic writing and reading on the iPad

Many faculty (e.g. M, HL, BE, F, RS, ZW, P) thought certain activities like academic reading and writing were better done on paper. There were also several participants (e.g. BE, HL, M) who thought a small tablet/laptop computer would be better than an iPad, with participant M specifying a MacBook Air with Microsoft Office for Mac.

In the interview, ZW considered the iPad entirely unsuitable for academic writing. P concurred, saying it was not as good a tool as a laptop, and did not

regard it as a serious tool for academic writing (p. 18). HL also considered the iPad unsuitable for academic reading and writing (p. 6, p. 10), and considered paper-based learning to be better, especially given the paper-based IELTS examination which was the final exit point from FDNS.

SJ, despite being a keen iPad proponent, also stressed the need for "traditional" writing—she used the iPad very little for this skill, and acknowledged the importance of writing by hand on paper (p. 25). Like several other participants, she dismissed the iPad as a serious reading and writing tool, saying simply "that doesn't work" (p. 3), and noting that, in her experience, students did not like to read, nor write, on the iPad either (p. 3 - 4), as RS also found (p. 2). Participant L reported from personal observation students rarely read on the device, and appeared reluctant to do so in class. This was a concern to him as reading was one of their weakest skills (p. 12).

S, another keen iPad proponent, had a similar experience to SJ. She criticised the device's failure to engage students when doing serious or academic work such as reading and writing, particularly in the afternoon (p. 6), when she claimed students were more tired. Participant M did not feel the device had made students better learners (p. 8)—in particular, she described how the cognitive acts of reading and writing on screen and on paper were different, and she regarded the iPad as inferior to paper in terms of these two skills (p. 8, p. 9), and that exclusive use of the iPad was detrimental to students' learning (p. 19). As she clearly stated: "If we're talking about teaching them reading skills: paper! There you go!" (p. 9). Participant BE also felt repeated use of the iPad could lead to eye strain when reading long texts (p. 3), and for writing activities could lead to loss of eye-to-hand coordination. She expressed concern that repeated use of the iPad did not allow students to develop the latter skill (p. 7, p. 9).

Several participants such as HL, ZW, C, and BE also remarked on the difficulty of typing on the iPad, and students' slow typing speeds. Participant BE and several others also remarked upon students having difficulty during reading (and listening) comprehensions when multiple windows needed to be open when answering questions, especially when combined with the aforementioned lack of typing skills. As a consequence, BE reported often asking students to write answers to digitised reading and listening comprehension exercises on paper (p. 8), rather than the pop up screens.

Another problem was the device's predictive text function, which meant students' work would automatically be "corrected", punctuated and capitalised, which participant F believed was a serious disadvantage, especially at lower levels, despite her being one of the most passionate iPad users of the respondents. She was adamant that "They need to do it on paper. It's something where you need to have a pen in your hand" (p. 17). Like F, participant B highlighted the devices unsuitability for academic writing due to its spellcheck and predictive text features, which he warned gave students " … a false sense of security" (p. 7).

Two teachers also considered written feedback to be better on paper, rather than the iPad. Participant F, despite her strong pro-iPad stance, was one (p. 17), and participant P concurred. He found giving feedback on paper far easier and quicker to do on paper for students than on the iPad (p. 6). He felt this immediacy of feedback was very important for students, especially the low level students he taught (p. 6 – 8), and believed manually examining student paper copies and giving written and verbal feedback immediately was the fastest and most efficient way, far more efficient than anything online either with an iPad, or indeed a laptop.

Interviewee P also found the iPad experience negative in terms of students' learning. He specifically found the e-texts developed for the iPad poor, though this was not the case for other subjects such as Maths, Science and Engineering, where he acknowledged there were some excellent materials (p. 10). Other reasons he cited included the difficulty of taking notes on the device (p. 3), which is why he had instructed students to bring a paper notebook. Moreover, he said if and when students did take notes on the device, their poor file management skills often meant they subsequently had difficulty in finding them.

He thought part of the problem was that the whole iPad initiative had been rushed into. As he said, "It seemed it was more important for them [HCT] to be able to say all their students had iPads for use in the classroom, than it did for designing a comprehensive, educational programme for them" (p. 10). He was also critical of the institution's managers, describing them as out of touch and unable to use or understand the technology themselves (p. 21 – 22), a comment echoed by others such as ZW (p. 25).

Linked to the rushed-out initiative, he found this caused teachers to be uncertain as to which iPad skills to inculcate in their students, leading to a lack of rigour both in terms of organisation, and as a consequence, in general academic life (p. 16). The constant updating of apps, and the lack of a set package provided with the iPad caused confusion, in contrast to laptops where every student had specific programmes for classroom and academic life pre-loaded before issue (p.17). He pointed out that in the university system in the US when he attended university, freshman courses addressed all these skills needed for academic study (p. 20), whereas currently at HCT there is no college-agreed skillset for students to have to learn on iPads—it is left very much to teachers' own discretion (p. 20).

He suggested there was a need to examine what other institutions worldwide were doing in relation to the iPad and undergraduate courses, especially in the light of the UAE's desire to become a knowledge-based economy (p. 17). His overall take on the initiative was negative, and echoed the notions discussed in Chapter 2.6 regarding the importance of "world firsts":

"…it seemed to be more important that we be able to tell the world that all of our students were using iPads than the learning … Appearances are more important than reality" (p. 25).

5.6.5 Other criticisms of the iPad—neglect of pedagogy and unsuitability

ZW was highly critical of the device in terms of the obsession with iPad PD at the expense of pedagogic PD, the latter which has been largely ignored since the adoption of the device (p.18). He regarded this as a pernicious yet largely invisible aspect of the iPad's adoption (p. 19), and that many of his colleagues had confused improving their iPad skills with developing professionally in terms of pedagogy. Effectively, he felt the iPad initiative had duped many of his colleagues and the institution as a whole, when there were far more important pedagogic goals in his opinion, such as examination writing. He singled out this skill, noting its importance as a gatekeeper throughout the system, yet considered many of the in-house examinations to be poorly written by teachers with limited training—or indeed no training at all. The damage to students of failing high-stakes exams, perhaps ruining their academic career, was something he regarded as "a major thing" (p. 20).

Regarding the device in general, participant P did not consider it powerful enough for a Bachelor's degree, especially for courses like Engineering and IT (p. 18), citing the example of CAD programmes. He was also critical of programmes such as Numbers (an Excel substitute) which again he considered not powerful enough, and Pages, which he considered difficult to use (p. 20). Another criticism he levelled at the device was its memory, which he deemed insufficient.

Participant LK's evaluation of the device was linked to his evaluation of the students' study skills. He considered well-motivated, academically able students who were keen to learn had the potential to benefit greatly from the iPad, giving the example of his own daughters at college. However, he considered his own students at HCT to be different—he found them to be easily distracted by the entertainment offered by the iPad, and disengaged from learning—unless immediately before a test (p. 2). As he noted, he might set the class an activity on the iPad, "and the class immediately gets fragmented. Some do it, and some don't …. In two minutes they are all off-task. A complete waste of time" (p. 2 - 3). As he noted, to prevent this fragmentation, he either keeps the activity very time-focused before reviewing the task with them, or gets behind students so he can see their screens and stop them getting off-task, as other participants such as F and S mentioned. He found a lot of the apps such as Socrative and Nearpod "gimmicky, and wastes [sic] time – which we don't have", so just "boiled it down to Dropbox and Adobe Reader" (p. 5) in terms of the apps he used with his students.

Participant LK felt that some of the issues of the iPad were a microcosm of the larger society, as he spoke at length of the macro-issues of education and UAE society. In his view, most students were not academically ready for such a distracting device such as the iPad. Instead, he considered their level of learning and study skills were more suitable for a teacher-led class, rather than one appropriating technology and student-centred learning (p. 2 – 3). He also focused on students' lack of reading culture, their paucity of ideas and vocabulary (p. 6), their focus on product rather than process in education, and the tendency to "help" each other when educationally inappropriate by copying work. All these factors, he claimed, served as barriers to any approach encouraging self-study or technology dependent approaches (p. 2 – 4). Despite these negatives, he was careful not to blame students for it, claiming it was

simply a generational issue and reflected where many students were at the current point in time in a young and rapidly developing country, and something he believed would change over time (p. 7 – 8).

5.6.6 Quantitative data

The questionnaire had several questions that sought to seek out limitation of the device. Question 26 asked: “What three reasons/things would you cite to discontinue using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?” 39 participants answered this question, with a total of 104 responses. As in question 24, these were coded and grouped in categories, as shown in Table 5 below.

Table 5: Reasons to discontinue using the iPad

CATEGORY	**Number of responses ranked #1**	**Number of responses ranked #2**	**Number of responses ranked #3**	**TOTAL**
A distraction	14	8	6	28
Technical problems	12	5	9	26
Problems reading/writing	4	4	5	13
Laptop is better/vocational	2	6	2	10
Poor learning tool	2	5	2	9
Books/paper are better	2	2	3	7
Poor exam tool	1	2	1	4
Difficult to organise files etc.	1	2	1	4
Other	1	1	2	4

The highest number of responses, 28, were ascribed to seeing the iPad as a distraction: “a huge distraction from learning” was one which typified these

responses. Others saw the gamification of many apps/activities as a diversion from sound pedagogy. Technical problems were the second most-cited reason to discontinue iPads, with 26 responses. The issues reported were broad–from the device not being powerful enough, to e-text issues, and password/Apple ID problems. Not supporting Flash was also reported by 2 respondents.

As with the qualitative data, there were 13 responses that also criticised the iPad for being a poor tool for reading and writing. In particular, difficulty reading long texts was cited by several respondents, as was the difficulty of typing on the devices. Two respondents specifically addressed the problem of eye strain when reading, with one claiming 3 of their students had suffered from this and had to seek help during the semester.

Ten respondents considered laptops to be a superior tool, and some addressed the fact that laptops were iPads are rarely used in a work context, and that use of the iPad deskilled students from what would most likely be the device they would use in further studies (laptops are required in the Bachelor's programmes offered by HCT), or the workplace. Linked to this unsuitability for study/work, 4 respondents also noted it was difficult to organise files/work on the iPad. A further 4 commented on the fact that the iPad is a difficult device to do online exams on—in particular, installing Respondus Lockdown Browser (easily done on laptops) is a complicated and long process. Instead, Guided Access is typically used on the iPad for this purpose, but it is a labour-intensive and slow-to-launch application compared to Lockdown Browser on a laptop. In the "other" category, the most noted response (2) was that sometimes apps had to be paid for, and another noted the need for more support and PD.

The next question (27) asked respondents if they had had any other problems with the iPad. There were 32 responses. Over half of these (19) mentioned technical problems—from the device freezing, to being slow to charge, to mirroring and Apple TV problems, echoing the qualitative data findings. Four again mentioned distraction issues, as in question 26. The other responses were a mixture—one reported no problems, others mentioned issues such as unavailability of vocabulary tests (though the exact issue was not clear), file management issues, the set-up time to get the device ready for teaching and learning, eye strain and two responses were left blank.

Question 31, "Overall, how have you found the iPad experience in terms of teaching and learning?" was in many ways the central query in the

questionnaire, and hoped to crystallise feelings towards the device in either a negative or positive way. Of the responses, 10 were held to be neutral: either explicitly declaring this as their stance, or saying a positive and negative about the device. For example, one participant stated: “Frustrating with Reading, because I believe it has had a detrimental effect. However, with vocabulary and listening it has added another dimension which has added value.” Another said: “Overall, I have found using the iPads in the classroom to be fine. I enjoy using the various apps with my students. However, I find that I spend a lot of time troubleshooting technical problems. Also, the students are easily distracted by social media sites while using iPads.”

In summary, then, the quantitative data supported the qualitative data in identifying similar key problems and limitations of iPad use. These were distraction, technical problems, that laptops and/or books were better, and difficulties reading and writing on the device. In addition, it was noted it was more difficult to do tests on the iPad, and some found the gamification of many of the iPad apps to neglect the real needs of students.

5.7 Evaluation of the device and its future for teaching and learning

At the time of data collection, the iPad initiative was nearing the end of its third year of implementation. Faculty were *au fait* with its use and usage, many of the initial issues had been ironed out, and teachers had become adept at trouble-shooting. Research question 2c therefore asked practitioners to evaluate the device for future stakeholders, and compare it to other materials/devices. These questions are addressed in the following section, and the faculty are grouped into three categories—those who were strongly pro-iPad, those who were strongly against it, and those who favoured keeping the device and using it as part of a blended approach, in conjunction with other materials/devices.

5.7.1 Pro-iPad

Participant F was one of the most passionate supporters of the iPad and was enthusiastic about its future. As she stated: “I really do hope that there’s a future for the iPads. I think also the way forward... I mean flipped classrooms, incorporating Twitter and social media as part of the class and bringing the world into our classrooms” (p. 19). On further questioning, she admitted she had

never used social media or “flipped classrooms” in her teaching, though regarded it as something that would happen (p. 19).

S was another eager proponent of the device, and also hoped it would have a future legacy. Nevertheless, she saw its limitations, and viewed it as unlikely to negate the utility of paper and textbooks. In addition, she saw its obsolescence in a short period of time to be inevitable. B, despite being an advocate of the device, recognised its shortcomings both in its power to distract and his view that the students considered it primarily as a device for entertainment, though as he noted, that was not the fault of the device, but rather its users (p. 13). He also noted that some students preferred textbooks, suggesting they were a learning resource to be retained in the classroom (p. 6, 13 – 14). Both these users, despite identifying themselves as pro-iPad, are firmly in the blended learning camp. Indeed, there was not a single teacher who advocated sole and exclusive use of the device in class.

Several others including SJ, HL and LK had a more nuanced stance—they regarded themselves as pro-iPad for teaching purposes, but not in the case of HCT students, who they argued lacked the maturity, study skills and linguistic competence to be able to use the device appropriately for educational purposes. They have therefore been placed in the “blended-learning” camp in section 5.8, as they used the device in a limited way in their classrooms, because of the teaching and learning context.

5.7.2 iPad-sceptic

There were a number of participants who self-labelled themselves as such, or on questioning, declared themselves to be opposed to the iPad initiative. Their positions and reasons are detailed in this section in response to the educational “revolution” the iPad had promised.

Participant L was clear in his evaluation of the iPad as a “revolution” in education terms, regarding it as little more than a passing fad, and considered that its “star had fallen”, and that people had seen through Apple’s marketing strategies (p. 12). Having worked in schools in Los Angeles where iPads had been rolled out, he spoke at length with some authority and experience on the subject, which merits partial reproduction here:

“I don’t think it’s going to prove to be that revolutionary in any way, it’s [the iPad] convenient for accessing information but I don’t see any profound development

coming forward … I'm from LA, and I used to work for the LA Unified School District … [and they] … rolled out iPads a few years ago at great expense and now they've cancelled it, and now I think the same thing is happening all over … major urban school districts [that] have tried this and it hasn't worked out, and it's hard to escape the fact that it was kind of a marketing push and … certain people got influenced … fell in love with it and thought it would be great, and I think now they've realised it's really not … and there's technical glitches that can pop up, it's expensive and it really doesn't result in any pay-off in terms of … providing a better education" (p.12) .

He did not feel the iPad had changed the way he taught, and saw no evidence students were learning any better using the device (p. 4), and thought given the expense, the initiative was not worth it. He regarded any approach regarding a single device as an educational panacea to be a failure, citing his experience of the US school system (p. 11 – 12). However, despite his opposition to the iPad, he conceded it could provide interest and variety in the classroom, that it could be a "great supplement" to learning (p. 12), and potentially useful to students in their free time.

Participant M, though a keen technophile, dismissed the iPad, considered its adoption unsuccessful, and summarised the whole initiative by saying "I don't know that it's served us really well … and where was the support [after the initiative's launch] from Apple?" (p. 21), before adding "… if I were a student, I wouldn't want an iPad" (p. 22). One of the major flaws she identified in particular was the whole initiative and roll-out of the iPad was enacted "in the absence of pedagogy" (p. 24), that "nothing was looked at" and it "wasn't a good idea", and that Apple and some of the developers had "… no clue about education" (p. 25).

She regarded herself as tech-savvy (p. 5), and had previously worked in curriculum design, specifically designing online games and activities (p. 23), and as she recalled her company motto was "If we don't do it better online, we don't do it." She described herself as "all for technology, but not for technology's sake" (p. 25), and felt the latter applied to the use of the iPad at HCT. As she explained, in the Bachelor's programme, students could bring their own device, and she felt the same should apply to FDNS (p. 21 – 22). As she said: "I think we need to end this Apple dependency and move towards … other devices as well" (p. 20).

She stated that if she were a student, she would prefer a laptop to an iPad, and cited her own preferred device that “works brilliantly” (p. 22), a MacBook Air with Microsoft Office for Mac, and that a laptop could do as much if not more than the iPad (p. 23 - 24), despite the large number of apps. She also complained that the Pages app on the iPad had a number of bugs (p. 21 - 22), and felt the screen and keyboard were too small to write effectively with the iPad. Regarding reading, she felt that paper was the best medium, and indeed said students often felt the same, saying: “I can’t tell you the number of times I hear students say ‘Miss, paper better’“ (p. 24). She also considered paper a useful medium as electronic devices could encourage students to go off-task, students she described as “already running on a short attention span” (p. 9), and hence she described her classroom environment as “operating half in … paper, half iPad” (p. 10), to mitigate the latter.

Despite her love of technology, frustration with the device and technical issues caused her to “run [paper] copies of everything” because the iPad was “not working” (p. 24), and she had arrived at what she termed a “hybrid approach” using a mixture of both iPad and paper. After the interview, she mentioned paper was initially used for back-up purposes, though increasingly it took primacy, as both she and the students found it easier to get straight on-task without any technical issues on the iPad, and avoid off-task issues caused by the distractive nature of the device. She wished for more of a blended approach to learning, with printed paper copies of materials coming from publishers who are supplying e-textbooks: “I’d like to see the hybrid, I’d like to see more paper materials coming back … [and] … being made available to us. You know, we’d be paying a lot of money for the access to these books, it would be nice to have print …” (p. 20).

Interviewee ZW was, by his own admission, an intense iPad sceptic, and spoke eloquently and at length on its shortcomings. Foremost, he considered the iPad to be inferior to “real” teaching and human interaction. As he said: “A lot of things [on the iPad] seem to be ‘tricksy’ ways of doing surveys in class and things, which … are not as good as looking at people, and getting to see their reaction as a teacher.”

He viewed the iPad initiative in the UAE as little more than a sales campaign by Apple to sell a product for education—a product which, in his opinion, was not fit for purpose, contrasting the device with products such as

educational books or whiteboards whose primary purpose is education (p. 5). One particular failing of the device he noted was its small screen size and the consequent difficulty to write, which he regarded as a vital part of language learning. He also considered reading on a screen to be inferior to paper, even if there are technological facilities to highlight text etc. (p. 7).

In the UAE learning context, he felt effective teaching often needed to be teacher-led, and especially in the FDNS programmes where a lot of material had to be covered quickly to bring students up to the level of an IELTS band 5, often in courses of just several weeks. Student-led learning in such situations he considered to be highly inefficient. He considered such high-pressure intensive courses as comparable to football training—where, as he illustrated:

"… they don't say: 'Just wander off and do your own thing with your own programme!' They'll be doing stuff in a very tight [way], and if they can afford it, one-to-one training" (p. 9).

He further exemplified his recommendation of teacher-led classrooms by noting the rigid teacher-led approach in his music teaching and in his daughter's ballet classes, recounting the synchronicity amongst the class in the latter case.

He also mentioned the high student approvals for his approach (at HCT, students evaluate teacher performance once a semester), despite teaching grammar and writing, which were generally not popular courses amongst students. He described his approach as lockstep with a lot of interaction, with the aim of mastery of a concept or sub-skill before moving on. He claimed students were motivated by this approach and enjoyed it, and were not motivated by "technology" *per se*.

The iPad, he claimed, not only distracted students, but fooled people, in providing a virtual, two-dimensional world that, despite its attractive graphics, was inferior to the real world (p. 11). Students, and people in general he claimed, missed out on the skill-superiority and importance of the "real world" when engaged instead with the "gamification of skills", etc., that are very much a part of the online/digital environment. In particular, he condemned the two-dimensional online presentations of grammar and skills, as he believed there was no personalisation or concept checking, or any of the "real" skills of teaching.

The physical aspect of teaching: relating to students' lives, interacting with them, eliciting, exemplifying and concept-checking, he regarded as far

superior to anything that could be produced by a device (p. 13 – 14). He also criticised the institution for its obsession with technology over pedagogy, and the lack of addressing urgent “problem” areas such as examination writing. He also described the institution’s short-lived approach as problematic, with courses and materials constantly changing tack with changes in management, and this—coupled with the inherent short life of technology—led to a situation where in his opinion the institution itself had “no legacy” (p. 22), not just the iPad initiative.

Dealing with the particular feature of iPad apps, he disliked the fact that they were pre-designed and couldn’t be “tweaked”, whereas a programme like PowerPoint could be modified. Perhaps most importantly, with the many technical problems of the device, he noted it was very easy to lose learners, especially given the academic profile of HCT students, and especially setting up something online at the start of the class. When this happens, as he stated:

“You’ve lost the audience, and that’s where technology intrudes most … I would never, ever, give a presentation based on people trying to get onto their computer first, because it’s not going to work” (p. 25).

Summing up the iPad initiative, he claimed: “Any teacher who was excited about it has ceased to be excited … I think the most excited people are still the managers, who don’t have to use it!” (p. 25).

Asked for his opinion on the future of the iPad, his reply was succinct and candid:

“There won’t be an iPad in 5 years. There can’t be. That’s not the way technology works. So there’s no future for the iPad … It wouldn’t surprise me if next year iPads are gone and Apple are out of business, and we say ‘Do you remember that?’ Like with Kodak. Kodak’s gone, and it seems unbelievable. You would never have believed it” (p. 20 - 21).

DS found that students’ enthusiasm for the iPad had worn off, both for apps such as Spelling City (p. 5), and any activity involving reading or writing—they preferred to do it on paper (p. 3). As his class was a group of students that was in full-time employment, and studied in the evenings, it was possible this was a more results-focused group than regular day-time students. The general consensus amongst faculty was evening (PM) groups took their studies more seriously than day (AM) students.

RS's evaluation of the device was that it was "…exactly like a phone. It's not a learning tool" (p. 6). At best, she considered it as just an occasional complement to more traditional teaching, using textbooks, paper and laptops (p. 3). She was clear that she did not see a pedagogy solely based on iPads as viable or in the best interests of teaching and learning (p. 3), and suggested its adoption was more to do with politics and marketing than to do with pedagogy (p. 6). She dismissed it several times through the interview as a serious tool for academic work, particularly for writing and reading, citing laptops were better (p. 6 – 7).

She also made the point that the HCT, ostensibly a vocational college, was adopting a device that was not used in the workplace, and additionally was effectively made redundant when students moved onto the Bachelor's programme, where laptops were the requirement (p. 7). Overall, she felt the iPad initiative was a failure, and that nobody was telling management or senior stakeholders "that this is not working" (p. 7). As she summed up:

"You see, you can't break a book. If it falls down, it doesn't break. You don't have to replace it. You don't have to go and buy a new screen… I mean the iPad is … a waste of money … It's nothing to do with learning" (p. 9).

5.7.3 Quantitative data—future of the iPad

Like the qualitative data, the questionnaire data had a range of responses from those who were enthusiastic about the iPad, to dismissals of it as a suitable pedagogic device. Question 28 asked: "If you had any recommendations for the future, what would they be?" There were 34 responses. 12 of them explicitly recommended getting rid of iPads. A typical comment was: "Ditch Apple, go back to laptops." Another 12 respondents suggested more of a blended approach in iPad use, integrating the device into the curriculum alongside other course materials. As one respondent commented: "There is a time and place for iPad use in the classroom. iPads should not be used to replace other language tools but to supplement the learning process. I strongly recommend that students have hard copies of their textbooks." 4 respondents spoke specifically in favour of textbooks over iPads.

Question 29 garnered 40 responses, asking what advice respondents would give to teachers about to use iPads. The most frequently occurring suggestion, mentioned by 12 participants, was to pre-train on the device before

teaching, either through PD sessions, Ed Tech support, colleagues or DIY sessions. The second-most frequent piece of advice proffered, mentioned by 11 participants, was to recognise the limitations of the device. These respondents noted that for certain skills—particularly reading and writing—paper-based material was better than the iPad. A further 4 respondents also advised teachers embarking on an iPad-based course to limit the number of apps they used. The other 13 responses were largely idiosyncratic or humorous, ranging from urging teachers to stay calm, not to rely on iPads too much, wishes of good luck, and acceptance of the device's likely inherent built-in planned obsolescence, as one respondent remarked: "Don't worry. Another machine will replace this one in the next couple of years."

The next question (30) asked: "What advice would you give to educational managers regarding iPads?" 38 respondents answered this question. The most frequent item recurring in 12 respondents' answers was that the device should be seen by educational managers as just (another) tool in the classroom, and not, as one participant called it, "a magic wand." Eight respondents' advice to management was cautionary: to be wary of technology for the sake of it, to be aware that students may see the iPad as an entertainment device, and that the device was not suitable for all skills.

More than one commentator did not consider iPads suitable for higher education. Seven respondents advised management to focus on training for iPads, either via training sessions, or peer tutoring/mentoring. Better technical support was mentioned by several of these commentators, as was the need for student orientation on the device. The remaining 11 comments referred to diverging issues. Two suggested listening to teachers' feedback, and there were various other individual suggestions: promoting the iPad in class, bring your own device, looking for alternatives, etc..

Question 33 asked faculty if they thought the iPad had been an "EFL Revolution", as it had been touted by Apple in June 2012 at the initiative's launch. There were 5 response options, with the responses summarised below (n=44):

1) Yes, it has revolutionised learning (8 participants/ 18.18%).
2) No, it hasn't revolutionised learning (25 participants/ 56.82%).
3) It has improved learning (0 participants/ 0%).
4) Learning has stayed much the same (0 participants/ 0%).

5) Other (11 participants/ 25%).

44 out of 45 participants answered this question. Items 3 and 4 which were rather non-committal/ hedging options did not receive a single response, so there was a clear polarity in reaction to the question. 25% of the respondents (11 participants) chose “Other.” In total, 20 participants wrote further comments. The responses echoed many of those to questions 22, 23, 26 and 30. Eleven of the responses were considered neutral, with 7 of them referring to the iPad as just another classroom tool. The other responses were characterised by one respondent who called it a “bit of a mix”, with some features that were useful (apps and materials access) countered by some that were not (distraction, students not using it as an educational tool).

There were 4 responses commenting on the device positively, albeit guardedly. One commented on it being easier to organise students’ material via Dropbox and Adobe Reader (though the same could be done on a laptop), another said it had “probably had an impact on teaching”, a third “to some extent” and a fourth “yes… for places that have good Wi-Fi!” Four participants commented negatively, two citing technical issues and poor training. One considered the device “a barrier to progression, a blind alley” whilst the fourth considered the opportunity the iPad offered had been squandered. As he said: “On the SAMR model, we are back to the beginning: Substitution (for a textbook).”

Overall, then, it was clear that the majority of teachers surveyed did not feel the iPad had been a revolution in teaching and learning. Though some participants were hostile to it, the dominant feeling appeared to be more circumspect—it was another tool, potentially useful for certain activities, but not one to be used to the exclusion of other means of curriculum delivery, such as textbooks and laptops.

5.8 Blended learning supporters

Though the earlier question of the future of iPads prompted a polarity amongst participants, the second part of RQ2c, which asked participants to compare iPads to laptops and books, produced a more nuanced response. Many of the respondents were receptive to the idea of a blended approach utilising the iPad in conjunction with laptops and books.

Interviewee C considered laptops and iPads as complementary, with laptops better for working with text and iPads superior for video and recording work (p. 5). As she says “with the iPad it’s fantastic … you can take your picture, you can do a video and you can do an audio recording (p. 5). Regarding the future, C had no doubt the iPad would be replaced by something else, and that already post-Foundations undergraduates were bringing their own devices (BYOD), an eclectic mix of laptops, iPads, Macbooks, tablets and smartphones. However, like participant ZW mentioned in 6.6.2, she still believed face-to-face teaching was the most effective approach, despite the increase in technology (p. 26).

Like F, S was enthusiastic about the device, saying students enjoyed its novelty status (p. 14), and reasoning that as digital natives, they knew how to use the device. Nevertheless, she still viewed a blended approach, utilising both iPads and books/paper as the most probable way forward (p. 16 - 18), and suggested that smart phones may also be part of such a blended approach (though mobile telephone use is currently banned in the classroom as part of HCT policy). Despite holding the iPad in high esteem, she found it inevitable that the device would be replaced in a few years by another emerging technology (p. 20).

Participant B was generally positive about the device, and hoped it would continue to be used in the future, and considered that although the iPad was often not used as a learning tool, this was not the fault of the device itself (p. 12 – 13). However, at the same time, he believed a blended approach utilising textbooks to be beneficial, and commented in the fact that noticeable numbers of his students preferred a traditional textbook over the iPad, and noted that even when online reading on M Reader was prescribed, about 30% of his students preferred to go over to the library and read the actual book itself (p. 6).

Interviewee CR declared herself to be “neutral” regarding the iPad and “not really interested” in the device (p. 11), but when asked if she would prefer it to be switched for a textbook, said on balance she would prefer to keep the iPad, largely due to the ease of storage of all her materials on Edmodo (p. 11). Additionally, as a Level 4 teacher, the objective of the course was very clear—for students to get the target band in IELTS. It was, as she said, a “concrete” objective, more so than Levels 1 – 3 (p. 11). She later clarified her position (p. 15), declaring: “I’d rather have a book and an iPad: I’d rather have a paper book

they [students] could work through, that would be my ideal, and an iPad where I can put my materials". She did not like—or use—the e-textbooks available, saying:

"I really don't like the e-texts and you don't get that feeling of progression that you've got something that you can see where you're going with it, because you can only see one page, one screen page at a time" (p. 16).

In evaluating the future of the device, SJ felt it offered more games and apps than the laptop (p. 8), and was more "dynamic" (p. 9), offering a new approach (p. 11), and allowed students to study outside the classroom (p. 9), presumably due to its portability. Regarding the e-textbooks, she mentioned she would like to have paper-based textbooks in addition, as the e-textbooks were "clunky" in terms of flicking backwards and forwards (p. 14), as other participants such as CR had mentioned. She also mentioned trying to make students more independent, setting up accounts on Quizlet themselves to test their vocabulary, rather than what she viewed as a very teacher-lead classroom, with students relying on the teacher for much of the input (p. 16 – 17). Another observation she made was that she saw the iPad as causing less interaction amongst students, and a reluctance to engage in more "traditional" activities, or even moving around the classroom (p. 21).

LK described himself as "Pro iPad", yet qualified this by describing a blended approach:

"If it's used in the proper way … it can enhance my effectiveness in the class, but I have to be the driver, and … I still want my whiteboard, and there are times for pen and paper, but give me the iPad, it's just another tool to use and up to me to use effectively" (p. 7)." He still found some things were better done on paper, and ultimately it was up to the teacher "…to make it useful for the students. The iPad is just a tool, and as long as it is used correctly and the teacher knows how to make use of it, that's fine" (p. 6).

He saw the device as a useful addition to his teaching armoury, but one that would be used in conjunction with other resources in a blended approach. He felt traditional teaching backed up by technology-based classes in a carefully maintained computer laboratory would be the best solution, but acknowledged this would not appear as educationally "sexy" as all students having their own iPads (p. 5).

Regarding the iPad's future, however, he was sceptical, feeling it "will only be around till the next piece of 'bling' comes along" (p. 6), reflecting the eagerness to adopt new technologies in the UAE, irrespective of their worth and/or evaluating them properly. As he went on to say:

"By the time we get the hang of it, they'll be out of the door and we'll be onto something else. I hope not, I hope we can build on what we have, to deepen it, but in this culture it's never like that, when they get bored they're onto the next thing. Nothing ever has the chance to grow in any meaningful way." (p. 6).

Overall, he was dismissive of the whole iPad initiative, as he said frankly (p. 3):

"If you think using the iPad has made students more process-orientated, more interested in the journey rather than the destination, then I would say absolutely no, it hasn't. If anything, it's more of a distraction."

HL described himself as "pro-iPad" (p. 13), yet his own approach was blended, and he rarely used the device. He saw the iPad as having a future in education, but admitted he only used the device for around 10% of his teaching, largely for gaming activities—in his own words, "pepping up the class" (p. 13) when they were sluggish. He described it as a "supplement to teaching" (p. 10) and maintained that many universities and colleges used the iPad and other educational technology more to promote themselves, than for the benefit of students, faculty, or, indeed, teaching and learning (p. 10). He claimed students preferred reading textbooks/on paper (p. 10), and also said the e-textbooks were difficult to read/use (p. 4), and not up to the standard of other e-texts available (p. 4). He found the iPad could be engaging, as he used it largely for games in class via various apps, and he liked the device's portability, but nevertheless considered a small laptop to be a better learning tool (p. 6), especially as it was much easier to type on.

In general, his approach was paper and textbook based, partly because of the paper-based nature of the IELTS Test which his students took at the end of the course (p. 12), partly because he found the students preferred paper/textbooks (p. 10) and partly, as he stated, there was little to worry about with paper/textbook: he knew it was going to work, whereas the iPad he expected to "crash" (p. 6). He felt the iPad was not the most useful tool, and considered its adoption to be largely for promotional reasons from the

institution, part of an on-going discourse of being modern and technological (p.10).

BE agreed, and found the amount of money invested in the iPad initiative (p. 10) bewildering given the lack of piloting " …to see how they actually work in the classroom" (p. 8). Like HL, she thought a laptop was a better educational tool in the classroom, and surmised that the HCT FDNS programme may move back to laptops (p. 8)—indeed she mentioned that some colleges already had, and said it appeared a logical move as students worked on laptops in their Bachelor's programmes, not iPads (p. 9). When asked if she would be happy to use only the iPad in class, her response was clear: "No, no way. No, I don't think it works for the learning styles of the students either. They need to have an eclectic mix of learning tools available to them." (p. 10).

BE described herself as "in the middle" whether pro or anti iPad, and saw it simply as an alternative tool to use as part of a blended approach. She was strongly opposed to sole use of the iPad in the classroom, but did not entirely dismiss the device, saying it had its uses as a supplemental resource as a part of a blended learning approach (p. 9), as HL and others had also said. Should the iPad remain, she mentioned it was important to keep up with the many apps and their educational uses—something she found difficult to do with her limited time to prepare students for the IELTS examination (p. 6 – 7).

Like HL and BE, RS also commented on the financial aspect of the iPad, and believed its adoption was more to do with a successful sales and marketing campaign, rather than its educational value (p. 6). She had conducted her own survey into student iPad use, and concluded that students did not like the iPad for learning, and cited evidence that students performed some tasks better on paper, such as the vocabulary tests (p. 3). She felt that students became isolated if they used the iPad too much, and that it should only be used once or twice a week, with the bulk of teaching time being via textbooks or laptops (p. 6), or even on their smartphone (p. 8). As mentioned earlier, she felt the iPad was a failed initiative, but no-one seemed to want to admit this, or inform senior management (p. 7 - 8).

Overall, though, the majority consensus was there was not a great future for the iPad. As participant ZW had noted, that is not the way technology works. What was perceived as a benefit by some teachers in section 5.5.3—the

device's novelty value—also marks the iPad out for its own demise. Novelty is an essentially ephemeral quality.

5.8.1 Questionnaire data: Blended learning, the iPad and laptops compared

Question 22 and 23 asked faculty to compare iPads to laptops and textbooks in terms of teaching and learning. Like the qualitative data on blended learning, laptops and books seemed preferred, though almost half the participants thought iPads were equally effective. The results are summarised below:

Table 6. Most effective teaching tool: iPad, laptop or textbook (n = 42).

Question #	**Most effective**		
	iPad	**Laptop**	**Equally effective**
22. How does the iPad compare to laptops …?	5	15	22
	Most effective		
	iPad	**Textbook**	**Equally effective**
23. How does the iPad compare to textbooks…?	4	18	19

As can be seen, only 5 (11.90%) out of the 42 respondents though iPads were more effective than laptops for teaching and learning. However, just over half the respondents (22 responses, or 52.38% of the sample) found iPads to be just as good as laptops, though more than a third—15 respondents or 35.71% of the sample—considered laptops to be more effective. The comments section to this question attracted 27 responses, and, mirroring the responses in the graphs, were largely supportive of both devices—for example, one participant remarked "I like them both. Use them both for different purposes."

However, the iPad did receive more negative responses than the laptop and these were typically for problems of writing on the iPad—indeed, over half those commenting (14 out of 27) mentioned this. Other negatives remarked on were the small screen size and ease of accessibility to social media and distraction.

5.8.2 Questionnaire data: Blended learning, the iPad and textbooks compared

Like Question 22, Question 23 asked participants to directly compare the iPad with another teaching medium, the traditional textbook, in terms of teaching and learning. The iPad fared worse than the comparison with laptops in terms of its ranking, with only 4 of the respondents (9.76%) considering it better than a textbook. 43.90% ranked iPads and textbooks equally in terms of teaching and learning, again suggesting the utility of a blended learning approach. However, significantly, almost half the participants (46.34%) reported textbooks to be more effective than iPads. 27 participants commented on this question, and the comments reflected the multiple choice answers.

Textbooks did not garner a single negative comment directed towards them, but 11 positive comments embedded in the negative posts about iPads. As one participant stated who praised books in comparison to iPads: “It's a no-brainer. iPads are an amusement park. It's impossible for students to resist.”

5.9 Students’ use and opinions of the iPad

Students’ opinions of the device were not sought directly in the data-gathering process for reasons described earlier. However, via the lens of faculty observation, a picture was built up of how students were employing the devices, via Research question 2d. The question was whether they regarded the device as a valuable pedagogic tool, a personal entertainment centre, or both. The data that faculty presented on students’ views is summarised in the following section, after analysing faculty perception of how tech-savvy students were with digital skills.

5.9.1 Digital natives revisited

As mentioned in Chapter 3.10.1, it is widely assumed that young people, such as HCT students, are digital natives, due to their heavy use of devices and smartphones. However, a number of participants challenged that. All interviewees mentioned the students’ obsession with games and social media etc., but when it came to real digital skills, several teaching faculty, such as C, M and LK, considered students lacked the digital literacy to unlock the learning-potential of the iPad. C specifically mentioned their lack of comprehension of important skills like file management and data clouds. F and P concurred with C

about file management and other basic skills. CR also voiced similar scepticism that the students were actually true digital natives, despite their youth (p. 16).

As participant M said, it was "… a great misconception that somehow because they're young, they're tech savvy" (p. 14) as she describes many of them having the same problems and displaying "helplessness" regarding simple fixes like re-booting devices throughout the semester, as SJ also found (p. 15). However, M also surmised such helplessness may have not been entirely due to lack of digital skills, but possibly demotivation, laziness, or a lack of critical thinking or interest (p. 14 - 15), but nevertheless, believed the "digital native" assumption was flawed.

5.9.2 The iPad as entertainment

Though most participants gave rather nuanced impressions of how the iPad was viewed by students, some participants, such as LK, believed students saw the device as little more than a source of entertainment. Participant B concurred with LK in this respect, and though an advocate of the device (p. 13 - 14), gave a very candid account of how he considered students viewed the device, differentiating between the perceptions of educators and the students themselves. As he explained, despite the device's educational potential, he believed students viewed the iPad as principally for entertainment:

"The big problem with an iPad … is that … adults and people … who implement these things, think of iPads as a way to learn, but … younger people think of an iPad as entertainment, and so they don't see that initially as a way to study. The iPad is there for their entertainment, for their communication, taking photographs, whereas a textbook is very obviously, this is something to do with study. So … there's … maybe a greater range of content available quickly with an iPad, but the idea that the students think that this is some great learning tool is, I don't think, there at the moment" (p. 3).

He also observed that some of his students preferred to read books rather than read on the device. However, such students, who preferred to study with textbooks were not granted that possibility. As B observed, students were "…not being given the opportunity to actually hold that textbook [in class]" (p. 12). He notes that there was, however, a grammar textbook issued in his Level at one point, and he observed that students " …like going through the exercises

… they like writing something and they feel like they've got a record, and they can go back to it" (p. 13).

5.9.3 The iPad as a learning tool

SJ was one of the teachers who defined her students as digital natives, saying they were used to the diversity of possibilities that the iPad afforded, and thus could go off at tangents and explore themes, and independently further their learning (p. 19). She balanced this with the *caveat* she mentioned throughout her interview though that some would see this as an excuse to go off on non-academic tangents. She concurred that the majority would use the device as a distraction, but nevertheless affirmed she had a few ambitious and motivated students who would use the device academically, often at home, and so saw the academic potential in the device.

There were a few other positive responses in the device's favour. BE mentioned that despite all the frustrations with the device on the part of both faculty and students, some students quite liked it (p. 3, 4, 8) " …as an alternative to just the standard lesson" (p. 3), much as DS and HL found. Participant ZW found the iPad useful as an online dictionary, but of little other educational value at all.

5.9.4 Students' preferences—paper-based texts, or iPad?

Some teachers said their students preferred paper-based resources for learning to the iPad. DS, for example, believed his students saw the iPad initially as a novelty, but that had soon worn off amongst the more mature, working students he taught in the evening, and he found that especially for reading or writing, paper was the students' preferred medium (p. 2 – 4). M, despite being keen on technology, felt the iPad was "… using technology simply for the sake of it" and she mentioned students had also expressed a preference for paper over the iPad (p. 24).

HL reported similar findings—students liked gaming activities on the iPad, but for more academic activities "… students prefer reading … with normal paper rather than the iPad" (p. 4), which he reiterated later in the interview (p. 10). Though participant L described his students as liking the device and feeling comfortable with it (p. 8), from the rest of his response this did not translate into any academic benefit on the part of students.

RS dismissed the iPad as a tool for teaching and learning (p. 2), saying students only liked it for playing games. For serious reading and writing, as she reiterated a number of times in the interview (p. 2, 8), they preferred paper. She also noted the difficulty they found writing on the device (p. 6 – 7), and had conducted surveys with her students revealing they did not like the iPad for teaching and learning (p. 2). As she explained: "I have done this survey with my students and I do believe that they don't like using iPads for learning. They like using iPads for games and checking emails and really, a little bit like the phone. They like using it in that manner, but not for learning and for teaching, and they would rather I used a lot of paper, pen and things like that" (p. 2). In contrast, she remarked that the students

"… like textbooks. They feel the textbook is theirs and they can scribble on it. They like it. They feel good." (p. 2).

She went on to state the fact that students did not bring their chargers for the iPad showed that they disliked the device, noting that students did not, paradoxically, forget to bring chargers for their phones (p. 8). She did mention one positive regarding students' opinions of the device, and that was its portability (p. 8). Overall, though, it was clear to RS that "they [students] don't like the iPad" (p. 8).

In brief, as this section hopes to have shown, despite the academic potential of the iPad, most teachers were of the opinion that students saw the device as primarily for entertainment, not study. There were occasional exceptions, but these took the form of the iPad being used as an infrequent alternative to the standard lesson, as exemplified by the responses above. Overall, however, the "iPad for entertainment" position emerged as the teachers' perception of how students' viewed the device.

5.9.5 Questionnaire data: Students' evaluation of the iPad

Question 34 asked participants to evaluate how students saw the iPad. All 46 participants answered this question. There were 3 response options, and these (with response rates) are summarised:

1. As a useful educational resource (8 participants/ 17.8%)
2. As a device primarily for entertainment / personal use (23 participants/ 51.1%)

3. Other (please specify) and any additional comments (23 participants/ 51.1%).

Faculty's consideration was that students' general perception of the iPad is for entertainment, rather than education, reinforcing the qualitative data. Though the clear distinction between educational use / entertainment and personal use is evident, the "other" section consists of those who felt they needed a response different to the options of items 1 and 2, in addition to some of those who had answered either as 1 and 2 and wished to add further comments. Analysing the comments section, there were a variety of responses, from negative to positive, though most—17 out of the 23 responses—regarded the iPad as "a bit of both" i.e. both used for educational and entertainment purposes, with 5 participants using exactly those words. Four participants considered students viewed the iPad as a device primarily for entertainment, unless they were guided via faculty to its educational uses. As one participant highlighted: "It is only useful when the teacher manages the resources carefully. In my experience, the students don't voluntarily use it for educational purposes. It is a huge distractor, and has led to many classroom management issues."

There was one commentator who dismissed the question, stating that the iPad had already become "old news", and students no longer liked them for either entertainment or education, but considered the device "…as a nuisance that they cannot use in the program area [i.e. Bachelor's programme they enter after FDNS]. We should return to laptops. Students are not interested in the iPad anymore. It has lost its allure. Their phones are more important to them."

5.10: Professional development, training, IT support and the role of management.

5.10.1 Introduction

In both the qualitative and quantitative data, participants highlighted PD, training, and IT and managerial support as themes of importance. Though questions on these were included in the questionnaire, being derived from the germane literature, participants also drew attention to these themes in the interviews, despite the fact no specific question was asked on these subjects in the semi-structured interviews. It was noteworthy that interviewees found these

issues important to the success of the iPad initiative. Due to the exploratory nature of the research it was not initially understood how important these themes would be; essentially, these themes could be grouped as institutional support for the iPad initiative. Practitioners were busy in the classroom bringing the iPad initiative to life in terms of teaching and learning; this section will look at the support available to faculty, and faculty perception of said support.

5.10.2 Institutional support: PD and IT

The Colleges have two in-house departments to assist with technical support: an Information Technology (IT) support department also called “Think Aid” to assist with general trouble-shooting of laptops and iPads, and an Educational Technology department (Ed. Tech.), also known as the Centre for Applied Learning and Multimedia (CALM) department, which assists with software in particular and in organising PD sessions for faculty and staff. Some faculty also offer PD sessions. The IT department originally consisted of 12 staff at the Women’s Campus and the Educational Technology department had 6, plus an Apple representative specifically to deal with iPad related issues. However, these departments have been considerably down-sized since the time this thesis was started, currently employing only 6 staff in total at DWC, with the corresponding departments at DMC similarly reduced.

At the start of the iPad initiative (2012) PD was extensive, with regular weekly sessions and several all-HCT PD events organised throughout the academic year. Over time the number of sessions dwindled (along with the number of staff in their respective departments), and there are few PD sessions offered at the time of writing.

For anyone familiar with operating a laptop either via Windows or Apple systems—but not the iPad—it might be thought the latter is similar. In fact, operating the device is markedly different—even turning the device on and off might baffle so-called “digital natives” initially. The touch screen commands may also take some time to be mastered by adopters of the device. Other functions—printing, mirroring and setting up Guided Access for examinations and tests require training and practice for effective use. This section addresses the need for training and professional development for both teachers and students, whilst also examining the need for IT and managerial support—and whether that support was sufficient to allow the smooth running of the device as

a teaching and content delivery tool. In the following section, interviewees gave their opinions on the HCT's offering of training and professional development, and IT support.

5.10.3 The need for general institutional guidelines

Before analysing respondents' specific opinions of training and support for the device, it is perhaps appropriate to consider some points respondents made about this subject in general. A number of interviewees, such as C, F and SJ, made general institutional recommendations about the device. They thought device usage guidelines needed to be clarified—for example, what it could and could not be used for, what apps were required, and a policy of bringing the device fully charged to class (SJ, p. 12).

Participant C felt the lack of training and policy in use of the device meant that teachers used an *ad hoc* approach to its implementation and student induction. This she considered haphazard and problematic, as some teachers used the device rarely or not at all, disadvantaging their students in other classes and in subsequent semesters. She considered designing a course to address these problems, possibly in a group project (p. 15), as a possible solution.

SJ also believed some kind of induction course for training in essential apps such as the lockdown browser (Guided Access) for tests would be highly beneficial for students (p. 17), something other participants, such as C and F, had also mentioned. Both SJ, C and F were conscious of the fact that, on entering the Bachelor's programme, the focus was on laptops, not iPads, and she identified a training need for students to ensure students had the required IT skills for this next phase of their academic career (p. 22, 23).

5.10.4 Training and PD for teachers

Though extensive PD was provided by CALM, and to a lesser extent Think Aid (IT Support) staff, many teachers, including CR, believed the best training came from fellow faculty (p. 12 – 13), finding PD sessions given by colleagues particularly valuable in keeping up to date with the device, as opposed to PD offerings from IT Support/CALM, which participant L described as "useless" (p. 5). This sentiment was echoed by SJ, who considered the PD offered at the College very poor, largely as it was offered by IT specialists not

teaching faculty, and stated it was lacking in relevance and innovation, as it was led by “techies [sic] who know nothing about education” (p. 28).

Apart from the poor level of training and PD outlined, some participants such as ZW (p.18) considered iPad PD posed a danger as it had eclipsed pedagogic PD at the FDNS Level (p.18). Others such as P concurred, regarding this as detrimental to teaching and learning, saying the whole iPad initiative had been “… handled badly from the very beginning” (p. 10).

5.10.5 Training for students

Interviewee C mentioned the need to train students to use the iPad every semester (p.13), and did not feel departmental-level training was sufficient nor comprehensive for students; neither was there a clear policy on appropriate use of technology, which she felt the system was lacking. To meet these needs, she suggested a specific induction course should be developed for students. Participant P agreed, and found the need to train students every semester in specific skills, such as emailing conventions and the use of the Calendar (p. 15), as well as fundamental IT skills such as file-naming and the use of folders.

F mentioned there had been some training of her Level 1 students (the lowest level) as part of a project, but not all of it had been relevant to her students’ needs. She conceded there were still major gaps in her students’ knowledge of the device in important academic areas such as file management, use of the Calendar and cloud storage (p. 9), in addition to an ability to usefully navigate the Internet (p. 16). Regarding technical support, she found she was able to fix many issues in the classroom itself, failing that she sent students to the CALM, and said they had been very good in fixing problems, which were typically quite simple—such as password issues.

Participant S mentioned the fact that her class had two student representatives who had been trained to help their peers with the iPad—this happened in some (though not all) FDNS classes. She claimed this meant most problems could be dealt with in the class, without sending students out to CALM (p. 11). Like other participants such as C and P, she instructed students to download certain apps, and trained them in some basic iPad requirements in the first two weeks of the semester (p. 10).

5.10.6 IT Support

Many participants found IT assistance lacking for the iPad. For example, participant CR noticed very little IT support, other than in examinations (p. 11). Unlike most other participants, she said she did not get involved with technical issues with the iPad—she just told students to work with a classmate and sort out the issues in their free time, presumably by asking classmates or going to CALM/IT Support. She described IT support as "under-resourced", and considered self-help and assistance from peers the primary means of trouble-shooting with the iPad (p. 14).

The system of students needing assistance going to Think Aid, and standing in a queue for issues like password problems, was, she considered, a huge waste of class time, and said students should do it in their free time, but were often reluctant to do so (p. 15). She also thought teachers should be prioritised in the queuing system, and—due to the fact they were not—stated she was reluctant to seek help from the IT Support department. HL also found sending students to IT Support/CALM, or asking the latter to come to the classroom took up too much class time, so recounted he would typically ask students to share devices in such instances (p. 7).

DS taught mainly in the late afternoon/evenings at the Women's Campus, and his assessment of the IT support was candid and excoriating. He described it as: "Terrible! You don't have any support here … and if you want to get any help, you have to make an appointment, you have to send the student there, and for PM [afternoon/evening students/classes], very often they have no one there [IT Support]. That's, you know, basically zero support" (p. 6).

L's colleague, M, found IT support at the Men's Campus "really poor". As she stated: "we have no way to call IT and there's no immediate response to problems, so, imagine—an entire department reliant upon technology and really poor support" (p. 11). She described typical day-to-day problems she encountered were Apple TV not working, Wi-Fi issues, projector issues, students having problems with the device, and forgotten passwords or codes for e-textbooks. She felt the IT Support department had not adequately prepared themselves for the iPad. Indeed, she mentioned that over the 3 years of the iPad initiative she thought the IT department had deliberately tried to side-step iPad technical support and "de-involved themselves" (p. 12). Participant P at the Women's Campus agreed, singling out the lack of preparedness (p. 24) and

coordination amongst IT support as being especially problematic (p. 10), with the support staff inadequately trained in iPad use.

Tech-savvy (p. 5) with a background in educational technology, M spent time setting her students up with essential apps and functions on the iPad. She believed such an induction was successful and useful, but complained it "eats [up] an incredible amount of my time up" (p. 14), especially at the start of the semester. Other teachers would try and get this task done by the IT Support department, and she described in detail the frustration of one of her colleagues, who sent students to IT support to get their HCT mail and other functions set up. As she narrated: "One of my colleagues who is very tech-savvy sent two new students down to get their iPads set up, she walks by, they're coming up [the stairs] and she says 'Did you get it done?'; 'No', they told me, 'they [IT Support] gave me this form and they gave me this website and told me to look at that'. .. And she marched them back in and said [to IT Support staff] 'Get them set up! That's why you're here!' But the responsibility is very hands off, and I think, one of the questions on your survey asked about broken iPads; if a student got it from someone, not our problem, not our problem, that seems to be the mantra, go back to where you bought it from" (p. 13).

LK, also teaching at the Men's Campus, sided with M in finding the IT support lacking. He believed the amount of support offered was being eroded, saying "… there used to be a lot of support, but now there's nothing … it's getting less and less" (p. 6). He also complained about the IT Support department being poor at communicating in general, and specifically in terms of clarity when giving instructions (p. 4 – 5). Due to technical issues he mentioned how it was essential to check everything was working before class—Apple TV, trouble-shoot any app you were using—"or your whole plan is going down the tubes" (p. 4). Like M, he also mentioned how it was necessary to set students' iPads up for classroom use which he acknowledged could take a whole week, but said if you failed to set the devices up correctly, ultimately you could be wasting a lot more time through the whole semester (p. 4).

Participant BE also had some strong opinions on technical support for the iPad. She later clarified that she felt IT Support for laptops was adequate. However, for iPads, she said:

"It's absolutely atrocious. There's absolutely zero support from the Technical Department here. Very often, they can't even solve a simple thing, like getting a

Home Page or Portal Page for the students. I think they're very ill-equipped to deal with the kinds of problems that some of these iPad issues have. Their immediate attention to any kind of [iPad] problem is very limited. It's dismal, to be honest" (p. 6).

As she went on to mention, she suggested this was due to them not being "…fully supported and in turn, they don't support us. I think they need to be better trained. We need that support system because we spend so much time troubleshooting in the class ourselves because you're not getting that immediate response, and it wastes an awful lot of class time, energy and frustration—a lot of frustration … the students are very, very frustrated. The number of times that they've had to go down to IT to get something fixed, not only do they waste time by not being in the classroom, but they're wasting time having to wait around and get the support that they need" (p. 6).

Regarding technical support, RS, an evening shift teacher, summarised it by saying "… we don't really have any" (p. 4). She mentioned the IT department closed at 5pm, and as evening classes started at 4pm and students were often late, it left little opportunity for assistance from the CALM or IT departments. To mitigate one common technical problem—students forgetting their chargers—she reported bringing extra ones to class (p. 4).

There were, however, in marked contrast to the general consensus above, three respondents, L, teaching at the Men's Campus, and B and F at the Women's, who found IT support to be very good. As L stated: "…students who have problems … I usually send them to … the help desk and they're quite responsive … or if there's a technical problem in the class and something's wrong with the projector … you can contact them and they will come … more or less straight away and … the times something has been wrong with my iPad, they've also been responsive and effective, so I would say it's very good" (p. 7).

Participants B and F also found IT support very good at DWC. Their only criticism was B felt some things could have been done faster, citing student accessibility problems with the e-textbook in particular (p. 8 - 9).

5.10.7 Questionnaire data: PD and technical support

Part C of the questionnaire examined the areas of PD and technical support for the device. The first two questions in this section (18 and 19) asked

faculty to evaluate PD offering and technical support. The table below summarises participants' responses:

Table 7. Evaluation of iPad PD and technical support (n = 44).

Question #	Excellent	Good	Average	Could be improved	Poor
18. What best describes the PD training sessions offered for the iPad?	5	18	9	9	3
	Excellent	**Good**	**Average**	**Could be improved**	**Poor**
19. How do you find College-based technical support services for the iPad?	4	14	7	7	12

Question 18 asked faculty to evaluate the PD sessions offered, as can be seen in Table 7 above. 44 respondents answered, with mixed responses in terms of quality of the sessions summarised below just over half (52.27%) found the sessions good or excellent, and just under half (47.73%) found the sessions only average or below average. Of these, 5 respondents (11.36%) found the sessions excellent, and 18 good (40.91%). Conversely, 9 respondents (20.45%) found the PD only average, exactly the same number feeling it "could be improved", and 3 respondents (6.82%) considered the PD sessions "poor".

Question 19 asked "How do you find College-based technical support services for the iPad?" 44 out of the 46 participants answered this question, and as can be seen from Table 7, it was clear that a majority found IT support average or below average with 26 out of 44 respondents (59.09%: "average" 15.91%, "could be improved" 15.91%, "poor" 27.28%) and only 18 (40.91%) considering it "good" (31.82%) or "excellent" (9.09%).

Question 20 asked "What is the procedure at your campus when you or a student needs iPad support in the classroom?" There are two campus, and whilst IT support should theoretically be the same, there may be some discrepancies, though this was not explicitly asked for. 43 participants answered this question and all entered comments.

Despite the many comments, they were all similar, with participants reporting that they either tried to fix the students' problems themselves, or sent students to the IT Help Desk, or a combination of the two.

Question 21 asked "Is there any additional PD or technical support that should be offered?" Out of the 38 participants who responded, 10 said no to this question. 10 participants said yes, that more technical support was needed for students, with several making the specific point this should be focused on new students. 13 answered more IT support in particular was needed, with another 2 commenting that more PD was required.

5.11 Summary

Despite causing excitement at the time of its adoption, three years into the iPad initiative the initial enthusiasm appeared to have waned on the part of all stakeholders—faculty, students and management. Though it has attractive features—portability, good graphics/recording abilities, and millions of apps, there are also significant negatives—distraction, extensive writing is difficult, Flash and other programmes are not supported, and not all apps are free (and some are initially, but then a new "pay version" emerges). Much of the use of the device in the classroom appears to be through "old" software such as PDF files, BBL, and e-textbooks lacking in interactive features.

The quantitative data corroborates the qualitative data. The faculty canvassed in the questionnaire are generally highly experienced, most with decades of experience. Given the teaching and learning environment of the HCT, with its emphasis on cutting-edge technology, all could be assumed to be digitally competent. Though there are likely varying degrees of technical competence amongst faculty, the high usage rate of the iPad out of class suggests this is a technically-savvy body of professionals, not a cohort of reluctant technophobes—and the responses to questions 16 and 17 explicitly illustrate this in the questionnaire (38 out of 43 respondents considering themselves confident or fairly confident using the iPad in class, and 34 out of 44 as technically very competent or competent in its use). So, as a highly experienced and digitally competent faculty body, the participants should be in a strong position to evaluate the teaching and learning value of a device such as the iPad.

Overall, though there were some keen proponents of the device, most teachers were generally unenthusiastic in their response to the device for teaching and learning. Participant CR's neutrality crystallised the opinion of many, in saying "… to be honest with you … I'm really not interested in them. I don't mind them, I'm not against them … I'm just not interested" (p. 14).

From the data gathered, the majority of faculty considered both laptops and textbooks to be superior, with some faculty feeling the iPad was pedagogically unfit for purpose. However, a majority also maintained that the iPad was a useful device in the classroom, but not one to supplant textbooks or laptops. However, not a single teacher advocated using the device alone, but rather as part of a blended approach, featuring paper-based materials, laptops and other devices. In that context, most faculty preferred to keep the iPad, notwithstanding the issues of distraction and extensive writing on the device, in addition to the likelihood of its future obsolescence and phasing out, which most practitioners saw as inevitable.

Its flexibility, variety and portability were admired, but its potential for distraction was highlighted many times by faculty throughout the questionnaire, and was clearly a factor of major concern to the participants, as was its limited use for extensive reading or writing. Technical problems were also cited by many respondents as a concern. In the classroom, its predominant use was not in an "iPad Apple world", but rather a loosely-constructed materials bank of PDF documents, BBL, the e-textbook, extensive photocopy supplements—and some app use and storage. Use outside of the classroom was predominantly for personal use and entertainment.

From the data, iPads were used extensively by faculty both inside and outside the classroom, both for educational purposes and personal use, and the device's usage had been maintained over 3 years since its inception in 2012. In the classroom, the device was most used for apps, e-textbooks and BBL, with the former being the most highly used. Despite the millions of apps available, the faculty concentrated its use on just over half a dozen, with Showbie being the most popular.

Where faculty began to diverge in opinion was PD and IT support, which approximately half the respondents found to be lacking, especially IT support. Those who were unhappy with these two areas keyed in on the failure of these departments to focus on what teachers/students wanted or needed, rather

offering sessions that they were presumed to need. In particular, more training on the device for students was recommended.

Among recommendations for the device, was pre-service training for faculty (questions 29/30), and for its limitations to be acknowledged and recognised by all stakeholders, including managers. Overall, the feeling towards the device was split (question 31). Negative comments focus largely on the device's potential for distraction and technical problems. Of the positive responses, it was interesting to see many leant more towards the skill-building of faculty, rather than the device's usefulness for learning/ student benefits.

When faculty were asked if they thought the iPad had been the "teaching revolution" it had been promised by Apple at its launch in 2012 in question 33, there was polarity amongst faculty in the response as noted in section 5.8.1. The majority of faculty clearly thought it was not pedagogically transformative (almost 57%), with only 18% believing it was. Some academics in the field have highlighted this tendency of emerging technology to polarise (e.g. Walker and White, 2013).

To conclude, the vast majority did not feel the iPad could be considered a classroom "revolution". Rather, it was another useful tool for the classroom, but not one that should be used exclusively, and the relevance of textbooks and laptops had been maintained, not diminished. Viewed historically, the iPad's most powerful feature initially was probably its novelty—a characteristic that, by definition, is evanescent, with a rapidly shortening half-life.

CHAPTER 6: DISCUSSION.

6.1 Introduction

This chapter aims to examine the significance of the findings, and argue that they are illustrative of the context—both institutional and nationwide. The roll out of iPads in the UAE was unprecedented, particular and peculiar, and—other Gulf States perhaps apart—it is hard to imagine it being done in such a manner elsewhere, namely without piloting or discussion, but, nonetheless, with considerable fanfare. The chapter also aims to consider the contribution to knowledge of this thesis, and evaluate the iPad in terms of its contribution to teaching and learning in the UAE context. It will do this both in general terms, and by specific reference to the SAMR model.

This chapter will therefore start by discussing the findings of the thesis, examine them in the institutional parameters, before locating them in the contextual narrative of the country and its policy. It will also illustrate the dichotomy of pedagogic practice vs. policy proclamation, and the issue of fads in education. Finally, it will identify ongoing changes in the HCT and wider educational context.

6.2 Significance of the study

This thesis and its study of the iPad filled a knowledge gap, as at the initial time of writing, no long-term primary research had been conducted on what was a global event, the largest rollout of iPads in the world in tertiary education. Worldwide, there has been little long term evaluation of their impact on tertiary education in general, and no examinations on their usage in the field of tertiary education in an EFL/ESL context. Neither has there been any examinations in the literature of why technology would be adopted as part of the UAE's rolling discourse of hegemony via "modernization" and global primacy, though some, such as Ridge (2014), have identified the disconnect between the state-of-the-art superlative constructions and the weakness of the education system. If that system, however, adopts the latest technology, a useful façade of "modernity" conveys an impression of advancement and legitimacy.

Ali's (2019) examination of the iPad initiative in the UAE were discussed in Chapter 3.7, providing a utilitarian and helpful summary of iPad use in the

classroom, and also a candid examination of its limitations. In summarising affordances, they were categorised in general terms, such as collaborative learning, and multimedia. His request for further long term studies, particularly the call for explorations of teachers' feelings and attitudes, and acknowledgement of his limited exploration of the latter in his own study due to time constraints were appropriate. This thesis claims to address such gaps in the knowledge, providing a wider and deeper exploration of faculty feelings towards the iPad, utilising a larger sample (46 faculty, as opposed to Ali's 5) and, rather than an examination of its affordances, instead provide a faculty evaluation as to the device's value in the classroom, and explicit examination of the apps being used by faculty. This study hopes to be a complement to Ali's findings, and indeed augment it in terms of the detailed faculty responses which were elicited in both the quantitative and qualitative data.

Specific points that emerged from this study were as follows. Firstly, there appeared no clear evidence that the iPad benefits teaching and learning echoing some of the critiques of the SAMR model (Hamilton *et al.,* 2016).Though some teachers and students enjoyed using it, and it was generally appreciated as an additional teaching tool, it was not considered a paradigm shift that would replace laptops, or even textbooks. Secondly, caution should be exercised when adopting a "top-down" implementation of pedagogic technology. This study demonstrates that unless faculty are convinced of the pedagogic worth of an emerging technology, many will very quickly ignore it and return to old approaches and delivery methods. This was noted in Chapter 3.4, where Churchill and Wang (2014) observed teachers in a Hong King university using e-books and PDFs, and Barabble's 2018 study at a college in the UK, where he admitted some faculty were merely transposing photocopies into a digital form. Developing suitable materials may avoid this, and discussion between management and faculty is important—if faculty are not helped, in this regard, they may be forced to adopt a less than ideal approach, or fall back into the use of paper copies, as noted in Chapter 6.5.3.

In addition, management should ensure a dialogue between faculty and IT support regarding appropriate pedagogical and technical support, to facilitate teaching and learning in the classroom; the findings of this study were that teaching faculty and IT Support were separate entities with differing agendas, rather than complementary and collaborative partners. A related, fourth factor

which emerged from the data was that the iPad was seen by participants as part of a blended approach, and to mandate the use of any learning tool to the exclusion of others was erroneous. As discussed in Chapter 5.8, faculty felt the iPad was a useful addition to teaching, but not one that should be used exclusively. Any emerging technology may initially appear attractive, but with the lack of evidence of its efficacy and consideration of the factors noted above, if novelty is the main attraction, such an ephemeral quality ultimately marks it for an early demise.

This thesis was also an opportunity to study the EFL industry at a moment when it was at the forefront of emerging technology. The EFL industry is a multi-billion dollar industry globally, generating over a billion pounds for the UK economy alone (UK's English Language Teaching sector worth £1.2 billion, 15/2/16). Yet, despite its economic significance, some academics have commented on how education and educators in general often lag behind in technology (e.g. Privateer, 1999, Hennigan, 2012), and higher education (O'Neill, Singh and O'Donoghue, 2004) specifically in ELT (e.g. Al-Mahrooqi and Troudi, 2014: 1, Garton and Graves, 2014: 277). Several country-specific studies have been done on the subject—for example, Li and Walsh (2011) writing about the situation in China, noted that although computers and ICT were widely available in terms of teaching use, this was often limited to PowerPoint presentations. In Norway, Røkenes and Krumsvik (2016) found trainee teachers differed in their ICT knowledge, and commented on the difficulty of moving beyond basic digital skills in the classroom for some practitioners.

So the adoption of the iPad here afforded a unique opportunity to witness the marrying of cutting-edge technology with EFL. It allowed an examination of how EFL practitioners managed such an ambitious innovation in ELT, and was a fundamental motivation for this study, as there was limited research into this area where ELT is performed via the vanguard of such an emerging technology. It also offered a window into coping mechanisms of teaching faculty when presented with a new technology with all its attendant technical problems, as mentioned in Chapter 3.10.5, and re-visited in section 7.6 of this chapter.

6.3 The iPad—innovation or distraction?

As per the findings, the device was used extensively inside and outside the classroom by faculty, though rates of use varied considerably. There were also interesting anomalies—some keen iPad teachers such as F never actually used the device—rather, materials were designed on her laptop for students to use on the iPad. Instances such as this support the idea the device is not one for creation, but consumption, as mentioned in Chapter 3.10.3. This was noticeable publicly at conferences on the iPad initiative: it was observed and noted that at all HCT conferences discussing the merits of the iPad, presenters never used the device—even speakers from Apple itself. Rather, laptops were used for PowerPoint presentations, which instigated some wry comments from faculty at the time. Another interesting finding was, despite the millions of apps, faculty use was concentrated in just a dozen, inviting the conclusion that not many are actually useful in the classroom environment.

There were some notable findings in terms of iPad use. Significantly, most practitioners found laptops and textbooks better teaching tools than the iPad, with even the keenest pro-iPad faculty maintaining the device should be used in conjunction with the former learning resources. However, iPads were viewed as a useful secondary tool, and one with some specific functions (e.g. making videos).

All research participants expressed serious reservations about the iPad's ability to distract. Other concerns were technical issues, lack of IT support, and the need for pre-service training for both faculty and students. Most faculty viewed the device as something that would be replaced, and were aware of the ephemeral nature of emerging technology and its intrinsic obsolescence. Some faculty were careful in preparing platform-agnostic materials that could be employed irrespective of device.

Emerging technologies may often be labelled as distractions. In the 1930s there were calls to ban car radios due to their distractive nature (Cripps, 2001), and later in the 20th Century, similar criticism of the television was widespread. Initially, both mediums, were regarded as of little, if any, educational value. However, though radio and television are seen as means of entertainment, they have also come to be regarded as serious and educational mediums, and certainly in the case of television, as a delivery method of education: the latter, for example, was the progenitor of distance education via

the Open University. The Internet has followed, extending the potential of education, and is the new innovation over television, transcending time and space via distance and online courses.

The iPad, however, is not an innovation on the scale of television or the Internet. It is, at best, simply an extension of old technology—and at worst, a gimmick. This explains the use of old paradigms such as PDFs, etc. being utilised on the iPad by faculty in this thesis: quite simply, better technology already existed. Perhaps the best that could be said for the iPad was that being lightweight and portable enabled it to achieve a degree of educational convenience. Some faculty highlighted this aspect of the device, and mentioned more motivated students were using it outside the classroom for learning purposes, which was a benefit of employing the device.

This convenient portability aside, however, empirical evidence from this thesis shows many teachers thought the device little more than a distraction. In many ways, this thesis provides evidence to what many seasoned practitioners knew intuitively on the device's launch, and formalises the response from a number of faculty with a wealth of experience, who emerged from the first iPad conference in June 2012 bemused and bewildered at this new "innovation" thrust on them. Even at this very early stage, experienced faculty expressed grave misgivings at the device's worth for academic reading, and more particularly writing, especially as management instructions at the time were that the device was to be used exclusively, with textbooks and laptops withdrawn for students. That management would make such an edict is illustrative of a misunderstanding of the importance of student-centred learning, notwithstanding experienced faculty's instinctive knowledge of what will work and what will not, in any given educational context. This management decision also showed a lack of understanding of context, which is dynamic, whether changing due to technological factors such as speed of Wi-Fi/functioning of technical devices, or due to affective factors such as students' learning styles and feelings.

6.4 The SAMR model re-visited

The SAMR model discussed in section 3.12 presents a continuum to evaluate technology from a mere substitution (i.e. doing "the same" on a different medium), to a re-definition of learning, a true innovation which only the

new technology can facilitate. Given the responses of teachers in this thesis about the HCT iPad initiative, there was a range of responses covering the SAMR model spectrum. There was a small cohort of faculty who regarded the iPad as an innovative device, and fully embraced aspects of the iPad in their teaching, and redefined the learning experience—whether via apps such as Edmodo and Socrates, or using the video/audio/recording features of the device.

With regard to the SAMR model it was clear that though teachers had the technical ability to fully incorporate the iPad technology in the class, the majority did not do so, preferring to use it as part of a blended approach, often for gaming and less academic pursuits (all participants mentioned this, especially HL, S, RS, C, M, SJ). Secondly, though there were teachers who used the device extensively in class (e.g. F, S, L, DL, LK), this was typically for reading PDF files of the course, classic “substitution” in terms of the SAMR model.

As noted in Chapter 3.12, there are a number of critiques of the SAMR model, and despite its widespread use, a noticeable lack of credible defences of the model in the literature. This thesis adds to that body of critiques.

Though there was a cohort of iPad *aficionados* who used it extensively in class, and might argue they were introducing tasks that were “higher” on the SAMR model than a non-device activity, by their own admission crucial skills like academic writing had to be done on paper, and many of the iPad activities were simply PDF files for reading, endorsing Mueller and Oppoenheimer’s study (op. cit.), and supporting Hamilton *et al’s* (2016) paper, challenging the SAMR model as best educational practice.

The most ardent supporters of the iPad such as participants F, C, F, L, M, HL and LK in this study were echoing Mueller and Oppenheimer’s (2014) study of students switching from writing by hand, to writing on an iPad. Amongst the materials most frequently employed on the device were PDFs—though Puentedura might see this as a positive example of “substitution”, the participants found the move to iPads actually had a negative effect on student learning, in terms of distraction, and reading and writing on the device, like Mueller and Oppenheimer (op. cit.).

Thus, the rigid hierarchies of the model, and the notion that “moving up the SAMR hierarchy” of levels leads to better learning outcomes, is one that is

not borne out by this research, and adds to the extant literature in challenging the model.

Hamilton *et al,* (2016) also criticised the model for its failure to address differing educational contexts, including such rudimentary factors as technical infrastructure and resources, teachers' technical knowledge and support, and student needs. This was evident in the data gathered in this thesis. Though faculty developed some excellent materials and skills sets for iPad, that they were not utilised more in PD was a lost opportunity. Rather, most PD was left to technicians (IT and CALM staff), who lagged behind in terms of innovative ways to use the iPad. As some faculty such as SHJ and BE commented, IT/Ed Tech staff often had little idea of what PD was actually required by faculty, instead tending to push repeated *pro forma* PD offerings throughout the academic year. Again, an actively engaged management could have helped to develop PD and hone it to faculty requirements, rather than leave it to the pedagogically-disconnected technicians.

Furthermore, (Hamilton *et al,* 2016: 9) also note putting product before educational process and associated learning objectives and outcomes is contrary to best practice. Despite the innovative use of the iPad amongst a few faculty members who moved into the stage of augmentation using various apps and the video functions of the device, the bulk of teachers were utilising old delivery tools such as PDFs, BBL and Adobe Reader documents—even amongst the most ardent iPad users. Thus, as a participant commented in section 5.8.1, for most faculty, the iPad served merely as a medium substitution, and a new technology is used with an old paradigm. In this case, a textbook or documents were digitised and put on a device, to be read on a screen. The device effectively became a content repository, with limited learner interaction, and was not an innovative, educational catalyst. This was not a problem for management, who seemed more focused on the product—i.e. the iPad, rather than any pedagogical benefits it brought.

This approach has long been recognised as a common failure in any truly transforming e-learning initiative, such as exemplified by O'Neill, Singh and O'Donoghue (2004: 313), writing 15 years ago:

"When staff are 'forced' down the eLearning route as a consequence of management directives and mission statements, the creation of sound pedagogic practice is often flawed or missing completely, and activities

constructed service the technology rather than student or learner progression or association."

As some teachers remarked, the problem in many ways was the "foregrounding" of the technology, whereby it became a constant issue to fix glitches, rather than the technology being in the background and highlighting and aiding the teaching. The whole initiative was flawed by an embracing of a technology that was thought capable of changing the teaching and learning experience itself—in other words, technologically-led pedagogy. This could, to some extent, be mitigated if the technology was fully supported by a dedicated IT/Ed Tech team, but from teachers' responses, this was not the case.

Another issue was the lack of support given to the initiative by management, beyond an initial cheerleading accompaniment that soon waned and flagged. By their own admission, neither line managers nor many senior management used the iPad, had any real understanding of the device, nor interest in it as a pedagogical tool. As some academics have noted (e.g. Basak, Wotto, and Bélanger, 2016), managerial support can be critical to successful implementation of emerging technologies in the classroom, as mentioned in Chapters 3.10.6, 5.10.1, and 5.10.2.

The fact that management showed little real interest in many ways reflects the idea that the required effect of the iPad initiative had already been achieved—namely to claim a world first, and generate headlines. Whether it achieved educational aims for either students or faculty appeared to be of secondary concern, which was underlined by the lack of any real research into the impact of the device, nor extensive qualitative evaluations from faculty sought.

6.5 Merits of the initiative and the device

In defence of the instigators of the iPad initiative, they had the wherewithal to initiate a large tertiary education experiment in an emerging and young country. This can be seen as a positive of the educational context and the country in general: decisions, when taken, are acted upon quickly, and not bogged down in discussion and debate. In terms of the iPad, this was certainly the case, with the devices being rolled out in a matter of weeks after the announcement in June 2012—teachers and students were using them in class by August.

Certainly students initially appeared to like the device, and several teachers were positive about it (including myself) in that students carried the iPad around all the time. As mentioned earlier, several teachers such as CR, F and SHJ suggested more motivated students could do more autonomous learning on it than other mediums, largely due to the device's portability. Indeed, looking at the positives of the iPad—its portability, its potential for recording and videoing, some apps, and the responses of the majority of teachers who regarded it as a useful supplemental tool, it could nevertheless be considered as a mismatch as the tool for a FDNS programme, which basically involves teaching fundamental academic reading and writing skills. For the latter, some of its better uses were using apps such as Popplet and Padlet for brainstorming ideas for writing tasks, and other collaborative writing activities. This seemed to work particularly well for students who were generally academically weak, and appeared intimidated by the challenging process of individual academic writing (Peel and Murray, 2015).

In addition, it is quite possible the iPad initiative could have been more successful if targeted at a different audience than FDNS students—those in engineering, health sciences, or applied media courses at HCT. There are many apps that dovetail with such courses, and for subjects involving observation, taking of field notes, or project work its benefits might have emerged more strongly (e.g. Welsh, Park, France, Mauchline, and Whalley, 2018), especially with a clearer direction from management and stronger technical support. However, this lack of support, combined with the lack of research into its efficacy nor ongoing analysis into its usefulness contributed to a visible decline amongst iPad use by both students and faculty, which rising ownership of smartphones served to accelerate. As one faculty member observed when interviewed in 2015, the iPad had lost its gloss quickly—students were far more interested in their smartphones.

6.6 The iPad—an entertainment device co-opted

In fairness to Steve Jobs and Apple, the iPad was not, at its launch, intended to be an educational device. In fact, there was no pretence that it was seen as anything other as an entertainment device, a "third way", lying between a smartphone and a desktop or laptop (Madway and Oreskovic (27/01/18), as Jobs himself announced in his keynote speech at the iPad's launch (BBC News,

2010). This fact not only makes it curious that the device would be adopted as a large scale national educational initiative, and that its use was mandated and imposed wholesale with no research into its usefulness, but that it was also contrary to the advice of experienced practitioners and materials writers such as ZW, who—unusually at HCT, or indeed in the national context—spoke out publicly against the iPad's imposition. As already discussed in the context chapter, the focus of some new initiatives might appear to be getting the headline and press release out, along with accompanying accolades and eulogies. Whether the initiative succeeds—or is even carried out—can seem to be secondary concerns in some instances.

In the case of the iPad, this is also what happened. Management quickly lost interest in the device, as did many faculty and students. Once smartphones had become ubiquitous, the device effectively became obsolete. Thus what was suspected by some practitioners—that the device was not a "revolution", or a universal educational panacea, was borne out by the findings of this thesis. Not only was the device an educational mismatch in general terms, this unsuitability was made more acute given the particular context—students' linguistic ability, the need for the device to be used for academic reading and writing, the "gatekeeper" examination which was the paper-based IELTS, and lacklustre technical support and training. Its suitability as an educational tool was further eroded by the widespread criticism by all faculty that iPads are distractions from the serious business of education. As stated earlier, the majority of faculty believed students considered the device as primarily a medium for entertainment, not education.

That there was strong resistance to use of the device from some faculty is therefore unsurprising. As ZW stated, he would never start a lesson employing technology, due to the possibility of technical failure. Echoing Eraut's statement in section 3.10.5, educational practitioners are on the front line, and technological failure typically equates to pedagogic failure. Given the overall rejection of the device as sole-use educational tool, the nature of technology itself and its inherent half-life, and perhaps also given the tendency of the wider society's affinity with novelty, it is unsurprising that many faculty expected the iPad to be superseded by another technology as mentioned in Chapter 5.7.2.

6.7 The dichotomy of UAE modernity—an iPad example

As noted in Chapters 5.6.3, paper photocopies were increasingly becoming a widespread teaching resource amongst FDNS faculty, and with official sanction for Level 4, the IELTS preparation course. However, at the start of the autumn semester of 2013, the official HCT line was eulogising the "paperless" classroom/campus it had created via the iPad, both its in-house publications and the national press (Naidoo, 2012, Nazzal, 2013). As that appeared to differ from observed faculty practice at the time, enquiries were made into the number of photocopies being taken at the print room at DWC; the reply was over quarter of a million copies in the first week of the semester (in a college of just over 2,000 students). The print room staff blamed this phenomenon squarely on the iPad initiative, whereby teachers were taking back-up copies—or increasingly, teaching straight from copies and bypassing the iPad altogether.

Nor does this reveal the full extent of the "teaching from photocopies" phenomenon—the faculty areas had 5 other photocopying machines, which could be observed to be in near-permanent use at this time (and subsequently in need of near-permanent maintenance). One of the photocopy shop employees indicated the number of photocopies being taken from the faculty areas was roughly the same as the photocopy shop, revealing a figure of half a million copies being taken in the first week of teaching—around 250 pages per student.

Such examples illustrate not only a public/private dichotomy of reality, but also the desire to make the latest innovation appear to be a success publicly. Examples such as these also underline the importance of adopting a mixed methods approach, with the qualitative data going beyond the headline-catching "quantitative facts", which may be misleading—in this case "the paperless classroom". Though HCT was claiming the iPad was affording a seamless evolution into "… a paperless cloud-based learning environment" (Naidoo, 2012), the reality on the ground was very different.

6.8 Educational fads in the UAE

As some academics in the region have commented, the faddish nature of educational policy in the UAE is not something new. As Lynn Nicks-McCaleb (2005: 328), previously a manager at HCT, noted over a decade ago:

“Addressing educational issues in isolation and with a fragmented approach, rather than holistically, is rarely successful in the longer term. Unfortunately, this method is frequently employed in the UAE where Western culture is highly valued, though not always popular. The latest ideas and technology are often embraced without planning or critique, and may subsequently be abandoned just as quickly and easily in favour of the next new fad or trend.”

As she continues: “The importance of strategic planning and the long-term, objective monitoring and evaluation of educational processes and technology introduced into institutions needs to be highlighted to educational leaders in the region. Caldwell argues that “transformation means change that is significant, systematic and sustained” (Caldwell, 2003a)” (op. cit.).

As Nicks-Caleb and Caldwell argue, real change, improvement and transformation in education requires a methodical, orderly and long-term approach, rather than the current bandwagon-jumping that risks becoming a road to nowhere. The two critical factors of true transformation—systematic and sustained approaches—are lacking at HCT, not just in the case of changing educational policies and curricula as already noted, but also with the current rapid turnover of faculty. Such elements, coupled with the rush to adopt new technologies without consideration, exposes the country to the danger of falling victim to educational fads rather than a real knowledge economy, which is central to the Vision 2021 policy.

6.9 New policies at the “HCT 2.0”; curricula and faculty in flux

If the iPad initiative serves as a microcosm of the nationwide obsession with “firsts” and “innovation”, its legacy and impact on educational improvement appear minimal, at best. Despite being given iPads when in the FDNS programme, the device’s conspicuous absence in terms of use by students in the Bachelor’s programmes tells its own story—students prefer to use laptops. Certainly, out of the hundreds of students I have taught in the Bachelor’s programmes (having transferred from FDNS to the General Studies programme in 2015), not one has brought an iPad to class; instead, all use laptops in the classroom. Colleagues report the same.

Indeed, there appears to be, as mentioned earlier, no legacy of the initiative; it is yet another approach the HCT has left by the wayside, part of the fragmented approach to education Nicks-McCaleb (2005) describes. Yet this is

just part of an ever-changing system of management, assessment and curricula which has been part of the HCT for decades, and seems to be gathering pace. Its mentioning here seems apposite, as the iPad is one node of such policy, part of the continuum of “innovation” which appears more akin to change-for-the sake-of-change, a boundless pursuit of a “transformative policy” that is in permanent flux with no sustained direction.

CHAPTER 7: CONCLUSION

7.1 Introduction

This final chapter considers the contributions to knowledge of the study, and its limitations, in addition to implications for practice. It also calls for future research in this field, and the wider educational context of the UAE. The legacy of the iPad initiative is discussed, and as the country moves ever-nearer to its Vision 2021 goals, its future educational needs are examined.

7.2 Contribution to knowledge

This thesis adds to the knowledge and extant literature about the iPad and pedagogy in several ways. Some of these are possibly context-specific, but the argument will be made that they resonate beyond the immediate context of the UAE, ESL and tertiary education. In addition, it will be contended that some of the findings are not-iPad specific, but could hold true for other emerging technologies.

Firstly, regarding tertiary education and ESL, there are no studies addressing app use on the iPad and pedagogy in any detail in the literature. It was this gap in the literature that prompted the research question of how practitioners use the device specifically in terms of apps. This holds true both in the UAE context and in global terms, as discussed in Chapter 3.4 and 3.5.

In spite of the lack of evidence of the iPad's efficacy as a 'classroom' tool coupled with the lack of apps designed for the educational context, this thesis offers data that supports in part how the iPad can be used effectively in the tertiary level/ESL classroom, and, for the first time in that context, assessed the apps teachers find most useful. The examination of app use in this thesis therefore advances understanding of practitioners' use of the device in the classroom. The thesis presents a unique insight into the usefulness and efficacy of iPad in language teaching, and as a result it is a source of reference for relevant apps in the ESL classroom, as recommended by practitioners themselves. The surprisingly narrow focus in terms of apps commonly employed in the classroom (just over a dozen), as mentioned in Chapter 5.3.2, and illustrated in Table 2, is one such example of a finding that may be of benefit to future practitioners.

The second research question sought to evaluate the iPad in terms of teaching and learning. There are a number of studies that have examined this question this as outlined in Chapter 3.9 and 3.10 with regard to primary and secondary educational settings, but very few in terms of ESL and tertiary education. Being an examination of the latter, this thesis therefore complements and enhances the extant literature based on primary and secondary schools.

Thirdly, the support of management was seen as critical to the success of the project. This has been mentioned in the germane literature regarding CALL, in sections 3.1 and 3.10.6. It holds true for the iPad too, and, as has been mentioned in those sections, good management would have created a meaningful relationship between faculty and support staff, mutually aiding each other and promoting the success of the iPad initiative. As several participants discussed in Chapter 5.10.3, the adoption of institutional guidelines would bring clarity to staff roles and a more standardised approach to teaching and learning objectives, and is something that should be adopted for future similar emerging technology initiatives.

In addition, IT support was found to be lacking by most participants. Some remarked on the fact that the reluctance to help with some issues stemmed from IT Support not being properly supported themselves. Just like teachers, they had had an emerging technology thrust on them with little or no training. Although the need to train teachers to use technology has been highlighted in the literature, this study stresses the need to provide tailored training not just to teachers, but to support staff regarding emerging technologies and different technological tools.

Fifthly, this thesis adds to the critiques of the SAMR model in terms of ignoring context and privileging product over praxis, as enunciated by Hamilton *et al* (2016), Green (2014), and Lacruz (2018). That is not to challenge emerging technologies *per se*, but rather to examine their use in terms of teaching and learning outcomes, and foster a techno-reflective attitude. That many of the research participants in this thesis reverted to photocopies during the iPad initiative reflected that it was not a technology they believed enhanced learning outcomes. Even the most fervent users were, by their own admission, not using the iPad for its technological affordances, but rather as a tool for viewing PDFs and other documents, hardly a transformative technology. Moving forward, it is therefore important to have an open-minded and nuanced

approach to educational technology. Piloting (significantly absent in the iPad initiative) would aid this, and allow emerging technologies to be targeted in areas of use where their affordances could be effectively utilized, possibly as a blended approach as previously articulated, rather than the universal approach that characterised the launch of the iPad in the UAE.

Finally, this thesis argues that despite its focus on the iPad, and the fact that the iPad initiative ended in 2019 in tertiary education in the UAE, it retains resonance and relevance beyond that context, to the wider world of education and emerging technologies, including primary and secondary school settings. At my sons' primary school, for example, they have just started using iPads this year. As a further example, iPhones and other smartphones are featuring increasingly in language learning (e.g. Zou, Yan and Li, 2020), and many of the findings of this thesis could be argued to be transferable to such a context. To conclude, though the iPad will be superseded by a new emerging technology, many of the findings of this thesis will hold true in terms of the contributions to knowledge regarding the need for effective management, technical support, and a nuanced evaluation of the SAMR model.

7.2 Limitations of the study

This was a small-scale study involving 46 faculty at two of the 17 campuses of the HCT. Though an argument has been presented in this thesis that the findings could be extrapolated to the larger population as recruited faculty have no say in which campus they are placed and therefore should be similar across the system, likewise there is an argument that this could not be the case. There may be local factors which influence the constitution of faculty at different campuses, whether institutional—such as management styles, technical support, etc.—or external factors such as schooling for faculty children, urban or rural locations, etc.. Hence the opinions expressed by faculty may be peculiar to this particular group of FDNS teachers at DWC and DMC.

In addition, another criticism that could be levelled at the thesis is students' perceptions of the device were not sought. Rather, faculty were asked to give their perceptions of student evaluation of the device. Such perceptions are therefore objects of interpretation, and subject to error or misunderstanding. Finally, the qualitative data are, by their nature, subject to interpretation. Though every effort has been taken to ensure transparency and rigour, such data

analyses are subject to misinterpretation and bias. By declaring my open-minded position to the iPad at the start of this thesis, I hoped to dispel notions that this thesis has been coloured by any partiality. Nevertheless, as part of the institution and initiative itself, some degree of subjectivity might be regarded as inevitable.

7.3 Implications for practice

Teachers who are corralled into a new technology in which they have had little consultation are likely to resort to old approaches and paradigms, especially if they feel support to be lacking, or the technology to be obstructive to pedagogy. This may not necessarily be as they do not like the technology, but rather, as a number of faculty noted in this thesis, they wanted the teaching "to work", and not be fiddling around with technical problems. In an academic reading and writing class, whether the text is on an iPad, laptop, paper, textbook is immaterial. The text itself should take precedence, not its medium. If that medium has the potential to block, limit, obscure or obfuscate the text and its meaning, it is anathema to sound pedagogy. This is neither an exclusively EFL/ESL concern, but could refer to any academic subject—the material, not its presentation mode, should be the primary pedagogic concern. As some of the more gimmicky aspects of the iPad were abandoned, and as some teachers felt IT support was lacking, old paradigms started creeping into the classroom—initially, they were still nominally "on the iPad", such as Adobe Reader and BBL, but as time progressed, more and more teachers were teaching from photocopies. To avoid this, such initiatives should be piloted, as Ali (2019) also called for, faculty and students could be consulted and involved, and their opinions heeded, and management and IT Support should fully assist during the full duration of the project.

That this initiative was undertaken without piloting and at a crucial stage of students' academic career, questions of ethics can be asked. Should such a policy be imposed without knowledge of the possible consequences? Why were stakeholders not informed in advance, including students whose future it could impact? Why were sales people from Apple given preference and listened to, with no involvement of professionals—i.e. teaching faculty? To seasoned UAE educators, the answer might be thought to lie within the context, and the desire

to impress, rather than educate.

7.4 Context-revisited

This thesis is a study of the iPad in a particular context where use of the iPad was mandated, and its effect on that context—faculty, students, and the institution itself. That context is a part of a larger context of a conservative society where governance is by decree, and the adoption of technology can be seen as both a sign of progress, and of progressive governance. The original context chapter was driven by the world's largest launch of iPads in the public tertiary educational system of a nation, with the socio-political context offered as a rationale, rather than an explicitly educational agenda. It thus presented itself as an area for research. It is therefore the hope of this thesis that it is not seen as a study solely on the iPad, but rather the adoption of emerging technology in an educational system with an agenda that may differ from guiding principles based on best educational practices. Instead, the main drive behind the iPad initiative appeared to be its novelty and "zeitgeist", features that are essentially a microcosm of aspects of the larger UAE system of governance by spectacle and *fiat*.

This thesis has argued one explanation of the country's obsession with cutting-edge technology is it is seen as a means of appearing progressive and cementing hegemony. Though the UAE's physical infrastructure can be imposing, and many aspects of its modernity are impressive, as noted in the context chapter, the performance of some of its institutions locate it as still a developing nation (United Nations, 2014). Another related reason is technology is seen as a shortcut to the developed world, effectively "buying" the future—and an educated, qualified youth. Having the latest technology is synonymous with the UAE's desire to be "the best". However, simply having technology does not necessarily translate as using it well, as noted in 3.10.1.

7.5 Areas for further research: iPad, linguistic and policy changes

Though this research filled a knowledge gap, a future recommendation would be to include observations and focus groups. The former could be observations of classes and faculty using the iPad in authentic pedagogic settings. Some use of observation was made in this thesis, for example in 4.12 6.7, and confirmed data gathered via interviews and the questionnaire, and

informal peer observation is a job requirement. Regarding focus groups, these could comprise faculty, which would potentially capture a broader range of opinion and include more participants, and is recommended as a means of further triangulating data (e.g. Caillaud and Flick, 2017).

Historically, the role of English as the medium of instruction has been the focus of academic attention and criticism in the UAE and elsewhere in the Gulf (e.g. Troudi, 2007; Troudi, Coombe, and Al-Hamliy, 2009; Karamani, 2010). The merging of the MoE and MOHESR in 2015 led to the dominance of the MoE's policy on online and distance-learning degrees, namely that they were unacceptable (MOHESR had previously accepted them from *bona fide* universities). Such degrees conferred by Western universities are not part of the traditional Arabic model of education, which the MoE has followed (Findlow, 2006). This has caused considerable upheaval at the HCT and other federal institutions, as many faculty suddenly found themselves with qualifications dubbed invalid by their own employers —including this Exeter doctoral degree itself, of which this thesis forms a part. In terms of such UK qualifications, the British Consulate has met with Ministry officials on a number of occasions, but has not convinced them to reverse the policy.

As a consequence, almost all senior management positions are now occupied by Emirati nationals and Jordanians. Several departments, previously staffed by a multi-ethnic international faculty, are now entirely or almost entirely Arab, largely Jordanian, and despite HCT's rigid policy of "English" only, Arabic is now widely used in official communications and in the classroom. This increasing use of Arabic at HCT is an interesting turn in developments, and is worthy of further research and investigation.

Recent changes are not just limited to evolving language instruction issues, however. Further questions are now arising over the ability of the country to realise its goals of a global Knowledge Economy, when the federal universities are now undergoing a change in its earlier "global model" of faculty, which was regarded as the ideal for Emirati graduates entering the (90% expatriate) workplace.

7.6 Summary and legacy

Mandated use of the iPad produced a kaleidoscope of responses on behalf of faculty, from enthusiastic adopters to those that felt it offered nothing

educationally, and many varied responses between these two poles. Overall, faculty felt it was a useful addition to their teaching tool repertoire, but definitely not one to adopt in place of books or laptops; rather, it was seen as a complementary supplement. This reflects overviews of the apposite literature of iPad use in higher education, such as that by Nguyen, Barton and Nguyen (2015), who found the iPad could enhance the learning experience, but not necessarily learning outcomes, and it was unclear how to integrate the device into an academic setting. When asked if they thought the iPad had been the teaching revolution it had been promised by Apple at its launch in 2012, there was polarity amongst faculty in the response as noted in Chapter 5.8.1., but the majority of faculty clearly though it was not (over 56%) Some academics in the field have highlighted this tendency of emerging technology to polarise (e.g. Walker and White, 2013).

As I observed, interest in the device fell away after a year or so, and the rising ubiquity of smartphones hastened the device's demise. In fact, the iPad was discontinued in the 2017 - 2018 academic year at HCT, and those who had devoted hundreds of hours producing app-specific material for the iPad suddenly found their content obsolete overnight. Wiser, savvier faculty had ensured early on that any materials produced for the iPad were platform-agnostic, allowing them to be easily converted or appropriated to the next emerging platform.

Regarding the presentation of materials itself, as noted in earlier chapters, the iPad tended to produce two different approaches to material presentation. The first was a piecemeal amalgamation of apps, BBL, e-textbook and other fragmented sources; the second a course uploaded to BBL, or Dropbox via Adobe, which was essentially a series of Word and PDF documents. Amongst more able students, the first caused some distress around examination time as the course was so atomised as to be hard to "know what to revise", which a number of students articulated. The second approach was increasingly seen to be printed out by students and faculty, essentially becoming a low-graphic series of documents, rather than the cutting-edge technological teaching aid that had been promised at its launch.

The whole iPad approach, which lasted for over 5 years, has left no apparent legacy, contribution to knowledge or skills, or student progression. In several ways, this is symptomatic of the institution, where courses, assessment,

and even examination procedures change from semester to semester. To give an example, the Academic Reading and Writing course I currently teach is unrecognizable from the course offered just two semesters ago. It has a new e-textbook, totally new assessments, and almost entirely new supplementary material.

Yet, next semester, this will all change again—the e-textbook that has only been used for one semester will be replaced, and assessments and supplementary materials will inevitably change. Such short-termism has effects on students and faculty. The former are confused as to course content and assessment due to its constant flux, and faculty are somewhat disengaged and sceptical in their approach, with an almost semester-by-semester sea-change of curriculum, policy and procedure that only serves to distract from the learning goals and the key Vision 2021 goals.

7.7 Future educational needs

The fanfare of the iPad initiative belies some of the educational realities on the ground. The UAE, despite its affluence, spends just 1% of its wealth on education, one of the lowest rates in the world (Ridge, 2014). In addition, just 0.01% of its budget is spent on research, compared to 3% by countries such as Finland and Japan (op. cit.). Tertiary education enrolment rates also remain internationally low, at 25% (op. cit.).

At primary and secondary school level, the traditionalist model is cricitised by Findlow (2006) for poor results; likewise, Ridge (2014, p. 20 - 23) documents very poor PISA scores, which are continuing to decline in the latest figures available (PISA, United Arab Emirates, 2015). TIMMS scores were also remarked upon by Ridge as poor, and again, have continued to decline according to the latest available figures. 2015 figures for TIMMS saw Mathematics scores in the UAE ranked at 38/49 countries for 4th grade students, and for 8th grade 32/48 (TIMMS 2015 International Results in Mathematics, 2015). Similarly, science grades in the UAE continue to be near the bottom, ranking 40/47 for 4th grade students for example (TIMMS 2015 International Results in Science, 2015). That the traditionalist MoE (Findlow, 2006) has now subsumed the more globally-orientated MOHESR, appears incompatible with the knowledge-economy-aims of Vision 2021. A knowledge

economy able to foster innovation needs individuals empowered with education and critical thinking, rather than traditionalist approaches such as rote-learning.

Although a thesis on the iPad initiative could be considered a singular study of a device, it might instead be considered part of a continuum of emerging technology. It is one piece of a jigsaw, which shows that, although the UAE's infrastructure is impressive, its human capital lags behind, particularly in terms of embracing the goals of a knowledge economy, and developing a competitive human capital to address the expatriate employment imbalance. This is illustrated in the lack of positions held by nationals in the private sector, where they number less than 1%; most nationals prefer the generally well-paid government jobs with shorter hours and more perks (Goby, 2015). The demographic of a nation where 90% of the population are foreigners invites the conclusion the indigenous population is either disinclined, or insufficiently skilled, to do many of the jobs the country needs.

Though technology has a strong role to play in education, it should not take primacy over knowledge itself. Should it risk overshadowing human capital development and a knowledge economy, it invites accusations of superficiality. In education, technology initiatives should serve to facilitate knowledge delivery and teaching and learning, not as in the iPad initiative and so many others here in the UAE, become the primary, foregrounded focus itself. In essence, as academics in the field have already qualified, to adopt new technology in a vacuum of context and pedagogy is to arrive at the flawed conclusion that "… technology is indeed the answer to all problems related to teaching and learning" (Simpson and Walker, 2014: 477).

Whether whiteboard, textbook, laptop, or iPad, in one of its simplest, most reductionist forms, acquiring knowledge can be equated to reading a text. The text should not be thought necessarily "enhanced" when bound to a particular medium, such as a device or screen, nor a digital presentation in itself necessarily better: it is simply an alternative means of presentation by educators. As Engin and Donanci (2015) note, speaking specifically of iPads:

"…a theme which emerged in each and every lesson, as well as interviews with teachers, is that technology is merely a device in the teacher and students' hands, a part of the teaching and learning repertoire."

Indeed, this echoes the words of the iPad's architect, Steve Jobs, who should perhaps have the "last word":

"Technology is nothing. What's important is that you have a faith in people, that they're basically good and smart, and if you give them tools, they'll do wonderful things with them" (Dwyer, 2017).

REFERENCES

Abdulla, F., & Ridge, N. (2011). *Where are all the men? Gender, participation and higher education in the United Arab Emirates.* Working Paper Series No. 11-03", Dubai School of Government. Retrieved on 23/6/16 from: http://www.dsg.ae/En/publication/Description.aspx?PubID=228&PriMenuID=11&mnu=Pri&

Abuelgasim, A., & Daiban, S. (2017). Levels of Climate Change Awareness in the United Arab Emirates. *Horizons in Humanities and Social Sciences, 2(2).*

Albadry, H. (2015, December). The effect of iPad assisted language learning on developing EFL students' autonomous language learning. In *Critical CALL–Proceedings of the 2015 EUROCALL Conference, Padova, Italy* (p. 1). Research-publishing.net.

Al Ali (2007). Emiratisation: drawing UAE nationals into their surging economy. *International Journal of Sociology and Social Policy, Volume 28, issue 9/10.*

Al Dabbagh, M. and Gargani, G. (2011) *Negotiating Identity: New Perspectives on the Globalization and Identity Debate in the GCC.* [e-book] Dubai School of Government, Dubai. Retrieved on 14/5/16 from: http://www.dsg.ae http://www.dsg.ae/portals/0/WP11-04.pdf

Alhajeri, O., Anderson, J. A., & Alant, E. (2017). Effectiveness of the use of iPads to enhance communication and learning for students with autism: A systematic review. *International Journal of Technology and Inclusive Education (IJTIE), 6 (1)*, 1041-1055. Retrieved on14/4/18 from: https://infonomics-society.org/wp-content/uploads/ijtie/published-papers/volume-6-2017/Effectiveness-of-the-Use-of-iPads-to-Enhance-Communication-and-Learning-for-Students-with-Autism.pdf

Al Khoury, S. and Duzgun, S. (2009) Reading Habits of young Emirati Women from the East Coast. *Cultivating Real Readers (2009).* Abu Dhabi: HCT Press

Al Mahrooqi, R., & Troudi, S. (Eds.). (2014). *Using technology in foreign language teaching*. UK: Cambridge Scholars Publishing.

Ali, B. (2019). *The iPad in the Foundations Program of the Higher Colleges of Technology in Fujairah.* In *English Language Teaching Research in the Middle East and North Africa* (pp. 667-685). Cham: Palgrave Macmillan.

Alkaabi, S. A. R., Albion, P., & Redmond, P. (2015). The iPad schizophrenia: UAE male students' reflection on the paradoxes of using iPads in college EFL classrooms. In *Proceedings of the 9th International Conference on Education and Social Science* (pp. 10-18). University of Southern Queensland. Retrieved on 12/3/19 from: https://eprints.usq.edu.au/30150/9/Alkaabi_Albion_Redmond_SV.pdf

Alkaabi, S. A. R., Albion, P., & Redmond, P. (2016). The impact of social networks on male student motivation in UAE tertiary education. In *2016 International Education Conference: Conference Proceedings* (p. 421). Clute Institute for Academic Research. Retrieved on 12/3/19 from: https://eprints.usq.edu.au/30149/5/Alkaabi_Albion_Redmond_AV.pdf

Alkaabi, S. A., Albion, P., & Redmond, P. (2017). Social network misuse in the classroom and its impact on male student motivation in UAE tertiary education. *IAFOR Journal of Education*, *5*(SI), 115-131. Retrieved on 12/3/19 from: https://eprints.usq.edu.au/33469/1/Alkaabi_Albion_Redmond_SV.pdf

Anderson, R. E., & Dexter, S. L. (2000). *School technology leadership: Incidence and impact.* (Tech. Rep. No. 6). University of California at Irvine: CRITO.

Angers, J. and Machtmes, K. (2005). An Ethnographic Case Study of

Beliefs, Context Factors and Practices of Teachers Integrating Technology. *The Qualitative Report, 10, 4, pp.771–794*. Retrieved on 12/10/16 from: http://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1832&context=tqr

Apple (2012). *Apple reinvents textbooks with iBooks 2 for iPad* [Press Release]. Retrieved on 24/10/16 from: http://www.apple.com/pr/library/2012/01/19Apple-Reinvents-Textbooks-with-iBooks-2-for-iPad.html

Apple website (2019). *Technology designed to be as limitless as a child's imagination.* Retrieved on 22/03/19 from: https://www.apple.com/education/

Arab Human Development Report (2003). New York: UNDP

Arabian Business (4/7/13). *Give the World Records a break Dubai.* Retrieved on 22/9/17 from: http://www.arabianbusiness.com/give-world-records-break-dubai-507724.html

Arabian Business (10/12/13). *Dubai must clean up fake goods reputation.* Retrieved on 15/4/16 from: http://www.arabianbusiness.com/dubai-must-clean-up-fake-goods-reputation-530041.html

Arabian Business (19/6/16). *UAE recruiter warns of mass exodus due to high costs and lack of jobs.* Retrieved on 24/6/18 from: http://www.arabianbusiness.com/uae-recruiter-warns-of-mass-exodus-of-expats-due-high-costs-lack-of-jobs-635722.html

Arabian Business (23/4/19). *UAE launches world's first Ministry of Possibilities.* Retrieved on 24/5/19 from: https://www.arabianbusiness.com/politics-economics/418407-uae-launches-worlds-first-ministry-of-possibilities?utm_source=Jarvis&utm_medium=notifications

Armitage, A. (2007). Mutual research designs: Redefining mixed methods research design. *In paper presented at the British Educational Research*

Association Annual Conference (Vol. 5, p. 8). Retrieved on 20/7/18 from: http://www.leeds.ac.uk/educol/documents/167799.htm

Arnold, T. (24/05/14). *The importance of statistics in the UAE.* The National. Retrieved on 24/3/18 from: https://www.thenational.ae/business/the-importance-of-statistics-in-the-uae-1.241928

Atallah, F., Tamim, R., Colburn, L., & El Saadi, L. (2015, March*).* iPads in UAE University Classrooms: Implications for Teaching and Learning. *Society for Information Technology & Teacher Education International Conference (pp. 1576-1581). Association for the Advancement of Computing in Education (AACE).* Retrieved on 12/12/15 from: https://www.learntechlib.org/p/150207/

Auquilla, D. P. O., & Urgilès, G. E. H. (2017). The use of iPad and applications for English Language Education. *Theory and Practice in Language Studies*, *7*(9), 709-715.

Ayari. S. (1996.) Diglossia and Illiteracy in the Arab World. *Language, Culture and Curriculum. Volume 9, Issue 3, 1996.*

Ayesh, M. (26/6/18). *Downturn transforms Dubai into a ghost town.* In "Middle East Eye". Retrieved on 16/8/18 from: https://www.middleeasteye.net/news/arabic-press-review-1972815841

Barrable, S. (2018). *Breaking through: stories of effective digital practice from UK further education (FE) and skills.* JISC Report. Retrieved on 23/5/19 from: http://repository.jisc.ac.uk/6575/1/SimonBarrable_PC_FINAL.pdf

Barrette, C. (2001). Students' preparedness and writing for CALL. *CALICO Journal, 19 (1), 5 – 36*

Basak, S. K., Wotto, M., & Bélanger, P. (2016). A Framework on the Critical Success Factors of E-Learning Implementation in Higher Education: A Review of the Literature. *International Journal of Social, Behavioural,*

Economic, Business and Industrial Engineering. 10(7), 2259-2264.

Basit, T. (2003). Manual or electronic? The role of coding in qualitative data analysis. *Educational Research, 45(2), 143 -154.*

Bax, S. (2003). CALL—past, present and future. *System*, *31*(1), 13-28.

BBC online (19/5/07). *Dubai ruler in vast charity gift.* Retrieved on 13/4/15 from: http://news.bbc.co.uk/2/hi/middle_east/6672923.stm

BBC News (2010). *Apple unveils iPad tablet device [online].* Retrieved on 04/03/18 from http://news.bbc.co.uk/1/hi/technology/8483654.stm

BBC online (04/03/13) *UAE 'coup plot' trial of 94 Islamist activists to begin.* Retrieved on 23/8/16 from: http://www.bbc.com/news/world-middle-east-21650810

Beatty, K. (2013). *Teaching & researching: Computer-assisted language learning*. London: Routledge.

Beblawi, H. and Luciani, G. (1987) *The Rentier State.* London: Routledge.

Benson, C. (2013). *The iPad: Novelty or Breakthrough for Science Education?* Retrieved 22/11/15 from: http://scholarworks.montana.edu/xmlui/handle/1/2757

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. USA: International society for technology in education.

Bielenberg, B. and Gillway, M. (2007). Adapting Problem-Based Learning to Meet the Lifelong Learning Needs of Developmental Students. *Learning and Teaching in Higher Education: Gulf Perspectives. Vol. 4, No. 1 (February 2007).*

Bluestein, S. A., & Kim, T. (2017). Expectations and fulfillment of course engagement, gained skills, and non-academic usage of college students utilizing tablets in an undergraduate skills course. *Education and Information Technologies*, *22*(4), 1757-1770. Retrieved on 7/4/19 from: https://search.proquest.com/docview/1912906792?pq-origsite=gscholar

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3(2), 77-101.*

Braxton, R. J. (2011). Managing the unemployment tsunami: education and workforce development*. The Journal of Human Resource and Adult Learning, 7 (2), p. 66 – 70.*

Buller, A. (26/3/18). Dubai property market seeks boost from 2020 EXPO to banish real estate gloom. *Arab News*. Retrieved on 7/7/18 from: http://www.arabnews.com/node/1273511/business-economy

Burden K., Hopkins P., Male, T., Martin S. and Trala, C. (2012). *iPad Scotland Evaluation.* University of Hull, UK.

Burden-Leahy, S. (2009). Globalisation and education in the postcolonial world: The conundrum of the higher education system of the United Arab Emirates*. Comparative Education, 45(4), 525-544.*

Burnett, C., Merchant, G., Simpson, A., & Walsh, M. (Eds.). (2017). *The case of the iPad: Mobile literacies in education*. Singapore: Springer.

Caillaud, S., & Flick, U. (2017). Focus groups in triangulation contexts. In *A New Era in Focus Group Research* (pp. 155-177). London: Palgrave Macmillan.

Cardullo, V. M., & Clark, L. (2019). Exploring Faculty and Student iPad Integration in Higher Education. *International Journal of Reliable and Quality E-Healthcare (IJRQEH)*, *8*(2), 50-69.

Castells, M. (2014). The impact of the Internet on society: a global perspective. *Change*, *19*, 127-148.

Cavanaugh, C., Hargis, J., Kamali, T., & Soto, M. (2013). Substitution to augmentation: Faculty adoption of iPad mobile learning in higher education. *Interactive Technology and Smart Education, 10(4), 270-284.* Retrieved on 10/6/18 from: https://www.emeraldinsight.com/doi/abs/10.1108/itse-01-2013-0001

Cavanaugh, C., Hargis, J., Munns, S., & Kamali, T. (2012). Celebrate teaching and learning: Sharing the iPad experience. *Journal of Teaching and Learning with Technology, 1-12.* Retrieved on 10/6/18 from: https://scholarworks.iu.edu/journals/index.php/jotlt/article/view/2163

Chapla, S. (2011). *Study results: Students benefit from iPads in the classroom.* University of Notre Dame, Indiana, US. Retrieved on 26/4/15 online at: http://newsinfo.nd.edu/news/18178-study-results-students-benefit-from-ipads-in-the-classroom/.

Chi, M. T. (1997). Quantifying qualitative analyses of verbal data: A practical guide. *The Journal of the Learning Sciences. Vol. 6 (3), 271-315.*

CIA Factbook (2017). Retrieved on 23/5/18 from: https://www.cia.gov/library/publications/the-world-factbook/geos/ae.html

Churchill, D., & Wang, T. (2014). Teacher's use of iPads in higher education. *Educational Media International*, *51*(3), 214-225.

Clare, J. (12/1/2013). *17 Pros and Cons of Using iPads in the Classroom.* Retrieved on 20/6/15 from: http://www.teacherswithapps.com/17-pros-and-cons-of-using-ipads-in-the-classroom/

Clark, W. and Luckin, R. (2013). *iPads in the classroom.* UK: University of London. Retrieved on 15/4/15 from: https://www.lkldev.ioe.ac.uk/lklinnovation/wp-content/uploads/2013/01/2013-

iPads-in-the-Classroom-v2.pdf

Cochrane, T., Narayan, V., & Oldfield, J. (2013). iPadagogy: appropriating the iPad within pedagogical contexts. *International Journal of Mobile Learning and Organisation*, 7(1), 48-65.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research Methods in Education.* New York: Routledge.

Corbin, J., & Morse, J. M. (2003). *The unstructured interactive interview: Issues of reciprocity and risks when dealing with sensitive topics.* Qualitative inquiry. *9*(3), 335-354.

Common European Framework for IELTS, n.d. Retrieved on 02/04/2019 from:
https://www.ielts.org/ielts-for-organisations/common-european-framework

Cresswell, J. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* Thousand Oaks, CA: Sage

Cresswell, J. (2014). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches.* London Sage.

Cripps Jr, J. A. (2001). Dialing while driving: The battle over cell phone use on America's roadways. *Gonzaga Law Review:* 37, 89.

Crotty, M. (1998). *The Foundations of Social Research.* Thousand Oaks, CA: Sage

Cumming, T. M. and Strnadová, I. (2016). *Parents' and teachers' perspectives on using iPads with students with developmental disabilities.* In K. Miesenberger, Bühler and Penaz (Eds.) (2016). *Proceedings of the international conference on computers helping people with special needs* (pp. 217- 222). Cham, Switzerland: Springer. Retrieved online on 23/5/19 from: https://link.springer.com/chapter/10.1007/978-3-319-41267-2_29

Cviko, A., McKenney, S., & Voogt, J. (2014). Teacher roles in designing technology-rich learning activities for early literacy: A cross-case analysis. *Computers & education,* 72, 68-79.

Davidson, C. (2008). *Dubai: the vulnerability of success.* New York: Columbia University Press

Davidson, C. (2010). The Higher Education Sector in the Gulf. *The EU and the GCC* (pp. 59 – 75). Gulf Research Center (GRC): Dubai, United Arab Emirates

Davidson, C. (2011a). *Dubai and the United Arab Emirates: Security Threats.* Durham University, UK. Retrieved on 23/8/16 from: http://dro.dur.ac.uk/7091/1/7091.pdf

Davidson, C. M. (2011b). *Power and politics in the Persian Gulf monarchies*. New York: Columbia University Press.

Davies, G., Otto, S. E., & Rüschoff, B. (2013). Historical perspectives on CALL. In *Contemporary Computer-assisted Language Learning*. Thomas, M., Reinders, H., & Warschauer, M. (Eds.), Chapter 2, pp.19-38. London: Bloomsbury.

Denscombe, M. (2008). Communities of practice a research paradigm for the mixed methods approach. *Journal of mixed methods research*, *2*(3), 270-283.

Denzin, N. K., & Lincoln, Y. S. (1998). *The Landscape of Qualitative Research: Theories and Issues*. Thousand Oaks, CA: Sage.

Dezuanni, M., Dooley, K., Gattenhof, S., & Knight, L. (2015). *iPads in the early years: Developing literacy and creativity*. Abingdon, Oxford: Routledge.

Dhal, S. (9/04/2014). *UAE students score abysmally low in Maths, problem solving.* Gulf News. Retrieved on 20/11/2016 from: https://gulfnews.com/news/uae/general/uae-students-score-abysmally-low-in-maths-problem-solving-1.1316989

Dörnyei, Z. (2007). *Research Methods in Applied Linguistics: Quantitative Qualitative, and Mixed Methodologies*. Oxford: Oxford University Press.

Dörnyei, Z. and Csizér, K. (2011). *How to design and analyze surveys in second language acquisition.* In **Mackey, A., & Gass, S. M. (Eds.). (2011).** *Research methods in second language acquisition: A practical guide*.

Drennan, G., & Moll, I. (2018). A Conceptual Understanding of How Educational Technology Coaches Help Teachers Integrate iPad Affordances into Their Teaching. *Electronic Journal of e-Learning*, *16*(2), 122-133. Retrieved on 4/3/19 from: https://eric.ed.gov/?id=EJ1205781

Dubai Statistics Centre Yearbook (2010). Retrieved on 7/7/14 from: http://dsc.gov.ae/Publication/SYB_2010.pdf

Dubai Statistics Centre Yearbook (2013). Retrieved on 7/6/18 from: https://www.dsc.gov.ae/Report/DSC_SYB_2013_01%20_%2014.pdf#search=marriage%20contracts

Dwyer, J. (20/12/17). *Seven Steve Jobs Quotes Small Businesses and Tech Startups Should Embrace.* Forbes Technology Council. Retrieved on 10/10/18 from: https://www.forbes.com/sites/forbestechcouncil/2017/12/20/seven-steve-jobs-quotes-small-businesses-and-tech-startups-should-embrace/#cb6598135b03

Engin, M., & Donanci, S. (2015). Dialogic teaching and iPads in the EAP classroom. *Computers an Education, 88, 268-279.*

Eraut, M. (2002). *Developing Professional Knowledge and Competence*. London: Routledge.

Ferguson, C. (1959) *Diglossia* in *Sociolinguistics: The Essential Readings.* Paulston, C.B. and Tucker, G.R (2003) Oxford: Blackwell

Fernández-López, Á., Rodríguez-Fórtiz, M. J., Rodríguez-Almendros, M. L., & Martínez-Segura, M. J. (2013). Mobile learning technology based on iOS devices to support students with special education needs. *Computers & Education, 61, 77-90.*

Financial Times (1/4/19). *Dubai fears the end of its 'build it and they will come' model***.** Retrieved on 17/6/19 from: https://www.ft.com/content/4d169d0c-4be4-11e9-8b7f-d49067e0f50d

Findlow, S. (2006) Higher Education and linguistic dualism in the Arab Gulf. *British Journal of Sociology of Education.* Volume 27*, Issue 1, 2006 (pp. 19 – 36).* Retrieved on 7/7/15 from: http://www.tandfonline.com/doi/abs/10.1080/01425690500376754

Fletcher-Watson, S., Petrou, A., Scott-Barrett, J., Dicks, P., Graham, C., O'Hare, A., Pain, H. and McConachie, H., (2016). A trial of an iPad™ intervention targeting social communication skills in children with autism. *Autism*, *20*(7), pp.771-782. Retrieved on 23/4/17 from: https://journals.sagepub.com/doi/full/10.1177/1362361315605624

Forstenlechner, I, Madi, M., Selim, H. and Rutledge, E. (2012). Emiratisation: determining the factors that influence the recruitment decisions of employers in the UAE. *International Journal of Human Resource Management. Jan 2012, Vol. 23, Issue 2, (p. 406 – 421).*

Franklin, E. (2012). My iPad and i. *Middlesex Journal of Educational Technology, 2(1).* Retrieved on 26/4/15 from: http://eprints.mdx.ac.uk/10005/1/MJET%20Vol%202%20December%202012%20Franklin.pdf

Fried, C. B. (2008). In-class laptop use and its effects on student learning. *Computers & Education*, *50*(3), 906-914. Retrieved on 26/12/19 from: https://doi.org/10.1016/j.compedu.2006.09.006

Freimuth, H. (2014). Challenges to Building a "Knowledge Society": The Role of Literacy in Promoting Critical Thinking in the UAE. *Policy Paper 10, September 2014, Al Qasimi Foundation for Policy Research.* Available online at: http://www.alqasimifoundation.com/admin/Content/File-1612201532357.pdf

Gabarre, C., Gabarre, S., Din, R., Shah, P. M., & Karim, A. A. (2014). iPads in the foreign language classroom: A learner's perspective. *3L: Language, Linguistics, Literature®*, *20*(1). Retrieved on 23/4/19 from: http://ejournals.ukm.my/3l/article/viewFile/4831/3391

Gallagher, T., Fisher, D., Lapp, D., Rowsell, J., Simpson, A., Scott, R., Walsh, M. Ciampa, K and Saudelli, M. (2015). International Perspectives on Literacy Learning with iPads. *The Journal of Education, 195*(3), 15-25. Retrieved on 14/4/19 from http://www.jstor.org/stable/44510414

Garton, S., & Graves, K. (2014). *International perspectives on materials in ELT*. New York: Palgrave MacMillan.

Gibbs, G. R. (2007). *Thematic coding and categorizing*. *Analyzing qualitative data.* London: Sage.

Gilksman, S. (2011). *What do students think of using iPads in class?* Retrieved on 23/6/15 from: http://ipadeducators.ning.com/profiles/blogs/what-do-students-think-of.

Gillispie, M. (2014). *From notepad to iPad: Using apps and web tools to engage a new generation of students*. UK: Routledge.

Gitsaki, C. (2012) *Aligning the HCT Foundations Program with the CFR.*

Retrieved 23/8/16 from: http://cfr.hct.ac.ae/files/Christina-Gitsaki-CFR-Conference.pdf

Gitsaki, C., Robby, M., Priest, T., Hamdan, K. and Ben-Chabane, Y. (2013). A research agenda for the UAE iPad Initiative. *In Learning and Teaching in Higher Education: Gulf Perspectives (10, 2).* Retrieved on 22/12/15 from: http://lthe.zu.ac.ae/index.php/lthehome/article/viewFile/162/66

Gitsaki, C., & Robby, M. A. (2014). Post-secondary students using the iPad to learn English: An impact study. *International Journal of Mobile and Blended Learning (IJMBL), 6(4), 53-74.*

Gitsaki, C., & Robby, M. A. (2016). *Post-Secondary Students Using the iPad to Learn English.* International Journal of Mobile and Blended Learning, 6(4), 53-74, October-December 2016.

Goby, V. P. (2015). Financialization and outsourcing in a different guise: the ethical chaos of workforce localization in the United Arab Emirates. *Journal of Business Ethics, 131(2), 415-421.*

Godwin, S. (2006) Globalization, Education and Emiratisation: A Case Study in the United Arab Emirates. *The Electronic Journal of Information Systems in Developing Countries, Vol. 27 No. 1, (pp. 1-14).* Retrieved on 2/11/16 from: http://studyhrm.pbworks.com/w/file/fetch/45104081/globalisation,%20education%20and%20emiratisation.pdf

Goulding, M., & Kyriacou, C. (2008*).* A systematic review of the use of ICTs in developing pupils' understanding of algebraic ideas. *Research Report, EPPI Centre, Social Research, Institute of Education, London.* Available online at: http://eprints.whiterose.ac.uk/72900/1/LinkClick.pdf

Green, L. S. (2014). Through the looking glass. *Knowledge Quest*, *43*(1), 36. Retrieved on 2/11/19 from: https://www.learntechlib.org/p/157541/

Grigoryan, T. (2018). Investigating Digital Native Female Learners' Attitudes towards Paperless Language Learning. *Research in Learning Technology*, *26*.

Guillemin, M., & Gillam, L. (2004). Ethics, reflexivity, and “ethically important moments” in research. *Qualitative inquiry, 10(2), 261-280.*

Guinness World Records (2014). *The world’s largest shopping trolley.* Retrieved on 13/10/16 from: http://www.guinnessworldrecords.com/records-1000/largest-shopping-cart-trolley/

Gulf News (3/3/13). *Sharjah workers attempt four word records.* Retrieved 11/7/16 from: http://gulfnews.com/news/gulf/uae/general/sharjah-workers-attempt-four-world-records-1.1153580

Gulf News (05/12/13). *Sharjah residents unhappy about frequent power cuts.* Retrieved on 7/8/16 from: http://gulfnews.com/news/gulf/uae/society/sharjah-residents-unhappy-with-frequent-power-cuts-due-to-maintenance-work-1.1263712

Gulf News (25/12/13). *Record set for largest sandcastle.* Retrieved on 11/8/15 from: http://gulfnews.com/news/gulf/uae/general/record-set-for-largest-sandcastle-1.1270804

Gulf News (01/12/18). *Now No. 1: UAE passport most powerful in the world.* Retrieved on 11/12/18 from: https://gulfnews.com/uae/government/now-no-1-uae-passport-most-powerful-in-the-world-1.1541685198560

Hahn, J., & Bussell, H. (2012). Curricular use of the iPad 2 by a first-year undergraduate learning community. *Library Technology Reports, 48(8), 42-47.*

Hamilton, E. R., Rosenberg, J. M., & Akcaoglu, M. (2016). The substitution augmentation modification redefinition (SAMR) model: A critical review and suggestions for its use. *TechTrends, 60*(5), 433-441. Retrieved on 22/12/19 from: doi:http://dx.doi.org/10.1007/s11528-016-0091-y

Hannafin, R. D., & Savenye, W. C. (1993). Technology in the classroom: The teacher's new role and resistance to it. *Educational Technology, 33(6), 26-31.*

Harb. N. and El-Shaarawi, A. (2007) Factors affecting business students' performance: the case of students in United Arab Emirates. *Journal of Education for Business. May 2007, Vol. 82 Issue 5.* Retrieved on 23/8/16 from: https://www.tandfonline.com/doi/abs/10.3200/JOEB.82.5.282-290

Hargis, J., Cavanaugh, C., Munns, S., & Kamali, T. (2012). iCelebrate teaching and learning: Sharing the iPad experience. *Journal of Teaching and Learning with Technology, 1-12.* Retrieved on 13/5/16 from: https://scholarworks.iu.edu/journals/index.php/jotlt/article/view/2163

Hargis, J., Cavanaugh, C., Kamali, T., & Soto, M. (2013). Substitution to augmentation: Faculty adoption of iPad mobile learning in higher education. *Interactive Technology and Smart Education, 10(4), 270-284.* Retrieved 11/6/16 from: https://www.emeraldinsight.com/doi/abs/10.1108/itse-01-2013-0001

Hargis, J., Cavanaugh, C., Kamali, T., & Soto, M. (2013). Measuring the difficult to measure: Teaching and learning with an iPad. *International Journal of Mobile and Blended Learning (IJMBL), 5(2), 60-77.*

Hargis, J., Cavanaugh, C., Kamali, T., & Soto, M. (2014). A federal higher education iPad mobile learning initiative: Triangulation of data to determine early effectiveness. *In Innovative Higher Education, 39(1), 45-57*. Retrieved on 12/6/16 from: https://link.springer.com/article/10.1007/s10755-013-9259-y

Hart-Davis, G. (2017). Troubleshooting iPads in the Classroom. In *Deploying iPads in the Classroom* (pp. 477-544). Berkeley, CA: Apress.

Hatherley-Greene, P. (2012). *Cultural Border Crossings in the UAE.* Policy paper, Sheikh Saud Bin Saqr Al Qasimi Foundation for Policy Research. Retrieved on 21/2/16 from: http://www.alqasimifoundation.com/Libraries/Publications/Pub8-paper_Peter_Hatherley_Greene.sflb.ashx

HCT About: Overview (n.d.). Retrieved on 24/12/17 from: http://www.hct.ac.ae/about/overview/

HCT Factbook 2017 – 2018. Retrieved on 23/4/18 from: http://www.hct.ac.ae/content/uploads/HCT-FACT-BOOK-2017-18_Jan18.pdf

HCT News (24/09/12). *UAE Federal Higher Institutions create history with mobile learning launch.* Retrieved on 4/8/16 from: http://news.hct.ac.ae/2012/09/uae-federal-higher-education-institutions-create-history-with-mobile-learning-launch/

HCT Recruit website (2015). Retrieved on 23/8/16 from: http://recruit.hct.ac.ae/WebForms/ViewJobDetail.aspx?j=328

Heath, C. and Luff, P. (1995) *Explicating face-to-face interaction.* In "Researching Social Life". (Gilbert, N., Ed.), pp. 306-326. London: Sage.

Heinrich, P. (2012). *The iPad as a Tool for Education: A Study of the Introduction of iPads at Longfield Academy, Kent*. Nottingham: NAACE: The ICT Association.

Helsper, E. J., & Eynon, R. (2010). *Digital natives: where is the evidence?* In "British Educational Research Journal", *36*(3), 503-520.

Henderson, S., & Yeow, J. (2012, January). iPad in education: A case study of iPad adoption and use in a primary school. *System Science*

(HICSS), 2012 45th Hawaii International Conference on System Sciences (pp. 78-87). IEEE.

Herrington, J., Herrington, A., Mantei, J., Olney, I., & Ferry, B. (2009). Using mobile technologies to develop new ways of teaching and learning. In: Herrington, J., Mantei, J., Olney, I., Ferry, B. and Herrington, A., (Eds.). *New technologies, new pedagogies: Mobile learning in higher education. University of Wollongong, Wollongong, (pp. 1-14).* Retrieved on 22/12/15 from: http://researchrepository.murdoch.edu.au/5227/1/Using_Mobile_technologies.pdf

Higher Colleges of Technology (2010). *The Learning Model.* Retrieved on 23/8/16 from: http://www.hct.ac.ae/about/learning-model/

Higher Colleges of Technology (n.d.)*. Entry requirements.* Available at: http://www.hct.ac.ae/en/admissions/entry-requirements/

Hilton, A. (2018). Engaging Primary School Students in Mathematics: Can iPads Make a Difference? *International Journal of Science and Mathematics Education*, *16*(1), 145-165.

Hilton, J. T. (2016). A case study of the application of SAMR and TPACK for reflection on technology integration into two social studies classrooms. *The Social Studies*, *107*(2), 68-73. Retrieved on 10/01/20 from: https://www.tandfonline.com/doi/full/10.1080/00377996.2015.1124376

Hiltzik, M. (2012). *Who really benefits from putting high tech gadgets in the classrooms?* LA Times, 4/2/12. Retrieved on 19/1/16 from: http://www.latimes.com/business/la-fi-hiltzik-20120205,0,639053.column

Horton, J. J., & Tambe, P. (2017). *The Death of a Technical Skill: Evidence from the Demise of Adobe Flash*. NYU Stern, unpublished paper. Retrieved on 10/01/19 from:

https://pdfs.semanticscholar.org/c9d0/55b48cffbf2d458e922488209c3c9cb8a31d.pdf

Hubbard, P. (2013). Making a Case for Learner Training in Technology Enhanced Language Learning Environments. *CALICO Journal, 30.2: 163-178.*

Huber, S. (2012). *A Development of a Taxonomy for the Use of Tablets in Schools*. Norderstedt, Germany: Books on Demand GmbH. Retrieved on 12/8/16 from:
http://l3t.eu/itug/images/band2.pdf

IMF Country Report No. 17/219 (July, 2017). *The United Arab Emirates.*

Ireland, G. V., & Woollerton, M. (2010). *The impact of the iPad and iPhone on education.* Journal of Bunkyo Gakuin University Department of Foreign Languages and Bunkyo Gakuin College, 10, 31-48. Retrieved on 23/5/14 from:
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.453.8095&rep=rep1&type=pdf

Isaacs, S. (2012). *Mobile learning for teachers in Africa and the Middle East: exploring the potential of mobile technologies to support teachers and improve practice*. France: UNESCO. Retrieved on 25/11/15 from:
http://unesdoc.unesco.org/images/0021/002163/216358e.pdf

Ismail, N. and Pacheco, F. (7/3/19). *Nobody knows how Dubai's economy has been doing lately.* Bloomberg. Retrieved online on 12/5/19 from:
https://www.bloomberg.com/news/articles/2019-03-06/nobody-knows-how-dubai-s-economy-s-been-doing-lately

ITP Net (6/9/12). *UAE colleges switch to iPad-only classrooms.* Retrieved on 6/6/17 from: http://www.itp.net/590333-uae-colleges-switch-to-ipad-only-classrooms#.Uuoksfm1ZcQ

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field methods*, *18*(1), 3-20. Retrieved online on 2/2/20 from: http://fmx.sagepub.com/cgi/content/abstract/18/1/3

Jafri, N. A. (2012). *The impact of continuing professional development on EFL teachers.* Germany: Lambert Academic Press.

Jain, J., & Luaran, J. E. (2016). iPad-agogy: Expanding or limiting pedagogical skills?. In *Envisioning the Future of Online Learning* (pp. 1-10). Springer, Singapore. Retrieved on 12/5/18 from: https://link.springer.com/chapter/10.1007/978-981-10-0954-9_1

Jenkins, H. (2009). *Confronting the Challenges of a Participatory Culture: Media Education for the 21st Century.* Cambridge: MIT Press.

Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., and Ludgate, H. (2013). *NMC Horizon Report: 2013 Higher Education Edition*. Austin, Texas: The New Media Consortium

Johnson, L., Adams, S., and Cummins, M. (2012). *NMC Horizon Report: 2012 K-12 Edition.* Austin, Texas: The New Media Consortium.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33(7), 14-26.*

Johnston, N. and Marsh, S. (2014). Using iBooks and iPad apps to embed information literacy into an EFL foundations course*. New Library World, 115 (1/2).* Retrieved on 26/11/16 from: https://www.emeraldinsight.com/doi/abs/10.1108/NLW-09-2013-0071

Jumeirah Group, Burj Al Arab (2014). Retrieved on 7/7/16 from: https://www.jumeirah.com/en/hotels-resorts/dubai/burj-al-arab/

Kandil, A. (2001) Reading Speed and Arab Students in The Process of Language Learning: An EFL Perspective. *Conference Proceedings, Teacher-to-Teacher Conference 2001, (Ed. Syed, Z.), (p. 211 – 237). Military Language Institute.* Abu Dhabi: UAE.

Karsenti, T., & Fievez, A. (2013). *The iPad in education: uses, benefits, and challenges – A survey of 6,057 students and 302 teachers in Quebec, Canada.* Montreal, QC: CRIFPE. Retrieved on 22/12/15 from: http://www.karsenti.ca/ipad/pdf/iPad_report_Karsenti-Fievez_EN.pdf

Khaleej Times (20/01/14). *UAE plans compulsory military service for males.* Retrieved on 23/8/16 from: http://www.khaleejtimes.com/kt-article-display-1.asp?xfile=data/government/2014/January/government_January82.xml&section=government

Khaleej Times (5/7/17). *Rising school fees hit demand for larger homes in UAE.* Retrieved on 21/6/18 from: https://www.khaleejtimes.com/business/real-estate/rising-school-fees-hit-demand-for-larger-homes-in-uae

Khaleej Times (18/7/18). *New Salik gate to come up on Sheikh Zayed Road in Dubai.* Retrieved on 21/3/19 from: https://www.khaleejtimes.com/nation/dubai/new-salik-gate-to-come-up-in-/dubai-1-

Khaleej Times (25/11/18). *5 Number ones that'll make you proud.* Retrieved on 21/12/18 from: https://www.khaleejtimes.com/nation/general/5-uae-number-ones-thatll-make-you-proud

Khawaja, N. (27/7/2017). Look to Social Media for the Gulf's Burgeoning Debates. *Royal Institute of International Affairs.* Retrieved on 24/3/18 from: https://www.chathamhouse.org/expert/comment/look-social-media-gulf-s-burgeoning-debates

Kinash, S., Brand, J., & Mathew, T. (2012). Challenging mobile learning discourse through research: Student perceptions of Blackboard Mobile Learn and iPads. *Australasian Journal of Educational Technology, 28(4).*

King, I., & Bass, D. (2013). *Microsoft's Surface tablet is said to fall short of predictions.* Bloomberg Business, 15/3/13. Retrieved on 14/2/16 from: http://www.bloomberg.com/news/articles/2013-03-14/microsoft-s-surface-tablet-is-said-to-fall-short-of-predictions

Koehler, M. J., & Mishra, P. (2014). Introducing TPCK. *Handbook of technological pedagogical content knowledge (TPCK) for educators (pp. 13-40).* UK: Routledge.

Kontkanen, S., Dillon, P., Valtonen, T., Eronen, L., Koskela, H., & Väisänen, P. (2017). Students' experiences of learning with iPads in upper secondary school–a base for proto-TPACK. *Education and Information Technologies*, *22*(4), 1299-1326. Retrieved on 23/5/19 from: https://search.proquest.com/docview/1912909031?pq-origsite=gscholar

Lacruz, N. (2018). SAMR Model. *Technology and the Curriculum: Summer 2018*. Retrieved on 2/11/19 from: https://techandcurriculum.pressbooks.com/chapter/samr/

Lawrence, B. A. (2016). iPad Acceptance by English Learners in Saudi Arabia. *English Language Teaching*, *9*(12), 34-46.

Leis, A. (2012). *A report on the use of iPads in the university classroom.* Retrieved on 23/4/2018 from: https://core.ac.uk/download/pdf/51495703.pdf

Lepowsky, I. (05/08/15). *What Schools Must Learn from LA's iPad Debacle.* Wired Business. Retrieved on 16/6/18 from: https://www.wired.com/2015/05/los-angeles-edtech/

Levy, M. (1997). *CALL: Context and conceptualization.* Oxford: Oxford University Press.

Levy, M., & Stockwell, G. (2013). *CALL dimensions: Options and issues in computer-assisted language learning*. Oxford: Routledge.

Li, L., & Walsh, S. (2011). Technology uptake in Chinese EFL classes. *Language teaching research, 15(1), 99-125.*

Link, A., Sintjago, A., & McKay, M. (2012, October). "Geeking out" with iPads: Undergraduate instructors discuss their experiences during the first year of a large-scale tablet initiative*. E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education (pp. 1112-1116). Association for the Advancement of Computing in Education (AACE).* Retrieved on 2/3/16 from: https://www.learntechlib.org/p/41750/

Linkens, J. (2012). *The Impact of iPads on Student Engagement, Motivation, and Achievement and Teacher Effectiveness in the School District of North Fond du Lac.* Dissertation Topic Paper, North Central University. Retrieved on 22/10/15 from: https://linskensportfolio.wikispaces.com/Dissertation+Topic+Paper

Livingstone, S. (2012). Critical reflections on the benefits of ICT in education. *Oxford Review of Education, 38 (1). pp. 9-24.*

Macaro, E., Handley, Z., & Walter, C. (2012). A systematic review of CALL in English as a second language: Focus on primary and secondary education. *Language Teaching*, *45*(1), 1-43.

Madway, G. and Oreskovic, A. (27/01/18). *Apple unveils iPad, bets on new device class.* Reuters. Retrieved on 5/3/18 from: https://www.reuters.com/article/us-apple-tablet/apple-unveils-ipad-bets-on-new-device-class-idUSTRE60Q0BY20100127?type=globalMarketsNews

Mang, C. F., and Wardley, L. J. (2012). Effective adoption of tablets in post-secondary education: Recommendations based on a trial of iPads in

university classes. *Journal of Information Technology Education, 11(1), 301-317.*

Manuguerra, M., & Petocz, P. (2011). Promoting student engagement by integrating new technology into tertiary education: The role of the iPad. *Asian Social Science, 7(11), 61.*

Marmarelli, T. & Ringle, M. (2011). *The Reed College iPad Study*. Retrieved on 22/10/15 from: http://134.10.2.252/cis/about/ipad_pilot/Reed_ipad_report.pdf

Martin, T., Berland, M., Benton, T., & Smith, C. P. (2013). Learning programming with IPRO: The effects of a mobile, social programming environment. *Journal of Interactive Learning Research, 24(3), 301-328.*

McColl, E., Jacoby, A., Thomas, L., Soutter, J., Bamford, C., Steen, N., & Bond, J. (2001). Design and use of questionnaires: a review of best practice applicable to surveys of health service staff and patients. *Core Research.* Retrieved on 12/11/16 from: http://www.journalslibrary.nihr.ac.uk/__data/assets/pdf_file/0007/59488/ExecutiveSummary-hta5310.pdf

McKechan, S., & Ellis, J. (2014). Collaborative learning in the Scottish curriculum for excellence: The challenges of assessment and potential of multi-touch technology. *Education, 3-13, 42(5), 475-487.*

Meurant, R. C. (2010). iPad tablet computing to foster Korean EFL digital literacy. *International Journal of u-and e-Service, Science and Technology, 3(4), 49-62.* Retrieved on 22/3/18 from: https://s3.amazonaws.com/academia.edu.documents/5146725/4.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1537006168&Signature=C3msqRHcOavaJ8U%2BUz4%2Ft2zpwJs%3D&response-content-disposition=inline%3B%20filename%3DiPad_Tablet_Computing_to_Foster_Korean_E.pd

Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis: A sourcebook of new methods.* London: Sage.

Miles, M. and Huberman, M. (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. London: Sage.

Ministry of Higher Education and Scientific Research (n.d.). *Interpreting CEPA scores.* Retrieved on 27/8/17 from: http://ws1.mohesr.ae/cepa/Files/Interpreting_CEPA_Scores.pdf

Minnis, J, R. (2006). First nationals education and rentier economics: parallels with the Gulf States. *Canadian Journal of Education, 29(4), 975-997.*

Morgan, D. L. (2014). Pragmatism as a paradigm for social research. *Qualitative Inquiry, 20(8), 1045-1053.*

Mouhanna, M. (2009). Re-examining the role of L1 in the EFL classroom. *UGRU Journal.* Retrieved on 7/7/12 from: http://www.ugr.uaeu.ac.ae/acads/ugrujournal/docs/REL1.pdf

Murphy, G. D. (2011). Post-PC devices: A summary of early iPad technology adoption in tertiary environments*. E-Journal of Business Education & Scholarship of Teaching, 5(1), 18-32*.

Murphy, M. (2014). *Why some schools are selling their iPads.* The Atlantic 5/8/14. Retrieved on 26/11/15 from: http://www.theatlantic.com/education/archive/2014/08/whats-the-best-device-for-interactive-learning/375567/

Murphy, T., & Williams, C. (2011, April). The iPad as a class presentation platform. *Proceedings of the 2011 ASEE Southeastern Section Conference, ASEE, Charleston, SC.* Retrieved on 26/11/15 online from: http://www.softwareeducationsupport.com/ASEE%20SE%20Conference%20Proceedings/Conference%20Files/ASEE2011/Papers/FP2011mur183_199

.PDF

Murray, O. T., & Olcese, N. R. (2011). Teaching and learning with iPads, ready or not? *TechTrends, 55(6), 42-48.*

Naidoo P. (30/9/12). Using the iPad to Create a Paperless Cloud-based Learning Environment. *UAE Journal of Educational Technology and eLearning.* Retrieved on 30/4/18 from: http://ejournal.hct.ac.ae/article/using-the-ipad-to-create-a-paperless-cloud-based-learning-environment/

The National (23/2/10). *Students need to be academically ready.* Retrieved on 11/7/15 from: http://www.thenational.ae/news/uae-news/education/students-need-to-be-academically-ready

The National (14/10/10). *UAE has world's largest environmental footprint.* Retrieved on 11/7/15 from: http://www.thenational.ae/news/uae-news/environment/uae-has-worlds-largest-environmental-footprint

The National (30/6/11). *Power cuts hit dozens of families in RAK.* Retrieved on 11/3/15 from: http://www.thenational.ae/news/uae-news/power-cuts-hit-dozens-of-families-in-rak

The National (2/8/11). *Fewer places for students at federal universities.* Retrieved on 3/9/16 from: http://www.thenational.ae/news/uae-news/education/fewer-places-for-students-at-federal-universities

The National (22/4/12). *Emiratis buck the trend on birth rates.* Retrieved on 11/3/16 from: http://www.thenational.ae/news/uae-news/health/emiratis-buck-the-trend-on-birth-rate

The National (01/9/12). *Dubai: home of world records to get its own Guinness office*. Retrieved on 11/7/16 from: http://www.thenational.ae/news/uae-news/dubai-home-of-world-records-to-get-its-own-guinness-office

The National (24/9/12). *HCT and UAE University students to learn using iPads.* Retrieved on 2/7/16 from: http://www.thenational.ae/news/uae-news/education/hct-and-uae-university-students-to-learn-using-ipads

The National (10/10/12). *Study shows Emiratis and expats in UAE prefer overseas medical care.* Retrieved on 11/7/16 from: http://www.thenational.ae/news/uae-news/health/study-shows-emiratis-and-expats-in-uae-prefer-overseas-medical-care

The National (16/12/13). *Schools failing to teach pupils to think critically says UAE academic.* Retrieved on 21/03/15 from: http://www.thenational.ae/uae/education/20130916/schools-failing-to-teach-pupils-to-think-critically-says-uae-academic

The National (4/2/14). *Challenges of abolishing foundation year in the UAE.* Retrieved on 8/11/16 from: http://www.thenational.ae/uae/education/challenges-of-abolishing-foundation-year-in-the-uae

The National (5/2/14). *Cultivating the right mindset for study matters.* Editorial. Retrieved on 8/11/16 from: http://www.thenational.ae/thenationalconversation/editorial/cultivating-the-right-mindset-for-study-matters

The National (18/4/15) *Inside the FNC: Finding UAE statistics a near-impossible task.* The National. Retrieved on 18/06/18 from: https://www.thenational.ae/uae/inside-the-fnc-finding-uae-statistics-a-near-impossible-task-1.51179

The National (16/6/17). *Savers in UAE struggle to stay on track.* Retrieved on 29/5/18 from: https://www.thenational.ae/business/savers-in-uae-struggle-to-stay-on-track-1.84463

The National (27/7/17). *Arabian Business barred from publishing for a month.* Retrieved on 29/5/18 from: https://www.thenational.ae/uae/arabian-

business-barred-from-publishing-for-a-month-1.614806

The National (15/5/18). *Summit looks at perfect future balance between Emirati and expat workforces.* Retrieved on 21/6/18 from: https://www.thenational.ae/uae/summit-looks-at-perfect-future-balance-between-emirati-and-expat-workforces-1.730520

The National (28/5/18). *Dubai rated the most expensive place to buy a summer dress and surf the internet, survey reveals.* Retrieved on 29/5/18 from: https://www.thenational.ae/uae/dubai-rated-the-most-expensive-place-to-buy-a-summer-dress-and-surf-the-internet-survey-reveals-1.734111

The National (24/12/18). *First, biggest and best: how the UAE went Guinness World Record Mad.* Retrieved on 29/5/19 from: https://www.thenational.ae/uae/heritage/first-biggest-and-best-how-the-uae-went-guinness-world-record-mad-in-2018-1.805863

Nazzal, N. (4/11/13). *HCT Dubai Women's College now a paper-free campus.* Gulf News. Retrieved on 30/4/18 from: https://gulfnews.com/news/uae/education/hct-dubai-women-s-college-now-a-paper-free-campus-1.1251055

Newell R. (1995). *Questionnaires.* In "Researching Social Life" (Gilbert, N., Ed.), pp. 94-115. London: Sage.

Newzoo (May, 2018). *Top 50 Countries by Smartphone Users and Penetration.* Retrieved on 28/6/18 from: https://newzoo.com/insights/rankings/top-50-countries-by-smartphone-penetration-and-users/

Nguyen, L., Barton, S. M., & Nguyen, L. T. (2015). iPads in higher education - Hype and hope*. British Journal of Educational Technology, 46(1), 190-203.*

Nogushi, S. (13/12/16) In Apple's backyard, iPads ignite furor in schools.

Mercury News. Retrieved on 16/6/18 from: https://www.mercurynews.com/2016/12/13/in-apples-backyard-ipads-ignite-furor-in-schools/

Norris, C., Hossain, A., & Soloway, E. (2012, March). Under what conditions does computer use positively impact student achievement? Supplemental vs. essential use. *Society for Information Technology & Teacher Education International Conference, Vol. 2012, No. 1, pp. 2021-2028.*

Norris, C., & Soloway, E. (2018). Mobile Learning in K-12: Roadblocks to Adoption. In Voogt, J., Knezek, G, Christensen, R, and Lai, K. (Eds.) (2018). *Second Handbook of Information Technology in Primary and Secondary Education*. Switzerland: Springer

O'Neill, K., Singh, G., & O'Donoghue, J. (2004). Implementing e-Learning programmes for higher education: A review of the literature. *Journal of Information Technology Education: Research, 3, 313-323.*

O'Sullivan, A. (2004). *Reading and Arab College Students—Issues in the United Arab Emirates Higher Colleges of Technology.* Retrieved on 8/11/16 from:http://bath.academia.edu/AndrewOSullivan/Papers/1056633/Reading_and_Arab_college_students_Issues_in_the_United_Arab_Emirates_Higher_Colleges_of_Technology

Ockert, D. (2018). Using a Tablet Computer for EFL Positive Self-Review: Increases in Self-Determination Theory-Based Learning Motives. *Calico Journal*, *35*(2), 182-199. Retrieved on 23/5/19 from: https://www.researchgate.net/profile/David_Ockert2/publication/323445531_Using_a_Tablet_Computer_for_EFL_Positive_Self-Review_Increases_in_Self-Determination_Theory-Based_Learning_Motives/links/5a965676aca2721405695ef4/Using-a-Tablet-Computer-for-EFL-Positive-Self-Review-Increases-in-Self-Determination-Theory-Based-Learning-Motives.pdf

Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology, 8(5), 375-387.*

Orb, A., Eisenhauer, L., & Wynaden, D. (2001). Ethics in qualitative research. *Journal of Nursing Scholarship, 33(1), 93-96.*

Oxford Business Group (2012).*The Ras Al Khaimah Report 2012.* Oxford Business Group, Oxford, UK.

Park, S. (2013). *Utilizing iPads to enhance student engagement in vocabulary learning: A case study (Master's thesis).* University of Central Florida Orlando, Florida. Retrieved on 18/9/18 from: https://stars.library.ucf.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=3775&context=etd

Patton, M. Q. (2002). *Qualitative research & evaluation methods.* Thousand Oaks, CA: Sage

Pearce, S. (2011). *Is the iPad the correct tool to aid learning in education?* Retrieved on 24/5/15 from: http://innovativescholar.com/2011/12/21/is-the-ipad-the-correct-tool-to-aid-learning-in-education/

Peel, R. (2004). The Internet and Language Use: A Case Study in the United Arab Emirates. *International Journal on Multicultural Societies (IJMS), Vol. 6, No. 1, 2004: 79 – 91. UNESCO*

Peel, R. (2014). *Chapter Seven: Challenge and Change in Online Reading: Learners' Perceptions of Textbooks and Reading Online.* In "Using Technology in Foreign Language Teaching". Al-Mahrooqi, R. and Troudi, S. (Eds.). UK: Cambridge Scholars Publishing.

Peel, R. and Murray, D. (2015). The Collaborative Classroom: Digital Tools for Academic Writing. *Conference proceedings from International*

Conference on 21st Century Education", Dubai, November 2015. Retrieved 05/03/18 from: http://www.21caf.org/uploads/1/3/5/2/13527682/ic21ce-1057-peele-2.pdf

Pellerin, M. (2018). iPad and iPod in the Language Classrooms: New Learning Environments and Learning Experiences. In *Handbook of Research on Integrating Technology Into Contemporary Language Learning and Teaching* (pp. 286-306). IGI Global.

Peluso, D. (2012). The fast-paced iPad revolution: Can educators stay up to date and relevant about these ubiquitous devices? *British Journal of Educational Technology, 43: E125–E127*.

Peng, H., Su, Y. J., Chou, C., & Tsai, C. C. (2009*).* Ubiquitous knowledge construction: Mobile learning re-defined and a conceptual framework. *Innovations in Education and Teaching International, 46(2), 171-183.*

Petersen, R.J. (2012). Policy dimensions of analytics in higher education*. EDUCAUSE Review, July/August, 44 - 49.*

PISA, United Arab Emirates (2015). Retrieved on 17/6/18 from: http://www.compareyourcountry.org/pisa/country/ARE?lg=en

Prensky, M. (2001). Digital natives, digital immigrants: Part 1. *On the Horizon. MCB University Press, Vol. 9 No. 5, October 2001.*

Privateer, P. M. (1999). Academic technology and the future of higher education: Strategic paths taken and not taken. *The Journal of Higher Education, 70(1), 60-79.*

Proffitt, B. (2010). *Take your iPad to work.* Boston, MA: Course Technology Press.

Puentedura, R. (2010). *SAMR and TPCK: Intro to advanced practice.* Retrieved on 2/12/18 from:

http://hippasus.com/resources/sweden2010/SAMR_TPCK_IntroToAdvancedPractice.pdf

Pund, L. (2012). *Why the iPad will not reform Higher Education anytime soon.* Retrieved on 15/10/16 from: https://techpinions.com/why-the-ipad-will-not-reform-higher-education-anytime-soon/6309

Qian, Y., Sun, Y. (2019). Autonomous learning of productive vocabulary in the EFL context: An action research approach, *Digital Scholarship in the Humanities*, Volume 34, Issue 1, April 2019. Retrieved on 22/5/19 from: https://0-doi-org.lib.exeter.ac.uk/10.1093/llc/fqy026

Quinn, C. (2010). *Writing and the 4C's of mobile.* Retrieved on 28/12/15 from: http://blog.learnlets.com/?p=1459

Reams, P., and Twale, D. (2008). The promise of mixed methods: Discovering conflicting realities in the data. *International Journal of Research & Method in Education, 31(2), 133-142.*

Reid, D. and Ostashewski, N. (2011). *iPads in the Classroom–New Technologies, Old Issues: Are they worth the effort?* In T. Bastiaens & M. Ebner (Eds.), *"Proceedings of World Conference on Educational Media and Technology 2011."* (pp. 1689-1694). Retrieved on 12/4/16 from: http://www.editlib.org/p/38089/?nl

Reporters Without Borders (2013). *Press Freedom Index.* Retrieved on 8/11/16 from: http://en.rsf.org/press-freedom-index-2013,1054.html

Retalis, S., Paraskeva, F., Alexiou, A., Litou, Z., Sbrini, T., & Limperaki, Y. (2018). Leveraging the 1: 1 iPad approach for enhanced learning in the classroom. *Educational Media International*, *55*(3), 213-230.

Reuters (6/7/11). *Arab unrest puts focus on Northern Emirates.* Retrieved on 3/10/16 from: http://www.reuters.com/article/2011/07/06/us-emirates-northern-idUSTRE7652Y020110706

Richards, K. (2003). *Qualitative Inquiry in TESOL.* Basingstoke, UK: Palgrave Macmillan.

Richards, L. (2015). *Handling qualitative data: A practical guide*. London: Sage.

Ridge, N. (2014). *Education and the Reverse Gender Divide in the Gulf States: Embracing the Global, Ignoring the Local.* New York: Teachers College Press.

Røkenes, F. M., & Krumsvik, R. J. (2016). Prepared to teach ESL with ICT? A study of digital competence in Norwegian teacher education. *Computers & Education, 97, 1-20.* Retrieved on 10/10/16 from: https://www.sciencedirect.com/science/article/abs/pii/S0360131516300471

Romrell, D., Kidder, L., & Wood, E. (2014). The SAMR model as a framework for evaluating mLearning. *Online Learning Journal*, *18*(2). Retrieved on 10/11/19 from: https://www.learntechlib.org/p/183753/

Saldaña, J. (2013). *The Coding Manual for Qualitative Researchers.* London: Sage.

Salem, O. & Dajani, H. (2013, November 19). *FNC would like Emiratisation to become law.* The National. Retrieved on 18/6/18 from: https://www.thenational.ae/uae/government/fnc-would-like-emiratisation-to-become-law-1.307797

Sana, F., Weston, T., & Cepeda, N. J. (2013). Laptop multitasking hinders classroom learning for both users and nearby peers. *Computers & Education*, *62*, 24-31. Retrieved on 10/12/19 from: https://doi.org/10.1016/j.compedu.2012.10.003

Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers College Press.

Shannon, J. (2003) Getting Gulf students to enjoy reading. *Perspectives, 11 (1), 21 – 24.*

Shaw, A. (2010). *It's Official: Jobs Announces Apple's IPad.* IDG News Service. Retrieved on 12/4/16 from: http://www.pcjobsworld.com/article/187901/apple_ipad_announced.html

Shemmings, D. (2006). 'Quantifying' qualitative data: an illustrative example of the use of Q methodology in psychosocial research. *Qualitative Research in Psychology, 3(2), 147-165.*

Shin, H. J., & Son, J. B. (2007). EFL teachers' perceptions and perspectives on Internet-assisted language teaching. *Computer-Assisted Language Learning Electronic Journal (CALL-EJ)*, *8*(2).

Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction*. London: Sage.

Simpson, J., and Walker, A. (2014). *New technologies for English Language Learning and Teaching*. In Leung, C., & Street, B. V. (Eds.) (2014). "The Routledge companion to English studies". Abingdon, UK: Routledge.

Singer, N. (02/03/17). *Apple's Devices Lose Luster in American Classrooms.* New York Times. Retrieved on 29/05/19 from: https://www.nytimes.com/2017/03/02/technology/apple-products-schools-education.html?_r=0

Slowinski, J. (2000). Becoming a technologically savvy administrator. *ERIC Digest 135*. EDO-EA-00-1. Retrieved on 29/05/19 from: https://www.researchgate.net/profile/Joseph_Slowinski/publication/265192077_A_Becoming_a_Technologically_Savvy_Administrator/links/5587e48408ae71f6ba917d0a.pdf

Smyth, J. D., Dillman, D. A., Christian, L. M., and Stern, M. J. (2006). Effects of using visual design principles to group response options in web surveys. *International Journal of Internet Science, 1(1), 6-16.*

Son, J. B. (2018). *Teacher development in technology-enhanced language teaching*. Springer International Publishing.

Sönmez, S., Apostopoulos, Y., Tran, D. and Rentrope, S. (2011). Human Rights and Health Disparities for Migrant Workers in the UAE. *Health and Human Rights Journal, Vol. 13, Issue 2*. Retrieved 8/11/16 from: http://www.hhrjournal.org/wp-content/uploads/sites/13/2013/06/Sonmez21.pdf

Souleles, N., Savva S., Watters H., Bull, B. & Annesley A. (2014). A phenomenographic investigation on the use of iPads among undergraduate art and design students iPads and art and design students. *British Journal of Educational Technology, January 2014.* Retrieved on 24/1/16 from: http://www.researchgate.net/profile/Nicos_Souleles/publication/259646193_A_phenomenographic_investigation_on_the_use_of_iPads_among_undergraduate_art_and_design_students/links/0deec52d14a64b64ca000000.pdf

Souleles, N. (2017). iPad versus traditional tools in art and design: A complementary association. *British Journal of Educational Technology*, *48*(2), 586-597.

Statista.com (2015). *Global iPad sales.* Retrieved on 7/5/16 from: http://www.statista.com/statistics/269915/global-apple-ipad-sales-since-q3-2010/

Statista (2017). *The number of available native iPad apps.* Available online at: https://www.statista.com/statistics/277209/number-of-available-native-ipad-apps/

Statista (2018). *Internet User Penetration in the United Arab Emirates from*

2013 – 2019. Retrieved on 18/6/18 from: https://www.statista.com/statistics/484923/internet-user-reach-uae/

Statista (2019). *Number of apps available in leading app stores as of 1st quarter 2019.* Retrieved on 18/4/19 from: https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Thousand Oaks, CA: Sage.

Sullivan, R. M. (2013). The tablet inscribed: Inclusive writing instruction with the iPad. *College Teaching, 61(1), 1-2*.

Sun, D., & Looi, C. K. (2018). Boundary interaction: Towards developing a mobile technology-enabled science curriculum to integrate learning in the informal spaces. *British Journal of Educational Technology*, *49*(3), 505-515.

Szuchman, J. (2012). Archaeology, Identity and the Demographic Imbalance in the United Arab Emirates. *Heritage and Society, 5 (1).*

Tashakkori, A. and Teddlie, C. (1998). *Mixed Methodology: Combing Qualitative and Quantitative Approaches.* London: Sage.

Taylor, M. (2008) *Orthographic and phonological awareness among L1 Arabic ESL learners: A quasi-experimental study.* Doctoral dissertation, University of Phoenix, Arizona. Retrieved on 8/11/16 from: http://books.google.ae/books?id=2hbNyzQ2_aYC&printsec=frontcover#v=onepage&q&f=false

Thomas, M., Reinders, H., & Warschauer, M. (2013). *Contemporary computer-assisted language learning*. London: Bloomsbury.

The Qatar Crisis (October 2017). *Project on Middle East Political Science.* Retrieved 8/7/18 from: https://pomeps.org/wp-

content/uploads/2017/10/POMEPS_GCC_Qatar-Crisis.pdf#page=55

TIMMS 2015 International Results in Mathematics (2015). Retrieved on 16/06/18 from: http://timss2015.org/timss-2015/mathematics/student-achievement/

TIMMS 2015 International Results in Science (2015). Retrieved on 16/06/18 from: http://timss2015.org/timss-2015/science/student-achievement/

Tomei, L. (2000). The technology façade. *Society for Information Technology & Teacher Education International Conference (Vol. 2000, No. 1, pp. 90-94).*

Tomei, L. A. (Ed.). (2003). *Challenges of teaching with technology across the curriculum: issues and solutions*. Hershey, PA: IGI Global.

Trager, E. (7/2/2017). *The Muslim Brotherhood is the root of the Qatar crisis.* The Atlantic. Retrieved 17/05/18 from: https://theqatarinsider.com/wp-content/uploads/2017/07/The-Atlantic_The-Muslim-Brotherhood-Is-the-Root-of-the-Qatar-Crisis_2Jul...-1.pdf

Trenwith, C. (2013, November 12). *Emiratisation failing to cut UAE jobless rate - Al Mulla.* Arabian Business. Retrieved 18/06/18 from: http://www.arabianbusiness.com/emiratisation-failing-cut-uae-jobless-rate-al-mulla-526191.html

Troudi, S. (2007). The effects of English as a medium of instruction. *The power of language: Perspectives from Arabia, 3, 1.*

Troudi, S. (2009). *The effects of English as a medium of instruction on Arabic as a language of science and academia*. In Wachob, P. (Ed.), "Power in the EFL Classroom: critical pedagogy in the Middle East" (pp. 196 – 216). Newcastle upon Tyne: Cambridge Scholars Publishing.

Troudi, S. & Jendli, A. (2011). *Emirati students' experiences of English as a medium of instruction.* In Al-Issa, A. & Dahan, L. S. (Eds.) "Global English and Arabic: Issues of language culture and identify" (pp. 23-48). Oxford: Peter Lang.

Troudi, S., Coombe, C., & Al-Hamliy, M. (2009). EFL Teachers' Views of English Language Assessment in Higher Education in the United Arab Emirates and Kuwait. *TESOL Quarterly: A Journal for Teachers of English to Speakers of Other Languages and of Standard English as a Second Dialect, 43 (3), 546-555.*

UAE Government Portal (2017). *Population and demographic mix.* Retrieved on 02/6/18 from: https://government.ae/en/information-and-services/social-affairs/preserving-the-emirati-national-identity/population-and-demographic-mix

UAEU Academic Personnel (2013). Retrieved on 8/11/16 from: http://www.uaeu.ac.ae/en/dvcaa/academic_personnel/faculty_handbook_2013.pdf

UK's English Language Teaching sector worth £1.2 billion (15/2/16). ICEF Monitor. Retrieved on 19/5/18 from: http://monitor.icef.com/2016/02/uks-english-language-teaching-sector-worth-1-2-billion/

Ulrichsen, K. C. (2011). *Insecure Gulf. The End of Certainty and the Transition to the Post-Oil-Era.* London: Hurst and Company.

Ulrichsen, K. C. (2017). *The United Arab Emirates: Power, Politics and Policy-making*. London: Routledge.

UNHR (6/2/14). *UN human rights expert urges the United Arab Emirates to strengthen the independence of its judiciary.* Retrieved on 6/12/16 from: http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=14237&LangID=E

United Arab Emirates Bureau of Statistics (2011). Retrieved on 8/10/17 from: http://www.uaestatistics.gov.ae/ReportPDF/Population%20Estimates%202020 06%20-%202010.pdf

United Nations (2014). *Country classification.* Retrieved 16/08/17 from: http://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf

United Nations (2015) *International Migration Stock. Population Division.* Retrieved on 28/5/18 from: https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml

US EIA [Energy Information Administration] (2013). *United Arab Emirates.* Retrieved on 15/8/16 from: http://www.eia.gov/countries/cab.cfm?fips=tc

Van der Ventel, B. and Newman, R. (2014). ***The use of the iPad in a first-year introductory physics course.*** *First International Conference on the use of iPads in Higher Education 2014 (proceedings).* Retrieved on 23/8/16 from: http://blog.yorksj.ac.uk/ipadproject/files/2014/04/ihe_2014_proceedings.pdf#page=248

Vision 2021 e-book (Prime Minister's Office, UAE Government, 2011). Retrieved on 10/5/16 from: http://www.vision2021.ae/downloads/UAE-Vision2021-Brochure-English.pdf

Wainwright, K. (2012). Putting iPads in the hands of faculty. *Proceedings of the 40th annual ACM SIGUCCS conference on User services (pp. 139-144). ACM.* Retrieved on 10/5/16 from: https://dl.acm.org/doi/10.1145/2382456.2382489

Walker, A., & White, G. (2013). *Technology Enhanced Language Learning:*

connecting theory and practice. Oxford University Press.

Walker. A. (2015). *Diet pills and digital learning.* Retrieved on 23/12/2016 from: http://www.aishawalker.com/2015/07/07/diet-pills-and-digital-learning/

Wang, B. T., Teng, C. W., & Chen, H. T. (2015). Using iPad to facilitate English vocabulary learning. *International Journal of Information and Education Technology, 5(2), 100-104*. Retrieved on 20/15/2017 from: http://ijiet.org/papers/484-S00003.pdf

Wang, Y. H. (2017). Integrating self-paced mobile learning into language instruction: impact on reading comprehension and learner satisfaction. *Interactive learning environments*, *25*(3), 397-411. Retrieved on 23/12/2018 from: https://www.tandfonline.com/doi/abs/10.1080/10494820.2015.1131170

Wardley, L. J., & Mang, C. F. (2015). Student observations: Introducing iPads into university classrooms. *Education and Information Technologies, 1-18.* Retrieved on 13/11/16 from: https://www.springerprofessional.de/en/student-observations-introducing-ipads-into-university-classroom/5440190

Warner, R. S., & Burton, G. J. S. (2017). *The Current State of Education in the UAE.* Mohammed Bin Rashid School of Government. Retrieved on 12/7/18 from: http://uaepublicpolicyforum.ae/wp-content/uploads/publications/MBRSG_PPF_Fertile_Oasis.pdf

Warschauer, M. (1996). *Computer-assisted language learning: An introduction.* In S. Fotos (Ed.), Multimedia language teaching. Tokyo: Logos International.

Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching, 31*(2), 57-71. Retrieved on 07/1/20 from: doi:10.1017/S0261444800012970

Washington Post (25/9/11) *Saudi women given right to vote.* Retrieved on 07/07/16: http://www.washingtonpost.com/blogs/blogpost/post/saudi-women-given-right-to-vote-run-as-candidates-for-first-time-photos-video/2011/09/25/gIQAfnpOwK_blog.html

Washington Post (7/2/05) *Saudis get civic lessons in advance of local vote.* Retrieved on 07/7/16 from: http://www.washingtonpost.com/wp-dyn/articles/A6118-2005Feb7.html

Weber, R. P. (1990). *Basic Content Analysis* (No. 49). Thousand Oaks, CA: Sage.

Weider, B. (2011). iPads could hinder teaching, professors say. *Chronicle of Higher Education, 57(28), A22-A23.*

Welsh, E. (2002, May). Dealing with data: Using NVivo in the qualitative data analysis process. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research (Vol. 3, No. 2).*

Welsh, K., Park, J., France, D., Mauchline, A. L., & Whalley, W. B. (2018). The iPad six years on: Progress and problems for enhancing mobile learning with special reference to fieldwork education. In *Mobile Learning and Higher Education* (pp. 20-30). UK: Routledge.

Williams, R. D., Lee, A., Link, A., & Ernst, D. (2014). Minding the gaps: Mobile technologies and student perceptions of technology*. International HETL Review, 4(1).* Retrieved on 13/4/16 from: https://www.hetl.org/minding-the-gaps-mobile-technologies-and-student-perceptions-of-technology/

World Bank (2014a). *Military expenditure (percentage of GDP).* Retrieved on 23/12/16 from: http://data.worldbank.org/indicator/MS.MIL.XPND.GD.ZS

World Bank (2014b). *World Development Indicators: Education completion and outcomes. Adult Literacy Rates.* Retrieved on 23/12/16 from: http://wdi.worldbank.org/table/2.13

World Bank (2015). *The Little Green Data Book.* Retrieved on 21/10/17 from:https://openknowledge.worldbank.org/bitstream/handle/10986/22025/9781464805608.pdf

World Bank (2018). *Country Rank and Value in the ITU ICT Index.* Retrieved on 07/06/18 from: https://tcdata360.worldbank.org/indicators/h2e1ddd20?country=ARE&indicator=24719&viz=bar_chart&years=2015

Woykes, E. (2011). *The pros and cons of iPads in the classroom.* Retrieved on 18/4/16 from: http://www.forbes.com/sites/elizabethwoyke/2011/01/21/pros-and-cons-of-ipads-in-the-classroom/

Wyse, D., Selwyn, N., Smith, E., & Suter, L. E. (Eds.) (2016).*The BERA/SAGE Handbook of Educational Research*. Thousand Oaks, CA: Sage.

Young, F. W., de Leeuw, J. & Takane, Y. (1980). *Quantifying qualitative data*. In E. D. Lantermann & H. Feger (Eds.) *"Similarity and choice".* Bern: Huber.

Zayed University (2015). *New Students - Placement*. Retrieved on 16/12/16 from: http://www.zu.ac.ae/main/en/colleges/colleges/abp/3-New_Students.aspx

Zayed University Careers website (2015). Retrieved on 16/11/16 from: http://www.zu.ac.ae/main/en/_careers/index.aspx

Zou, B., Yan, X., & Li, H. (2020). Students' Perspectives on Using Online Sources and Apps for EFL Learning in the Mobile-Assisted Language

Learning Context. In *Language Learning and Literacy: Breakthroughs in Research and Practice* (pp. 515-531). IGI Global.

APPENDIX

APPENDIX 1

UNIVERSITY OF EXETER CONSENT FORM FOR RESEARCH

Title of Research Project: “The iPad – an EFL classroom revolution?"

Project details: The primary aim of this research is to examine how teachers have implemented iPads in the classrooms, the Apps and e-texts used, and for teachers to evaluate the education value of the device. A second related aim is for teachers to discuss the reception of the devices by students. This research is for academic purposes only.

This project will be conducted via an online survey, and semi-structured interviews which will be recorded. The research hopes to canvas as many teachers as possible via the survey, and select ten participants to interview (on an entirely voluntary basis of course).

My contact details: Richard Peel, Dubai Women’s College, PO Box 16062, Baghdad Street, Al Qusais, Dubai, UAE. Tel: (00 971) 04 208 9583. Email: **rsp205@exeter.ac.uk**

CONSENT FORM

I have been fully informed about the aims and purposes of the project.

I understand that:

there is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation and may also request that my data be destroyed

I have the right to refuse permission for the publication of any information about me

any information which I give will be used solely for the purposes of this research project, which may include publications or academic conference or seminar presentations

if applicable, the information, which I give, may be shared between any of the other researcher(s) participating in this project in an anonymised form

all information I give will be treated as confidential

the researcher(s) will make every effort to preserve my anonymity

.....…….. .....

(Signature of participant) (Date)

……

(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher(s)

Contact phone number of researcher(s): Richard Peel 04 208 9583

If you have any concerns about the project that you would like to discuss, please contact:

Dr Li Li, Li.Li@exeter.ac.uk Graduate School of Education, Exeter University, UK

OR Dr Ghassoub Mustafa gmustafa@hct.ac.ae HCT Research Committee, Dubai Branch, Dubai HCT Colleges,

* when research takes place in a school, the right to withdraw from the research does NOT usually mean that pupils or students may withdraw from lessons in which the research takes place

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

Revised March 2013

APPENDIX 2

INFORMATION SHEET
THE IPAD – AN EFL CLASSROOM REVOLUTION?

You are invited to participate in a research project which hopes to evaluate the impact of the iPad on teaching ESL at public universities in the UAE, namely at the HCT. This research project is the thesis of my doctoral programme in ESL at the University of Exeter.

Before you decide whether or not to participate in this project, I would like to share with you some details regarding how the research will be conducted and its aims. If there are further queries or clarification required, please feel free to contact me via my University of Exeter email: rsp205@exeter.ac.uk or alternatively via my HCT address: richard.peel@hct.ac.ae .

The primary aim of this research is to examine how teachers have implemented iPads in the classrooms, the Apps and e-texts used, and for teachers to evaluate the educational value of the device. A second related aim is for teachers to discuss the reception of the devices by students. This research is for academic purposes only.

This project will be conducted via an online survey, and semi-structured interviews which will be recorded. The research hopes to canvas as many teachers as possible via the survey, and select ten participants to interview (on an entirely voluntary basis of course).

Regarding anonymity and confidentiality, your identity will never be disclosed and all data will be stored securely. Pseudonyms will be used at all times in the write-up of the data, and survey data is extraneous to the institution—that is, no one will be able to access it except me. I personally guarantee, as per the University of Exeter guidelines, that none of your responses/opinions/answers will ever be shared with any other

person or institution. Survey responses and interview recordings will be accessed only by myself, and deleted and disposed of when they are no longer required.

You have no obligation to take part in this research project, and—should you agree to participate — can withdraw from the project at any time without giving reasons.

After you read this, I hope you have a clear idea about the research project. There is a consent form attached to this sheet which is a University of Exeter requirement—if you are willing to participate in the project, please sign the consent form. Again, this consent will be retained only by myself and never accessible by a third party.

Should you wish to participate, many thanks in advance for your kind assistance in my doctoral thesis.

APPENDIX 3

HCT Consent Form for participating in Research Projects

- I confirm that I have read and understood the information sheet for the above project and the researcher has answered any queries to my satisfaction.
- I understand that my participation is voluntary and that I am free to withdraw from the project at any time, without having to give a reason and without any consequences.
- I understand that I can withdraw my data from the study at any time.
- I understand that any information recorded in the investigation will remain confidential and no information I provide can identify me
- I consent to being a participant in the project

I (PRINT NAME)	Hereby agree to take part in the above project
Signature of Participant:	Date

Dubai Women's College
Practicing the Future

APPENDIX 4

RESEARCH SHARING AGREEMENT
BETWEEN HCT DUBAI Colleges AND RESEARCHER

College ID No: H00002581 **Department:** FDNS

This Agreement is made and entered into between (HCT DUBAI) on behalf of the HCT DUBAI Research Committee and *(name of researcher)* Richard Peel

The purpose of this Agreement is to set forth the terms, conditions, and obligations concerning the sharing of research between the parties.
Therefore, Richard Peel agrees to share research related to the "The iPad in ESL, a case study in the UAE" research study under the following conditions:

1. Richard Peel agrees to maintain research data originating from "The iPad in ESL, a case study in the UAE" research study.

2. Each party agrees to maintain the research results such as a report of the findings, conclusions and recommendations in the HCT DUBAI Library Research Project Database.

3. Both parties agree to maintain confidentiality and privacy safeguards that were originally created as part of the research protocol.

4. Both parties agree not to release information about specific identifiable subjects to anyone.

5. Both parties agree to the boundary conditions of the original proposal under which data sharing was initiated. That is, neither party shall re-specify the proposed response variables, or the proposed covariates, without prior approval of the other. Moreover, each party agrees to cooperate in selective

reporting of focused results so as to protect the integrity of subsequent research activities and uses of the shared data by the originating party.

This agreement to be executed effective as of the first date written below.

Name of HCT DUBAI RC Chairperson: _____

Signature:_____

Date: _____

Name of Researcher: Richard Peel

Signature:_____

Date: 08/05/15

Name of HCT DUBAI Director: _____

Signature_____

Date: _____

Dubai Women's College
Practicing the Future

APPENDIX 5

APPLICATION TO CONDUCT RESEARCH BY HCT DUBAI FACULTY, STAFF, STUDENTS AND OTHERS

Name: Richard Peel

College ID No: H0002581

Department: FDNS

Date of Application: 7/5/15

Details of University / Organisation and Credential / Qualification (for which research is required):

University of Exeter (UK), Ed D TESOL

Brief Outline of Research Topic / Area (that explains the purpose and area of research):

The iPad is a tablet computer designed and marketed by Apple Inc., and was first released on April 3, 2010, with 2nd, 3rd and 4th generation devices being released in subsequent years. It differs from a laptop in having a multi-touch screen, including a virtual keyboard. The iPad can make videos, take photographs, play music and has built-in Wi-Fi allowing it to perform Internet functions such as web-browsing and emailing. It can also be used for playing games, GPS navigation, social networking, etc., by installing various apps, of which there are currently more than 475,000 in the App Store, including

educational apps. In many ways it has promised to revolutionise teaching and curriculum delivery, and has been widely adopted in schools in the US, UK and other countries.

2012 heralded the launch of the iPad as the *de facto* delivery platform for curricula in Foundations programmes at all public universities in the UAE, where programme delivery is via English, a second or foreign language for the UAE nationals attending these institutions. This was a world first in terms of nationwide adoption in tertiary level education. Hailed as an educational revolution, how valuable a teaching and learning tool has the iPad been in the UAE context? This is the research question this thesis seeks to address, albeit on a small scale, via a survey of FDNS faculty at DWC and DMC, and follow-up interviews of 10 individuals who (hopefully!) will volunteer.

Details of Proposed Research/ Survey Tools:

Include here:

- Current status of proposed research at your institution: Approved by tutor, formally approved by institution's (Exeter University's) Ethics Committee Timeline
- Type of research: qualitative
- Methodology: interviews and survey
    - Attach copies of questions or information on the direction of questioning for interviews or surveys
    - Attach copy of consent form
- Anticipated respondents: FDNS teachers

Anticipated number of respondents – 50 via survey, 10 via interviews

Survey – all FDNS teachers will be invited to participate. First 10 who reply to invitation in survey to be interviewed.

Anticipated Benefit to HCT DUBAI or to the field of study:

Include here:

- The first comprehensive evaluation of the educational benefit of the iPad by faculty
- Identification of most useful Apps employed by HCT Dubai Faculty
- Identification of best practice in teaching using the iPad
- Canvassing opinions on how to enhance the iPad's role in curriculum delivery at HCT Dubai

Planned Feedback / Updates to HCT DUBAI Management, Faculty and Students

Written up thesis/PD sessions to be offered to faculty and management

APPENDIX 6
ETHICAL ISSUES

CHECKLIST *If you answer YES to any of the questions below, you will be required to submit further information for ethics approval. Even if all questions are answered NO, the college may require that more details be submitted later.*

Does your research involve - *(please circle)*

1	Any novel procedure in the therapy or management of patients in a clinical setting?	YES NO
2	Any form of physically invasive procedure on participants or the administration of any food, drink or medicine?	YES NO
3	Touching, physical pain, or emotional distress of any sort?	YES NO
4	The participation of students, other than in the observation of normal college activity?	YES NO
5	Participants who are in a dependent situation, such as students, other than those who are being observed in their normal environment where such observation is considered innocuous?	YES NO
6	Acquisition of data about institutions or individuals through any form of database and in which those institutions or individuals are directly or indirectly identifiable?	YES NO
7	Use of questionnaire or interviews which may be linked either directly (eg through recording of names) or indirectly (eg through a cross-linked code) to the individual?	YES NO
8	Use of questionnaire, interview, or procedure which might be reasonably expected to cause discomfort, embarrassment, or psychological or spiritual harm to the participants?	YES NO

9	Processes that potentially exclude and/or disadvantage a person or group, such as the collection of information which may expose the person/group to discrimination, misrepresentation or reduction in quality or amount of service?	YES NO
10	Collection or disclosure of personal information that might breach confidentiality of student or employee records?	YES NO
11	Payments or inducements, other than reasonable recompense, to participants for their participation?	YES NO
12	Deception of any kind of the participants, including concealment of purpose or covert observation?	YES NO
13	Disclosure of the response outside the research which could place participants or institutions at risk of criminal prosecution or civil liability or be damaging to their financial standing, employability, professional standing or personal relationships?	YES NO
14	Any other sensitive issue of the study which has not been addressed in this checklist (e.g. ethical, cultural, or religious)?	YES NO

Investigator Signature: _____

Date: _____

Office Use Only:

Date Added to Database: _____

Approval No: _____

This form should be completed by students/staff undertaking research involving humans with minimal risk, defined as "the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life". Research may not commence without written notification of approval. See over page for application guidelines.

Section 1	To be completed by applicant

1. **Investigator Name:** Richard Peel
2. **Supervisor Name** Yvonne Johnson
3. **School** **University of Exeter**
4. **Project Title** **The iPad in EFL, a case study in the UAE**
5. **Project Type** (e.g. Undergraduate, Honours, Coursework Master's degree) Ed D thesis
6. **Recruitment** Procedures follow guidelines as stated in the National Statement ☒
7. **Participants** Describe the population from which participants/sample will be recruited: Dubai Colleges FDNS faculty
8. **Participant Data** anonymous
9. **Sources of Data**
10. **Data Collection Method(s)** (e.g. observation, physical activity, interviews, survey): Online survey, follow up interviews

Please confirm the following:

11. **Privacy & Confidentiality**.....

i. Data will be stored in a secure location (state where): external HDD locked at work/home

ii. Data will be stored for as short a time as possible: data will be destroyed after analysis

iii. Access to data will be restricted to the researcher only

iv. Data will only be used for purposes as described in the Information sheet

v. Data will only be published in the format as stated in the Information sheet

12. Information Sheet

i. Participants will be given an information sheet[2]

ii. Information sheet will contain all items listed on the attached guidelines

Attach written justification if an Information sheet is not being used

13. Consent form

i.

ii. Participants sign a consent form

iii.

14. Attachments Research Methods & Ethical Issues

i. Information sheet ☒

ii. Consent form ☒

iii. Instrument (eg survey) ☒

Signature: _____

Date:

Section 2	To be completed by research ethics coordinator/reviewer

(a) Project meets ethical requirements and is granted approval
From _____ to _____

(b) Project requires amendment, to be resubmitted to reviewer for approval *(attach list of amendments……..*☐

(c) Applicant instructed to submit further information for approval process……☐

Name of reviewer *(please print)* _____

Signature:_____

Date:_____

Notes from **Application for Approval of Research with Minimal Risk (Ethical Requirements)**

[1] Recruitment of participants must not involve coercion. Participation must be voluntary. The researcher must have authorised access to the contact details of participants. This is a standard ethical requirement.

[2] Participants must be given an information sheet that suits their language ability, unless they are incapable of understanding written information, or if it is culturally inappropriate, in which case information can be given verbally.

[3] A consent form may not be required if participation is completely anonymous (no personal details recorded) **and** information is not sensitive i.e. unlikely to cause embarrassment, pain, distress, emotional or spiritual discomfort**.**

Submission

Submit the form (*HCT DUBAI Application for Approval of Research with Minimal Risk: Ethical Requirement)*

to the ethics committee chairperson at HCT DUBAI

Before completing the form, applicants should first check with research ethics coordinator at the institution at which they are studying to see if there are guidelines regarding the kinds of research that can be approved.

Informed Consent

A consent form and information sheet must be provided to participants in all but exceptional circumstances. In preparing these documents reference should be made to the *Australian NHMRC National Statement on Ethical Conduct in Research Involving Humans* (see paragraph on **Consent** 1.7 1.12).

Paragraph 1.7 of the *Australian National Statement* says:

Before research is undertaken, whether involving individuals or collectivities, the consent of the participants must be obtained, except in specific circumstances defined elsewhere in this Statement [see paragraphs 1.11, 6.9, 14.4, 15.8, 16.13].

So as to conform to ethical and legal requirements, obtaining consent should involve:
provision to participants, at their level of comprehension, of information about the purpose, methods, demands, risks, inconveniences, discomforts, and possible outcomes of the research (including the likelihood and form of publication of research results); and the exercise of a voluntary choice to participate.

Other main points to note from the Australian National Statement are listed below:

- A participant may refuse to participate without giving a reason or justification (paragraph 1.8).
- A participant's consent must be clearly established, and the consent of all properly interested parties obtained (paragraph 1.9). When appropriate, consent may need to be sought at both an individual and an organisation level.
- Consent must not be the subject of coercion, or to any inducement or influence which could impair its voluntary character (paragraph 1.10).
- Circumstances in which consent from participants may not be necessary include: the use of de-identified data in epidemiological research, observational research in public places, or the use of anonymous surveys (paragraph 1.11).
- A participant must be free at any time to withdraw consent to further involvement in the research.

Researchers who would like permission to have access to the personal details of staff or students of HCT DUBAI or HCT for the purposes of directly inviting them to participate in a research study (e.g. contact details) will require approval from the Director of all colleges involved.

Information Sheet

The purpose of the information sheet is to provide participants with a plain language statement that clearly describes the aims of the project and the nature of involvement of participants. Participants should be clearly informed of their rights and any risks associated with participation. At all times the researcher(s) must observe the welfare of the participants and respect the dignity and personal privacy of each individual.

An information sheet must include the following:

- the aims of the project,
- a description of what will be required of the participants (include details of amount of time required of participants)

- a statement which addresses confidentiality and security of information (details of who will have access to personal information and the purpose(s) for which participant information will be used, including whether participants would be potentially identifiable in any published material)
- a statement that advises participation is completely voluntary; participants are at liberty to withdraw at any time without prejudice or negative consequences; non-participation will not affect an individuals rights/access to other services/care (eg in the case of patients)
- any risks / benefits to participants
- contact details of the investigators (and supervisor where the principal investigator is a student) should the participant require further information
- contact details of the Human Research Ethics Committee (Secretary) should participants wish to make a complaint on ethical grounds
- confirmation that the project has been approved by the Curtin University Human Research Ethics Committee.

Consent Form

A consent form would normally include the details listed below:

- title of project
- statements of confirmation, such as -
  "I have been informed of and understand the purposes of the study."
  "I have been given an opportunity to ask questions."
  "I understand I can withdraw at any time without prejudice."
  "Any information which might potentially identify me will not be used in published material."
  "I agree to participate in the study as outlined to me."
- name of participant, signature and date.

References

NHMRC, "National Statement on Ethical Conduct in Research Involving Humans"

http://www.nhmrc.gov.au/publications/synopses/e72syn.htm

NHMRC, “Human Research Ethics Handbook”

http://www.nhmrc.gov.au/publications/synopses/e42syn.htm

Joint NHMRC/AVCC “Statement and Guidelines on Research Practice, Section 2 “Data Storage and Retention”

http://www.nhmrc.gov.au/grants/policy/researchprac.htm#5

Where a researcher would like to use data that has already been collected by a Commonwealth agency, the researcher will need to consult the following publication:

NHMRC “Guidelines under Section 95 of the Privacy Act 1988”, Section 2, Procedures to be followed by researchers and Appendix 1 Information Privacy Principles.

http://www.nhmrc.gov.au/publications/synopses/e26syn.htm

Where a researcher would like to use data that has already been collected by a private organisation, then researchers will need to consult the following publication:

NHMRC Guidelines Approved Under Section 95A of the Privacy Act 1988, Section A Guidelines for the conduct of research relevant to public health or public safety and Appendix 1 National Privacy Principles

http://www.nhmrc.gov.au/publications/synopses/e43syn.htm

APPENDIX 7

Guest Speaker Clearance Process – Director's Office

Initial Approvers	Dean of Academic Operations
Facilitator	Isra Mosameh - imosameh@hct.ac.ae
Documents	- Guest Speaker's Biography - Guest Speaker's CV - Event Proposal (program purpose, target audience, learning outcomes, venue and date/time, etc.). - Confirmation from Marketing that no conflict exists with other planned events on campus (confirmation email to be attached) - Detailed Budget allocated for the event's guest speaker.
Approvals on Academic Clearances	- Guest speaker must be approved by Dean of Academic Operations prior to applying for security clearance. - Complete submissions must be submitted at least 15 days prior to event to avoid delays.
Final Approvers	DWC Director
Documents	For Emirati Guest Speakers the following documents are necessary:- - Request Form – Guest Speakers and Visitors (Attached) - Arabic Letter (Attached) – no need to be signed - Colored Photo - Passport Copy (passport page with the Unified number has to be attached too – الرقم الموحد) - Family Book Copy - ID Card Copy

Approvals on Security Clearance	Director's Signature on the forms where indicated is required to submit documents for security clearance.
Submission of Documents	- Signed documents should be sent via email to Ms. Ohoud Al Hammadi at oalhammadi@hct.ac.ae in the **JPEG format** ONLY. *Documents provided in a different format shall not be processed.* - A hard copy of all documents must then be submitted to Director's Office in an envelope. After which they shall be sent to CS. (Please ensure submitting the envelope to Ms. Isra Mosameh in person, and not leave it on her desk). - A security clearance request needs to be submitted at least 15 days prior to the expected arrival of a guest speaker.
Important Notes	- No guest speaker shall be allowed on campus unless Academic Approval and Security Clearance have been granted. - Please note that security clearance is only valid for 6 months. (Duration is subject to change).

APPENDIX 8

Envisaged questions for questionnaire V1 04/21/15

1. How much are you currently using the iPad in class?
    a. Daily
    b. Weekly
    c. Monthly
    d. Seldom
    e. Never
2. Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now?
    a. More than before
    b. Less
    c. About the same
3. Has using iPads/mobile devices in the classroom changed the way you teach?
    a. Yes
    b. No

    If yes, can you please specify? _____
4. Do you think having mobile devices in the classroom has changed the way students learn?
    a. Yes
    b. No

    If yes, can you please specify? _____
5. In what ways are you using it in the class? Please rank the following from highest to lowest in terms of use:
    a. E-textbook
    b. Apps (please specify)
    c. Internet (please specify)
    d. Blackboard Learn
    e. Other (please specify) _____
6. How comfortable do you feel using the iPad in the classroom?

a. Extremely comfortable
b. more comfortable than with a laptop/
c. fairly comfortable
d. uncomfortable

7. How does the iPad compare to earlier means of curriculum delivery—i.e. laptops and textbooks?
    a. It is a great improvement
    b. it is a useful complement
    c. laptops and/or textbooks were more effective

8. How do you find College-based support services for the iPad?
    a. Excellent
    b. very good
    c. good
    d. could be improved
    e. poor

9. What aspects of learning do you feel has been enhanced by the iPad? (please specify) _____

10. What issues/problems (if any) have you had with the iPad so far? _____

11. What advice would you give to
    a. teachers who are about to use mobile devices? _____
    b. educational managers _____
12. If you had any recommendations for the future, what would they be? _____

13. Overall, how have you found the iPad experience in terms of teaching and learning?

a. Excellent
b. very good
c. good
d. average
e. poor

14. Would you be willing to do a short (30 min max) follow up interview?
    a. Yes
    b. No

Thank you.

Envisaged questions for a semi-structured interview

1. Has using iPads/mobile devices in the classroom changed the way you teach? How?
2. Do you think having mobile devices in the classroom has changed the way students learn? How?
3. Can you describe a situation where learning has changed?
4. Can you describe a situation where learning has stayed the same?
5. When using mobile devices/iPads in the classroom what considerations do you as a teacher need to make?
6. What would you do differently in coming semesters?
7. In what ways has a mobile device been beneficial to students' learning?
8. In what ways—if any—has a mobile device been detrimental to students' learning?
9. What—if any—difficulties have you encountered using mobile devices?
10. Overall, how have you found the iPad experience in terms of teaching and learning?
11. What advice would you give to
    a. teachers who are about to use mobile devices?
    b. educational managers?

APPENDIX 9

iPad questions for questionnaire V2 08/5/15

Part A – Participant Profile

1. Are you male/female?
2. Are you aged:
    a. Under 25?
    b. 26 – 35?
    c. 36 – 45?
    d. 46 – 55?
    e. 56 – 65?
    f. Over 64?
3. How long have you been teaching?
    a. 1 – 5 years
    b. 6 – 10 years
    c. 11 – 20 years
    d. 21 to 30 years
    e. Over 30 years

4. How technically competent do you feel using educational technology (laptops/online learning etc.) in general?
    a. Very competent
    b. Competent
    c. Somewhat competent
    d. Reluctant user

Part B – use of the iPad

5. How long have you been using an iPad? _____

6. Do you use it out of class? Y/N – if no, go to q. 7

7. If yes, how many hours per week would you say you used it for, and for what purposes?

   _____

8. How much are you currently using the iPad in class? Every lesson/most lessons/half the lessons/a few lessons/seldom/never
9. Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now? More than before/less than before/about the same
10. In what ways are you using it in the class? Please rank the following in order of use, with the first (#1) being the most used, and #5 being the least used:

a) E-textbook
b) Apps (please specify, and please rank in order of use, with the first (#1) being the app most used)
c) Internet (please specify and rank as above)
d) Blackboard Learn
e) Other (please specify and rank as above)

Part C – iPad technical support and training

11. How confident do you feel using the iPad in the classroom?
    a. Very confident
    b. Fairly confident
    c. Lacking in confidence

12. How technically competent do you feel using the iPad?
    a. Very competent

b. Competent
c. Sometimes need help
d. Often need help
e. I rarely use it

13. What best describes the Professional Development training sessions offered for the IPad?
    a. Excellent
    b. Good
    c. Average
    d. Could be improved

14. Can you say why, briefly?

    _____

15. How do you find College-based technical support services for the iPad?
    a. Excellent
    b. Good
    c. Average
    d. Poor

16. Can you say why, briefly?

    _____

Part D - iPad evaluation and recommendations

17. How does the iPad compare to laptops in terms of teaching and learning?
    a. iPads are more effective
    b. They are equally effective
    c. Laptops are more effective

Can you say why, briefly?

_____

18. How does the iPad compare to books in terms of teaching and learning?
    a. iPads are more effective
    b. They are equally effective
    c. Books are more effective

Can you say why, briefly?

_____

19. What aspects of learning do you feel has been enhanced by the iPad? (please specify)

_____

20. What issues/problems (if any) have you had with the iPad so far?

_____

21. If you had any recommendations for the future, what would they be?

_____

22. What advice would you give to teachers who are about to use mobile devices?

_____

23. What advice would you give to: educational managers

_____

24. Overall, how have you found the iPad experience in terms of teaching and learning?

_____

25. Would you be willing to do a short (30 min max) follow up interview? Y/N

Thank you.

Envisaged questions for a semi-structured interview

1. How do you use the iPad for teaching?
2. Do you use the iPad out of class?
3. How long have you been using it?
4. Has using iPads/mobile devices in the classroom changed the way you teach? How?
5. Do you think having mobile devices in the classroom has changed the way students learn? How?
6. Are there ways in which learning has stayed the same?
7. When using mobile devices/iPads in the classroom what considerations do you as a teacher need to make?
8. What would you do differently in coming semesters?
9. In what ways has a mobile device been beneficial to students' learning?
10. In what ways —if any —has a mobile device been detrimental to students' learning?
11. What is your outlook on the future of iPads in the classroom in our learning context (HCT)?

Thank you.

APPENDIX 10

iPad questions for questionnaire V3 10/5/15

Part A – Participant Profile

1. Are you
    a. Male
    b. female

2. Are you aged:
    a. Under 25?
    b. 26 – 35?
    c. 36 – 45?
    d. 46 – 55?
    e. 56 – 65?
    f. Over 65?

3. How long have you been teaching?
    a. 1 – 5 years
    b. 6 – 10 years
    c. 11 – 20 years
    d. 21 to 30 years
    e. Over 30 years

Part B – use of the iPad

4. How long have you been using an iPad? _____

5. Do you use it out of class?
    a. Yes
    b. No

If no, go to q. 8

6. If yes, how many hours per week would you say you use it?
    a. 1 – 5
    b. 6 – 10
    c. 11 – 15
    d. 16 – 20
    e. 20 – 24
    f. 25 or more

7. For what purposes do you use it out of class? Please rank the following in order of use, with the first (#1) being the most used, and #10 being the least used:

    a. Checking personal e-mail
    b. Checking work e-mail
    c. Social media
    d. News sites
    e. Watching films
    f. Games
    g. Lesson planning
    h. Course/curriculum/materials development
    i. Other work-related use (please specify) _____
    j. Other (please specify) _____

8. How much are you currently using the iPad in class?
    a. Every lesson
    b. most lessons
    c. half the lessons
    d. a few lessons
    e. seldom

f. never

9. Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now?
    a. More than before
    b. less than before
    c. about the same

10. In what ways are you using it in the class? Please rank the following in order of use, with the first (#1) being the most used, and #5 being the least used:
    a. E-textbook
    b. Apps (please specify, and please rank in order of use, with the first (#1) being the app most used)
    c. Internet (please specify and rank as above)
    d. Blackboard Learn
    e. Other (please specify and rank as above)

Part C – iPad technical support and training

11. How confident do you feel using the iPad in the classroom?
    a. Very confident
    b. fairly confident
    c. lacking in confidence

12. How technically competent do you feel using the iPad?
    a. Very competent
    b. competent
    c. sometimes need help
    d. often need help
    e. I rarely use it

13. What best describes the Professional Development training sessions offered for the iPad?
    a. Excellent
    b. Good
    c. Average
    d. could be improved

    Can you say why, briefly?

    _____

14. How do you find College-based technical support services for the iPad?
    a. Excellent
    b. good
    c. could be improved
    d. poor

    Can you say why, briefly?

    _____

15. What is the procedure at your campus when you or a student needs iPad support in the classroom?

    _____

16. Is there any additional PD or technical support that should be offered?

    _____

Part D - iPad evaluation and recommendations

17. How does the iPad compare to laptops in terms of teaching and learning? iPads are more effective/they are equally effective/laptops are more effective

    Can you say why, briefly? _____

18. How does the iPad compare to books in terms of teaching and learning? iPads are more effective/they are equally effective/books are more effective

Can you say why, briefly? _____

19. What aspects of learning do you feel has been enhanced by the iPad? (please specify)

_____

20. What issues/problems (if any) have you had with the iPad so far?

_____

21. What three reasons/things would you cite to **continue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

I. _____

II. _____

III. _____

22. What three reasons/things would you cite to **discontinue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

I. _____

II. _____

III. _____

23. If you had any recommendations for the future, what would they be?

_____

24. What advice would you give to teachers who are about to use mobile devices?

_____

25. What advice would you give to: educational managers?

_____

26. Overall, how have you found the iPad experience in terms of teaching and learning?

_____

27. Would you be willing to do a short (30 min max) follow up interview?
    a. Yes
    b. No

Thank you.

Envisaged questions for a semi-structured interview

1. How do you use the iPad for teaching?
2. Do you use the iPad out of class?
3. How long have you been using it?
4. Has using iPads/mobile devices in the classroom changed the way you teach? How?
5. Do you think having mobile devices in the classroom has changed the way students learn? How?
6. Are there ways in which learning has stayed the same?
7. When using mobile devices/iPads in the classroom what considerations do you as a teacher need to make?
8. What would you do differently in coming semesters?
9. In what ways has a mobile device been beneficial to students' learning?
10. In what ways—if any—has a mobile device been detrimental to students' learning?
11. What is your outlook on the future of iPads in the classroom in our learning context (HCT)?

12. And finally, would you be able to provide a lesson plan for a class where you employed the iPad, and give feedback on it in the next week or so?

Thank you.

APPENDIX 11

iPad questions for questionnaire V4 11/5/15

Part A – Participant Profile

1. Are you
    a. Male
    b. female

2. Are you aged:
    a. Under 25?
    b. 26 – 35?
    c. 36 – 45?
    d. 46 – 55?
    e. 56 – 65?
    f. Over 65?

3. How long have you been teaching?
    a. 1 – 5 years
    b. 6 – 10 years
    c. 11 – 20 years
    d. 21 to 30 years
    e. Over 30 years

Part B – use of the iPad

4. How long have you been using an iPad? _____

5. Do you use it out of class?
    a. Yes
    b. No

If no, go to q. 8

6. If yes, how many hours per week would you say you use it?
    a. 1 – 5
    b. 6 – 10
    c. 11 – 15
    d. 16 – 20
    e. 20 – 24
    f. 25 or more

7. For what purposes do you use it out of class? Please rank the following in order of use, with the first (#1) being the most used, and #10 being the least used:

    a. Checking personal e-mail
    b. Checking work e-mail
    c. Social media
    d. News sites
    e. Watching films
    f. Games
    g. Lesson planning
    h. Course/curriculum/materials development
    i. Other work-related use (please specify) _____
    j. Other (please specify) _____

8. How much are you currently using the iPad in class?
    a. Every lesson
    b. most lessons
    c. half the lessons
    d. a few lessons
    e. seldom
    f. never

9. Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now?
    a. More than before
    b. Less than before
    c. about the same

10. In what ways are you using it in the class? Please rank the following in order of use, with the first (#1) being the most used, and #5 being the least used:
    a. E-textbook
    b. Apps (please specify, and please rank in order of use, with the first (#1) being the app most used)
    c. Internet (please specify and rank as above)
    d. Blackboard Learn
    e. Other (please specify and rank as above)

Part C – iPad technical support and training

11. How confident do you feel using the iPad in the classroom?
    a. Very confident
    b. fairly confident
    c. lacking in confidence

12. How technically competent do you feel using the iPad?
    a. Very competent/competent
    b. sometimes need help
    c. often need help
    d. rarely use it

13. What best describes the Professional Development training sessions offered for the iPad?

a. Excellent
b. Good
c. Average
d. could be improved

Can you say why, briefly?

_____

14. How do you find College-based technical support services for the iPad?
    a. Excellent
    b. Good
    c. could be improved
    d. poor

Can you say why, briefly?

_____

15. What is the procedure at your campus when you or a student needs iPad support in the classroom?

_____

16. Is there any additional PD or technical support that should be offered?

_____

Part D - iPad evaluation and recommendations

17. How does the iPad compare to laptops in terms of teaching and learning?
    a. iPads are more effective
    b. they are equally effective
    c. laptops are more effective

Can you say why, briefly?

_____

18. How does the iPad compare to books in terms of teaching and learning?
    a. iPads are more effective
    b. they are equally effective
    c. books are more effective

Can you say why, briefly?

_____

19. What aspects of learning do you feel has been enhanced by the iPad? (please specify)

_____

20. What issues/problems (if any) have you had with the iPad so far?

_____

21. What three reasons/things would you cite to **continue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?
    I. _____
    II. _____
    III. _____

22. What three reasons/things would you cite to **discontinue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?
    I. _____

II. _____

III. _____

23. If you had any recommendations for the future, what would they be?

_____

24. What advice would you give to teachers who are about to use mobile devices?

_____

25. What advice would you give to: educational managers?

_____

26. Overall, how have you found the iPad experience in terms of teaching and learning?

_____

27. Would you be willing to do a short (30 min max) follow up interview?
    a. Yes
    b. No

Thank you.

<u>Envisaged questions for a semi-structured interview</u>

1. How do you use the iPad for teaching?
2. Do you use the iPad out of class?
3. How long have you been using it?
4. Has using iPads/mobile devices in the classroom changed the way you teach? How?
5. Do you think having mobile devices in the classroom has changed the way students learn? How?
6. Are there ways in which learning has stayed the same?
7. When using mobile devices/iPads in the classroom what considerations do you as a teacher need to make?

8. What would you do differently in coming semesters?
9. In what ways has a mobile device been beneficial to students' learning?
10. In what ways - if any - has a mobile device been detrimental to students' learning?
11. What is your outlook on the future of iPads in the classroom in our learning context (HCT)?
12. And finally, would you be able to provide a lesson plan for a class where you employed the iPad, and give feedback on it in the next week or so?

Thank you.

APPENDIX 12

iPad questions for questionnaire V5 12/5/15

Part A – Participant Profile

1. Are you
    a. Male
    b. female

2. Are you aged:
    a. Under 26?
    b. 26 – 35?
    c. 36 – 45?
    d. 46 – 55?
    e. 56 – 65?
    f. Over 65?

3. How long have you been teaching?
    a. 1 – 5 years
    b. 6 – 10 years
    c. 11 – 20 years
    d. 21 to 30 years
    e. Over 30 years

Part B – use of the iPad

4. Approximately how long have you been using an iPad?

    _____

5. Do you use it out of class?
    a. Yes
    b. No

    If no, go to q. 8

6. If yes, how many hours per week would you say you use it?
    a. 1 – 5
    b. 6 – 10
    c. 11 – 15
    d. 16 – 20
    e. 21 – 25
    f. More than 25

7. For what purposes do you use it out of class? Please rank the following in order of use, with the first (#1) being the most used, and #10 being the least used:

    a. Checking personal e-mail
    b. Checking work e-mail
    c. Social media
    d. News sites / media
    e. Watching films
    f. Games
    g. Lesson planning
    h. Course/curriculum/materials development
    i. Online shopping
    j. Other work-related use (please specify) _____
    k. Other (please specify) _____

8. How much are you currently using the iPad in class?

a. Every lesson
b. most lessons
c. half the lessons
d. a few lessons
e. seldom
f. never

9. Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now?
    a. More than before
    b. Less than before
    c. about the same

10. In what ways are you using it in the class? Please rank the following in order of use, with the first (#1) being the most used, and #5 being the least used:
    i. E-textbook
    ii. Apps
    iii. Internet (please specify and rank as above)
    iv. Blackboard Learn
    v. Other (please specify and rank as above)

11. Which Apps do you use most in class? Please rank, with the first (#1) being the app most used.
    I. ----------
    II. ----------
    III. ----------
    IV. ----------
    V. ----------

Part C – iPad technical support and training

12. How confident do you feel using the iPad in the classroom?
    a. Very confident
    b. fairly confident
    c. lacking in confidence but use it some of the time
    d. prefer to use other resources such as textbooks and photocopies

13. How technically competent do you feel using the iPad?
    a. Very competent
    b. competent
    c. sometimes need help
    d. often need help
    e. I rarely use it

14. What best describes the Professional Development training sessions offered for the iPad?
    a. Excellent
    b. good
    c. average
    d. could be improved
    e. poor

    Can you say why, briefly?

    _____

15. How do you find College-based technical support services for the iPad?
    a. Excellent
    b. good
    c. could be improved
    d. poor

    Can you say why, briefly?

    _____

16. What is the procedure at your campus when you or a student needs iPad support in the classroom?

_____

17. Is there any additional PD or technical support that should be offered?

_____

Part D - iPad evaluation and recommendations

18. How does the iPad compare to laptops in terms of teaching and learning?
    a. iPads are more effective
    b. they are both equally effective
    c. laptops are more effective

    Can you say why, briefly?

    _____

19. How does the iPad compare to textbooks in terms of teaching and learning?
    a. iPads are more effective
    b. they are both equally effective
    c. textbooks are more effective

    Can you say why, briefly?

    _____

20. What aspects of learning do you feel has been enhanced by the iPad? (please specify)

_____

21. What issues/problems (if any) have you had with the iPad so far?

_____

22. What three reasons/things would you cite to **continue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

    i. _____
    ii. _____
    iii. _____

23. What three reasons/things would you cite to **discontinue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

    i. _____
    ii. _____
    iii. _____

24. If you had any recommendations for the future, what would they be?

_____

25. What advice would you give to teachers who are about to use iPads?

_____

26. What advice would you give to educational managers?

_____

27. Overall, how have you found the iPad experience in terms of teaching and learning?

_____

28. Would you be willing to do a short (30 min max) follow up interview?
    a. Yes
    b. No

Thank you.

Envisaged questions for a semi-structured interview

1. How do you use the iPad for teaching?
2. Do you use the iPad out of class?
3. How long have you been using it?
4. Has using iPads in the classroom changed the way you teach? How?
5. Do you think having iPads in the classroom has changed the way students learn? How?
6. Are there ways in which learning has stayed the same?
7. When using iPads in the classroom, what considerations do you as a teacher need to make?
8. What would you do differently in coming semesters?
9. In what ways has the iPad been beneficial to students' learning?
10. In what ways - if any - has the iPad been detrimental to students' learning?
11. What is your outlook on the future of iPads in the classroom in our learning context (HCT)?
12. And finally, would you be able to provide a lesson plan for a class where you employed the iPad, and give feedback on it in the next week or so?

Thank you.

APPENDIX 13

iPad qs for survey V5 12/5/15

Part A – Participant Profile

1. Are you
    a. Male
    b. female

2. Are you aged:
    a. Under 26?
    b. 26 – 35?
    c. 36 – 45?
    d. 46 – 55?
    e. 56 – 65?
    f. Over 65?

3. How long have you been teaching?
    a. 1 – 5 years
    b. 6 – 10 years
    c. 11 – 20 years
    d. 21 to 30 years
    e. Over 30 years

4. What level of FDNS do you teach?
    a. 1
    b. 2
    c. 3
    d. 4

5. What level do you usually teach?
    a. 1
    b. 2
    c. 3
    d. 4

Part B – use of the iPad

6. Approximately how long have you been using an iPad?

    _____

7. Do you use it out of class?
    a. Yes
    b. No

If no, go to q. 8

8. If yes, how many hours per week would you say you use it?
    a. 1 – 5
    b. 6 – 10
    c. 11 – 15
    d. 16 – 20
    e. 21 – 25
    f. More than 25

9. For what purposes do you use it out of class? Please rank the following in order of use, with the first (#1) being the most used, and #6 being the least used:

    a. Checking personal e-mail
    b. News sites / current affairs

c. Entertainment (social media, games, films)
d. Work-related use (work email, materials development etc.)
e. Online shopping
f. Other

10. If you selected ‘Other’ in Q.9, please provide details _____

11. How much are you currently using the iPad in class?
    a. Every lesson
    b. most lessons
    c. half the lessons/
    d. a few lessons
    e. seldom
    f. never

12. Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now?
    a. More than before
    b. less than before
    c. about the same

13. In what ways are you using it in the class? Please rank the following in order of use, with the first (#1) being the most used, and #5 being the least used:
    a. E-textbook
    b. Apps
    c. Internet
    d. Blackboard Learn
    e. Other

14. If you selected ‘Other’ in Q.13, please provide details _____

15. Which Apps do you use most in class? Please rank, with the first (#1) being the app most used.
    a. ----------
    b. ----------
    c. ----------
    d. ----------
    e. ----------

Part C – iPad technical support and training

16. How confident do you feel using the iPad in the classroom?
    a. Very confident
    b. fairly confident
    c. lacking in confidence but use it some of the time
    d. prefer to use other resources such as textbooks and photocopies

17. How technically competent do you feel using the iPad?
    a. Very competent
    b. competent
    c. sometimes need help
    d. often need help
    e. I rarely use it

18. What best describes the Professional Development training sessions offered for the iPad
    a. Excellent
    b. good
    c. average
    d. could be improved
    e. poor

Can you say why, briefly?

_____

19. How do you find College-based technical support services for the iPad?
    a. Excellent
    b. good
    c. could be improved
    d. poor

Can you say why, briefly?

_____

20. What is the procedure at your campus when you or a student needs iPad support in the classroom?

_____

21. Is there any additional PD or technical support that should be offered?

_____

Part D - iPad evaluation and recommendations

22. How does the iPad compare to laptops in terms of teaching and learning?
    a. iPads are more effective
    b. they are both equally effective
    c. laptops are more effective

Can you say why, briefly?

_____

23. How does the iPad compare to textbooks in terms of teaching and learning?
    a. Pads are more effective
    b. they are both equally effective

c. textbooks are more effective

Can you say why, briefly?

_____

24. What aspects of learning do you feel has been enhanced by the iPad? (please specify)

_____

25. What issues/problems (if any) have you had with the iPad so far?

_____

26. What three reasons/things would you cite to **continue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

    i. _____
    ii. _____
    iii. _____

27. What three reasons/things would you cite to **discontinue** using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

    i. _____
    ii. _____
    iii. _____

28. If you had any recommendations for the future, what would they be?

_____

29. What advice would you give to teachers who are about to use iPads?

_____

30. What advice would you give to educational managers?

_____

31. Overall, how have you found the iPad experience in terms of teaching and learning?

_____

32. Would you be willing to do a short (30 min max) follow up interview?
    a. Yes
    b. No

Thank you.

Envisaged questions for a semi-structured interview

1. How do you use the iPad for teaching?
2. Do you use the iPad out of class?
3. How long have you been using it?
4. Has using iPads in the classroom changed the way you teach? How?
5. Do you think having iPads in the classroom has changed the way students learn? How?
6. Are there ways in which learning has stayed the same?
7. When using iPads in the classroom, what considerations do you as a teacher need to make?
8. What would you do differently in coming semesters?
9. In what ways has the iPad been beneficial to students' learning?
10. In what ways - if any - has the iPad been detrimental to students' learning?
11. What is your outlook on the future of iPads in the classroom in our learning context (HCT)?
12. Are you pro or anti-iPad?

Thank you.

APPENDIX 14

Table 1: Questionnaire respondents' 5 most-used apps. Total of 51 apps. High usage apps highlighted in yellow.

Respondents' choice of app	# 1	# 2	# 3	# 4	# 5	Total
Active reading	0	2	0	0	0	2
Adobe Reader	2	4	1	3	2	12
Adobe Voice	0	0	0	0	1	1
Annotate	1	0	0	0	0	1
British Council Johnny's Grammar	0	0	1	0	0	1
BBL/Mobile Learn	2	1	0	3	0	6
Cambridge Bookshelf	0	0	0	0	2	2
Chicktionary	0	0	0	1	0	1
Class Dojo	0	0	0	0	1	1
Creative Book Builder (CBB)	1	2	4	3	1	11
Dolphin Browser	0	0	1	0	0	1
Dragon Dictation	0	0	1	0	0	1
Drop Box	3	1	1	0	0	5
Edmodo	1	0	0	0	1	2
Educreations	0	0	0	3	1	4
E-textbook	0	0	0	0	1	1
Explain Everything	0	0	0	1	2	3
Flashcards	0	0	1	0	0	1

Flipquizme	0	0	0	1	0	1
Free Spelling App	1	0	0	0	0	1
iBooks	1	2	2	2	2	9
iMovie	0	0	2	0	1	3
iTunes	1	0	0	0	0	1
Kahoot	1	0	1	2	0	4
Keynote	1	5	1	2	1	10
Mail	0	1	0	0	0	1
Moviemaker	0	0	1	0	0	1
Nearpod	0	2	6	2	0	10
News site apps e.g. BBC World	0	0	1	0	0	1
Oxford Bookshelf /Grammar	1	0	1	0	0	2
Padlet	0	1	0	0	0	1
Pages	4	1	3	0	1	9
Pixlr	0	0	0	1	0	1
Popplet/Popplet Lite	1	2	1	2	2	8
Prezi	0	0	0	0	1	1
Puppet Pals	1	0	0	0	0	1
Ready Set English	0	0	0	1	0	1
Respondus Lockdown	0	0	0	1	0	1
Road to IELTS/Active reading	1	2	0	0	1	4
Quizlet	2	5	5	0	0	12
Safari	0	1	0	0	0	1
Showbie	10	0	1	1	1	13
Socrative	4	2	1	1	4	12

Softchalk	0	0	0	1	0	1
Spelling City	3	5	2	4	1	15
TeacherKit	1	0	0	0	0	1
TED Talks	0	0	1	0	1	2
Tellegami	0	1	0	0	0	1
TenseBuster	0	1	2	0	1	4
Timer (Clock)	0	0	0	1	1	2
YouTube	0	0	0	1	0	1

APPENDIX 15

Sample Transcript

Sound file 13. HL19.25

Table: 1. Research Questions, sub-themes colour-coded, with attendant themes

Research Question and colour-coded themes	**Sub-themes of colour-coded themes**				
RQ 1: How do practitioners use the iPad?					
RQ 1a) How is it used by practitioners in the classroom?	1a.i) Generic software, materials and email	1a.ii App use	1a.iii) Tool use (camera/video)	1a.iv) iPad classroom approaches	
RQ 1b) and out of the classroom?	1b.i) Educational uses of the iPad.		1b.ii) The iPad for entertainment		
RQ 2) How do stakeholders evaluate the device as a teaching and learning tool?					
RQ 2a) What benefits does it offer to teaching and learning?	2a.i) Portability	2a.ii) Novelty and variety	2a.iii) Material storage	2a.iv) App use	2a.v) Other benefits – the e-textbook, self-study, gaming and dictionary work
RQ 2b) Are there any limitations/disadvantages?	2b.i) Distraction	2b.ii) Teaching/ materials issues	2b.iii) Technical problems	2b.iv) Academic reading and writing issues	2b.v) Other (to be specified in the text)

RQ 2c) How would you evaluate the device for future stakeholders, and how does it compare to other materials/devices (i.e. textbooks, laptops, BYOD)?	2c.i) Pro iPad	2c.iii) Works best as part of blended learning/ materials or devices ranked similarly	2c.iii) Works best as part of blended learning/ materials or devices ranked similarly
RQ 2d) How do students view the device?	2d.i) As an educational device	2d.ii) As an entertainment device	2d.iii) As both 2d.i and 2d.ii
RQ3. What training and support is needed?			
RQ 3. Training needs as identified by respondents	3.i) Training/PD for teachers	3.ii) Training for students	3.iii) IT Support
4. Interesting but not categorised	This sub-category was not highly represented throughout the 15 interviews, but nevertheless contained interesting data on subjects such as management issues and the iPad being a self-promoting initiative for the institution, which were worked into the findings chapter of the thesis.		
No code ascribed	Sections of the transcript with no mention of the device or related topics.		

Participant HL Transcript

I: Okay, so many thanks for agreeing to do this interview with me…all the interviewees have code names, you're number 13, so to remember you I'll call you, have you got a name you'd like to be known by…

HL: Anything's fine…

I: Highlight, I'll call you Highlight [laughter]. So, can I ask you first of all how you use the iPad for teaching?

HL: Basically, to be honest it took me a while to actually get the hang of using the iPad, I didn't use it terribly for a lot of time when I first started, (1a.iv) but now I use it for spelling, there's a particular spelling game that we have called Spelling City that I use it for, also an application to Popplet to plan student's essays, (1a.ii) also any time I want to use a video for example, I can send a video to them and they can easily access that and also if they, for example, for independent studying time, I can give them a particular link and let them actually you know, go ahead and do some studying. (1a.i)

I: Do you use stuff like BB Learn on that or…?

HL: Yeah I do, with the BB Learn stuff it's pretty much for the spelling side of things to be honest so it's mostly for the spelling…yeah, so BB Learn is pretty much for the spelling side of things. (1a.i)

I: And do you use the iPad out of class?

HL: Yes, I do, I use it a lot, it's mostly for surfing, I do have a Mac at home which is almost similar to an iPad, so if I do use the iPad it's really just for surfing the net and because of the size it's convenient, but in terms of applications, I don't really use applications that much, you know, I play a few little games here and there but it's mainly for surfing the 'Net. (1b.ii)

I: Just for entertainment basically, yeah…?

HL: Basically yeah, yeah, like looking at YouTube or whatever it might be. (1b.ii)

I: And you've been here for two years, am I right…?

HL: Yeah that's right…

I: So, did you use it before, the iPad or just when you came here…?

HL: Not for classes no, so it was only when I came here, I used to use it for myself for personal use… (1b.ii [initially unclear if 1b.i) or 1b.ii), clarified with participant in follow up interview)

I: Oh, you had an iPad before you came here…?

HL: I did, I did, I had an iPad about a year before I came, so yeah I used it just for personal use but in terms of classwork, at my previous college, we just had a whiteboard, a smartboard so any sort of videos and things like that or; some of the things that we do with the kids, with the girls now, I would just do on the smartboard for example so, yeah.

I: We don't have smartboards here do we…?

HL: No, we don't, no.

I: Has using iPads in the classroom changed the way you teach?

HL: I guess in some ways it has, like I said, I suppose one of the things, one of the problems I guess I sort of, had to sort of address was, I was a little bit too teacher centred, a lot of teacher talk time and kind of dominating the class so I think, with the iPad it kind of, like I mentioned before, it gives them certain degrees of independence when they're working and I think, as a teacher it's sort of been good for me because I've been able to realise that, you know, you sort of give them work to do on BB Learn and you can more sort of, facilitate the class rather than have to be talking and lecturing to them the whole time. (1a.iv)

I: Do you find they go off task a lot though on the iPad?

HL: Not really, because I mean, obviously like, we're sort of, and when I say we, teachers are sort of, moving around and kind of looking and seeing what they're doing, so they obviously know that if they're doing the wrong thing, they'll get pulled up and I'm usually pretty strict about things like mobile phones and you know, using social media like Instagram and stuff so they kind of know, if they do it, you know, they'll be repercussions. Having said that, if they finish the work that I've given them and they've got five or ten minutes over, I don't care if they want to just play around while they're waiting for the other guys to finish. (1a.iv)

I: And do you think using iPads in the classroom has changed the way students learn?

HL: Yeah, perhaps like, I think it's been more engaging for them in certain areas, like I said in particularly like, (2a.v) I mean I'm not a huge fan of Spelling City but I like the idea of Spelling City in terms of playing games, (1a.i) Spelling City is not an iPad specific app, but also for PCs etc.) I find that when they're playing games, especially the games that are competitive with each other, then tend to really enjoy that. (2a.v) There's another website called Kahoot which they use with the iPads for that and that seems to be very successful (1a.i) Kahoot is not an iPad specific app) and I think that's based on the competitive side of things so, I think it just, generally it makes things more engaging. They can actually see, you know, videos and … rather than just as a text. (2a.v) Having said that, you know, things like reading and that, I still find that a lot of students prefer reading just on, with normal paper rather than the iPad. (2b.iv) [Note: there is some overlap between sub-categories 1a.i and 2a.v in the earlier part of this response].

I: Yeah, I've found the same, I mean a lot of mine ask for, they've given up on the e-textbook, they've asked me for paper…

HL: I think it's one of the things, because I think, one of the surprising things I've found is that e-textbooks that we've been given, in terms of their functionality, in terms of the way that they are, like in terms

of even turning pages and things like that, I know there are some textbooks where the kids would turn a page it would like take ten seconds for the page to turn, I don't know why but they're not at the same level for example, as a book you buy on Amazon, so I don't know why that is, but it's like with Amazon, if I use my, and I use Amazon for example for the Kindle books, they're really, really good, but for some reason, you know, you think Cambridge would have their you know, act together but it seems like they're not of the same quality. (2b.iv)

I: Yeah, we've found the same, I mean I don't understand why I mean even having downloaded them, they still turn slowly, it's quite difficult to move from page to page, I mean certainly from chapter to chapter, students just get lost, it just takes too long…

HL: And sometimes work is not saved as well, that's happened a couple of times, where kids have done the work and it hasn't been, and they've gone to the next page and then gone back and it hasn't been saved, now I don't know whether that's actually a mistake they made or it's a glitch with the book but that gets really frustrating and if they do that, then they have this sort of, negative attitude and they think well, I've just wasted half an hour for you know, for nothing. (2b.iv)

I: Yeah, I actually got, I actually got Mohammed in from CALM to sort that out and it seems to be working now, so, but yeah, I mean other teachers have reported the same as yourself. You … so there are some ways that, the way students learn has changed did you just say?

HL: In terms of, you know, like in the actual, the learning is more engaging… (2a.ii, clarified with participant after interview)

I: Okay…

HL: So that's the main thing from it, even like for example this thing, I think it's sort of an example, if I do all this thing with the whole class, they have to listen all at the one time, whereas if they do it

independently which they usually do, sometimes through their headphones, they can go back if they miss something or they can play it again, or they can learn at their pace rather than having to sort of, be with the whole class, and if you've got a weaker student, they can spend extra time or, you know, go back over something because it's a bit more independent as well as being engaging. (2a.ii and 2a.v, clarified with participant after interview).

I: Do you think there's way that learning has stayed the same as well?

HL: I think so, I mean at the end of day like, you know, like you mentioned that some students go off task, you know, they have to still do the work, (2b.i) you know I mean reading is reading and listening is listening, and I mean the type of course that we teach with the IELTS course, you know, they have to do the work, so regardless of the format, at the end of the day, you know, if they've got a text for example of 500 words that they have to read on a piece of paper or an iPad, they have to do the work so if they are lazy and they are not going to do the work, it's still not going to make that much difference, so, generally speaking I think you know, the stronger students who use a textbook would still be the stronger students with the iPads, but, so I don't think it would make a huge difference because you know, the work is the work. (2c.iii)

I: I mean, just focussing on these two questions, I mean, presumably the things that you've mentioned are that students can work at their own pace etc., that would hold true for a laptop as well?

HL: With a laptop yeah, well that's the thing, that's sort of another question again, I don't really think there's a huge difference between a laptop and an iPad to be honest (2c.iii), I think, obviously the portability is a factor (2a.i), but in terms of, if I had my way I'd actually prefer kind of small laptops (2c.ii) because I think in terms of typing and things like that, you know, it's much easier to type, I've never been a fan of typing on iPads. (2b.iv) I guess with the

iPads like, portability is the main factor. (2a.i) The application side of things is obviously good but I'm sure they could actually, you know you can sort of do the same kind of thing on a laptop (2c.ii) so, yeah, I don't really know the advantages of an iPad over a laptop other than the portability I would have thought. (2a.i)

I: Okay, interesting. When you're using iPad's in the classroom, what considerations as a teacher do you need to make?

HL: Can you give me an example like, what sort of…?

I: Well kind of, if I'm teaching from a textbook I don't have to really worry about anything, I know it's going to work, if I'm teaching from an iPad, especially if I had, for example, an observed class with an iPad, I would definitely have a plan B because I would expect something somewhere to crash…

HL: Yeah yeah sure, okay, obviously you know, connectivity is one of the things, whether they can actually connect to the Internet is one thing, also the fact that a lot of students you know, don't bring their iPad's all the time, they're supposed to but you usually invariably get one or two that don't or they've forgotten their password or something like that. (2b.iii) Another thing I guess is the battery is always an issue sometimes and they don't have the charger or whatever like that but I guess with all sort of, forms of, you know like computers or laptops and iPads, (2c.iii) you have those kinds of issues which you wouldn't have with, you know, like a textbook and paper. (2c.ii)

I: And when you have issues with the iPad in class, how would you rate technical support for the device?

HL: The thing is like, we don't have enough time in the class, you know, you have the class and by the time I actually call someone and they actually come and all the rest of it, it's almost not really worth it (3.iii), so if I've got a student who has a particular problem, then I'd

get them to share the iPad with their friend for example. If the whole class has a problem I would probably scrap that activity and do something else, (2b.iii) do you know what I mean, because I personally just don't bother with calling because just from what I've heard, it just, usually takes, you know, 20 minutes, half an hour and by that stage you kind of, it's just a waste of time, they [students] get restless and they lose interest (3.iii)

I: Can you call and get people to your classroom? I can't.

HL: I just use the phone, you can actually call and get someone so… (3.iii)

I: Where's that…?

HL: In the corridor, you can actually call…

I: Who do you call?

HL: I always call reception and say I need someone from, you know, I need a technician or something to come and help me with my things, so… (3.iii)

I: Wow, have they ever come?!

HL: Well, they have come, but it takes a while, it sometimes takes you know, it takes… (3.iii)

I: That's never worked for me…

HL: Half an hour yeah… (3.iii)

I: I send these online requests and typically I never hear anything back.

HL: Yeah, like I said I would, nine times out of ten I will just scrap it do you know what I mean, it's like, (2b.iii) as a teacher if you like, give them a reading or an activity that they've done before and you've forgotten that you've given it to them, they just have to adapt and give them something else so, I think part of being a good teacher is

being able to adapt to those situations and the iPad is no exception. (2c.iii)

I: Is there anything you'd do differently in coming semesters?

HL: Is there anything I would do differently?

I: Yeah, in relation to the iPad?

HL: Not really, I guess you know, I think, I definitely find that the more that I use it, the more I learn and the more that I sort of, get better with it, like I mean if you'd spoke to me one year ago to now, (1a.iv) I definitely am more familiar with the benefits of it and I think it really, a lot of it comes down to the applications that are available, do you know what I mean? So the more knowledge that you have about the applications and what's available, the better you are I think. (2a.iv) You know, for example, like I mentioned you know, the Kahoot for example, you know, that was something I just found out about six months ago and you know, I really have found it to be a very, very engaging sort of website or application. Now is that because of the iPad, I guess it is but I think if you didn't have the iPad you couldn't use it, do you know what I mean, so… (2a.v, clarified after interview, as Kahoot! works on any device)

I: It doesn't work on a laptop, Kahoot, it's just for…?

HL: Actually that's a good question, it probably does, it probably does, I'm not too sure about that but just have a knowledge of the different applications and what's available, I think definitely you know, it improves like; moving forward I think it's for me, just the process of getting better as I go, so the more I learn the better and more effective I will be and, you know, I would hazard a guess that, my feeling is the iPad is not going to go away, I think it's still going to be you know the sort of, digital learning will continue so I think just all teachers have to get used to it. (1a.iv)

I: Okay. What ways do you think the iPad has been beneficial to students learning?

HL: I'm sounding like a broken record but like I said, it's you know, it's engaging, they can work at their own pace…yeah I mean, I guess I mean, even with a textbook you still work at home I guess but I suppose it's just the portability like you know, not that I guess our students would do it, but a lot of other students I think maybe, if they're on a bus or a train or something it's easy to do a bit of work you know, because it's just there on the iPad (2a.i, 2a.v) …the only problem and I think it applies to teachers as well whenever you are using any type of laptop or iPad is just making sure you are not distracted by the more sort of fun things to do like you know, the Instagram and the Facebook so, it can take a lot of self-discipline for a lot of students I think, when they're studying not to be distracted by those things. (2b.i)

I: Do you think it's been detrimental to students' learning, the iPad in any way?

HL: I wouldn't say detrimental…like I said in terms of reading, I find that, you know, that they [students] tend to prefer to read you know, sort of via paper and a textbook rather than digital and I don't know why that is whether it's just a comfort thing or it's what they're used to and that might change with future, in future years when sort of students become used to it, but I wouldn't say it's detrimental, I think it's just; what I think though with the iPad, (2d.iv) I think it's a supplement to teaching at the moment (2c.iii), now that might change in the future but … like the way that, you know, that some colleges, some universities kind of promote the iPad, they kind of make it out that it's the be all and end all, where you have to use the iPad with everything. There are certain things that at this particular stage the iPad is not really suitable for, i.e., reading and using e-textbooks for example, I still think that sometimes the e-textbooks you know, have problems and that causes you know, difficulties, (2bii and 2b.iv, clarified with participant after interview) so I think as a supplement to teaching it's fine, (2c.iii) but I wouldn't use it, at this stage, you know,

in a way that universities try to push the teachers to do, because I think a lot of the time, a lot of the universities tend to view the iPad and the use of it as almost like a promotional tool for their college as in terms of you know, being up with the latest technology and I think, it seems that I think, in some respects it's almost like a selling point for some schools that we use iPads you know, and I think it's kind of promoted that way, (4) but when it comes to the real nitty gritty of being in the classroom as a teacher, you know, they're good to use at times but they are not the only thing to use. (2c.iii)

I: Do you think it was used in that way here, as a way to promote the college…?

HL: I think every place, honestly I think every place that promotes it like that, is like that you know, I mean obviously—Higher Colleges of Technology—and the name itself is kind of, insinuates that they're at the cutting edge in terms of technology and I think the iPad is kind of, part of that kind of package that they try to promote. (4)

I: When you talk about other universities, you're talking about Western universities I imagine…?

HL: Yeah, like I mean I know for example you know, Zayed [University]… (4)

I: Oh you are talking about the ones here?

HL: Yeah I mean even when I'm in the car, I listen to the different radio advertisements … I think there's a British course or something and it says it's all iPad learning or digital learning, I don't remember the name of the school but it's along the same lines of that, sort of, and I think parents who are not teachers obviously, they know that technology is not going away and I think that they want their kids to be, you know, savvy, technologically savvy and that kind of whole idea of everything's being learned on the iPad means that, you know, it's 21st century or whatever it is, education which is appealing to, you know, the parents and… (4)

I: Yeah sure, it's marketing and no parent wants to think that kids are being left behind, you know, even if they don't understand the technology, they'll worry about that…

HL: And I know, even like you know, if I'm looking at different jobs as well, and I get jobs sent to me by, I look at different jobs that are sent to me, a lot of the requirements now are that you know, you have knowledge of using applications on the iPad and I know when I had my interview for this place, they quizzed me about different things which to be honest I swotted up on, you know, and just sort of looked at and answered the questions but you know obviously it was a big deal here, but then when I got here I realised that it wasn't such a big deal after all, and I can put it down on paper, but you do need to know it. (4)

I: I think you've touched on this question before, but what's your outlook on the future of iPads in the classroom here at the colleges?

HL: Yeah like I really …I don't think they are going to go away and I know a lot of people might disagree but I don't think they are going to go away. I think it will come down to applications and improving and getting better, I think in terms of like we mentioned before about eBooks you know, the functionality of the applications will get better. (2c.i) There are certain things … like it also really depends on other things. Like, for example, with the IELTS test that we have, it's a written test. Now as long as the IELTS test is a written test, there's always going to be a need for, you know, writing on a piece of paper, because it's the same as the test. When the IELTS tests … or if it becomes digital, then you know, then obviously you are getting pushed more towards using digital sort of forms of learning (4) but the way I see it, it's not going to … it definitely … I can't see it not surviving, it's going to continue and I think the applications will get better, probably the actual device itself will get better and yeah I mean, that's how I see it sort of, you know, five years or ten years from now. (2a.v, clarified with participant after interview)

I: Okay. I know you're a Level 4 Teacher, so like myself you're teaching towards the IELTS test, how much of the time would you say you are actually using the iPad in class?

HL: Goodness me…it's definitely increased… (1a.iv)

I: Since you've been here or increased this semester…?

HL: No, no increased basically in the last year since I've kind of got into it more, and I've kind of learned more about it. Probably, honestly, I don't use it as much as many other teachers , I'd probably say about 10%, I'd say 10% would be average and it probably should be more, but you know, I use it [in class] like I said, almost like, as an additional part of my teaching so, yeah. (1a.iv)

I: If you had to be categorised as pro-iPad, anti-iPad or in the middle, where would you put yourself in a learning context?

HL: Actually despite the fact that I don't use it as much as I probably should, (1a.iv) I probably would be pro-iPad because I think it does have its place, you know what I mean, it definitely does have its place and you know, (2c.i) like I said, I think the engagement side of it is one of the things that, like you tend to find that if they get out the iPad, they tend to kind of, even if they're in a bit of a lull, you can put them on the iPad and they kind of pep up a little bit I think, that's what I find anyway, so it definitely has its place, it's just a matter of… (2a.ii and 2a.v) … I'd probably say pro, not a real strong pro, but as a pro in the sense of it is an additional form of learning, not as the … like I mentioned, the only way to learn. (2c.i and 2c.iii)

I: Is there anything else you'd like to say?

HL: I think that's just about everything, your questions have pretty much covered all the areas there, so…

I: Well thanks very much.

HL: My pleasure.

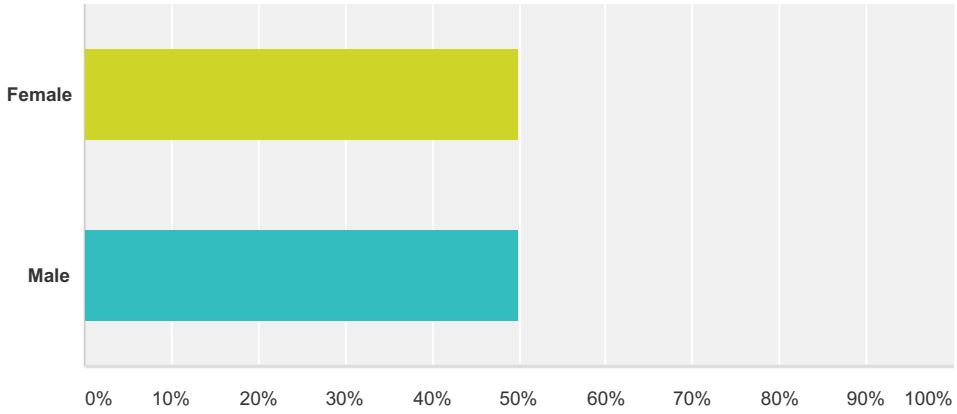
I: Thanks.

[End of interview]

APPENDIX 16
IPAD USER QUESTIONNAIRE RESPONSES

Q1 Are you male or female?

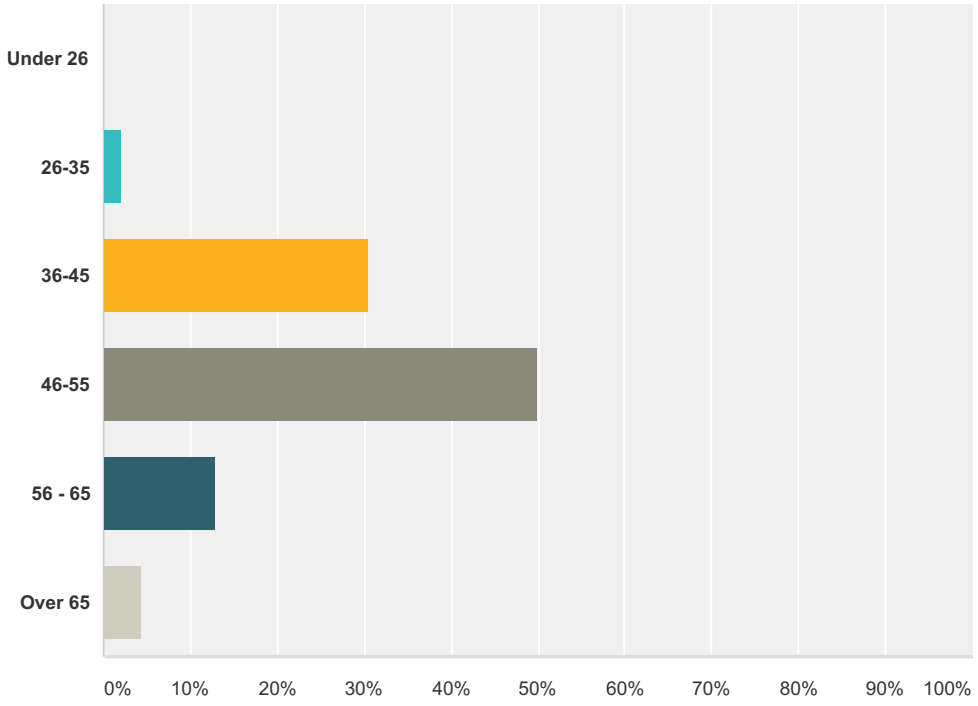
Answered: 46 Skipped: 0



Answer Choices	Responses	
Female	**50.00%**	23
Male	**50.00%**	23
Total		**46**

Q2 What is your age?

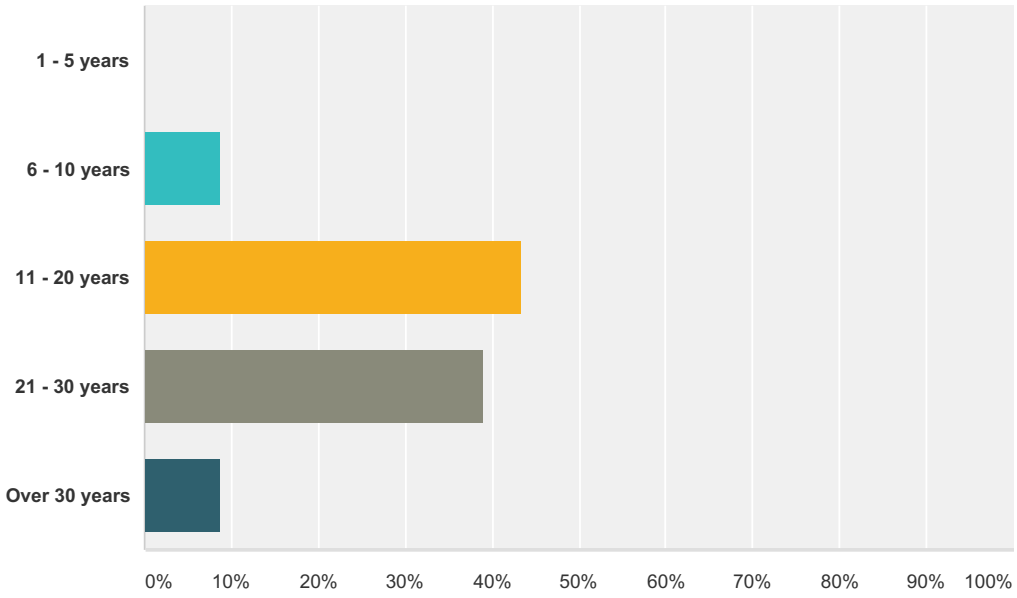
Answered: 46 Skipped: 0



Answer Choices	Responses	
Under 26	**0.00%**	0
26-35	**2.17%**	1
36-45	**30.43%**	14
46-55	**50.00%**	23
56 - 65	**13.04%**	6
Over 65	**4.35%**	2
Total		**46**

Q3 How long have you been a teacher?

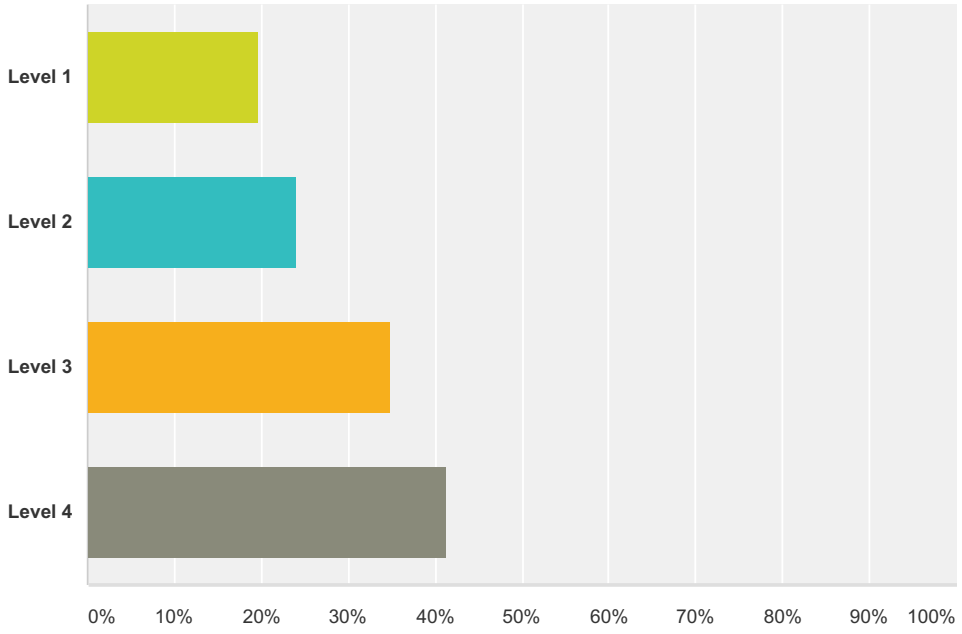
Answered: 46 Skipped: 0



Answer Choices	Responses	
1 - 5 years	**0.00%**	0
6 - 10 years	**8.70%**	4
11 - 20 years	**43.48%**	20
21 - 30 years	**39.13%**	18
Over 30 years	**8.70%**	4
Total		**46**

Q4 Which Level / Levels of Foundations are you currently teaching? (please tick all that apply)

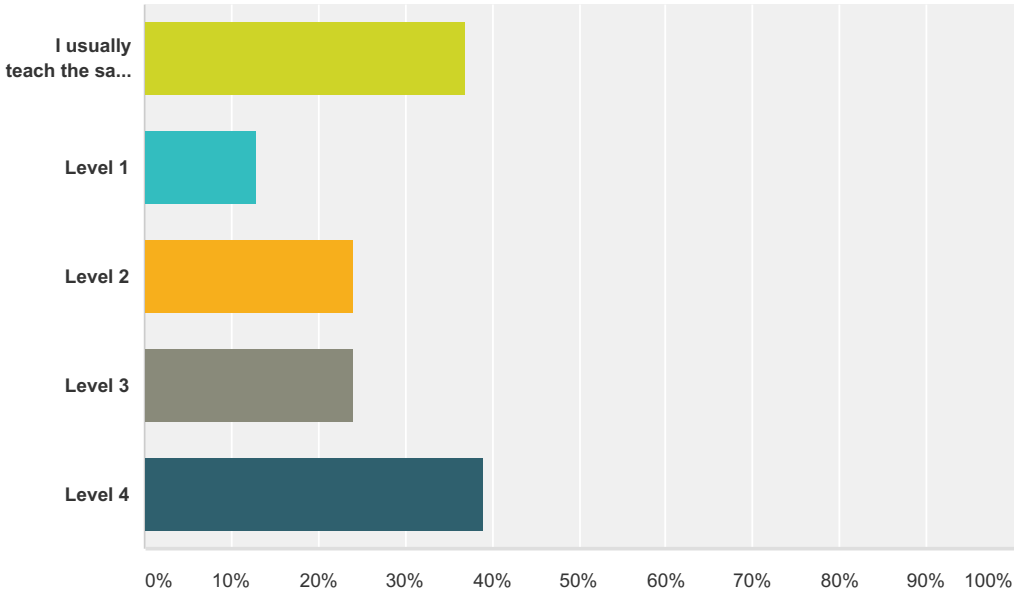
Answered: 46 Skipped: 0



Answer Choices	Responses	
Level 1	**19.57%**	9
Level 2	**23.91%**	11
Level 3	**34.78%**	16
Level 4	**41.30%**	19
Total Respondents: 46		

Q5 Which Level / Levels of Foundations do you usually teach? (please tick all that apply)

Answered: 46 Skipped: 0



Answer Choices	Responses	
I usually teach the same Levels as I indicated in Q.4	**36.96%**	17
Level 1	**13.04%**	6
Level 2	**23.91%**	11
Level 3	**23.91%**	11
Level 4	**39.13%**	18
Total Respondents: 46		

Q6 Approximately how long have you been using an iPad?

Answered: 44 Skipped: 2

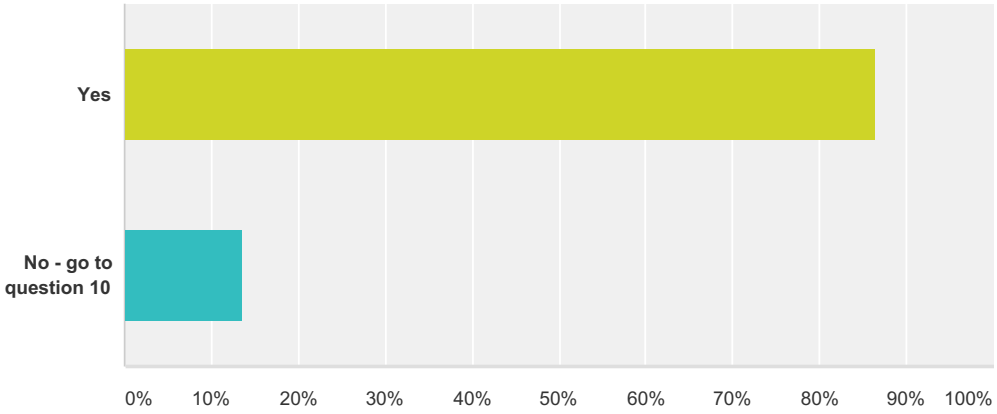
Answer Choices	Responses	
Years	**100.00%**	44
Months	**38.64%**	17

#	Years	Date
1	4	11/13/2016 10:35 AM
2	3	6/25/2015 4:55 PM
3	3	6/22/2015 2:30 PM
4	2	6/22/2015 2:01 PM
5	3	6/21/2015 2:04 PM
6	3	6/21/2015 1:52 PM
7	2	6/21/2015 12:26 PM
8	3	6/21/2015 12:02 PM
9	3	6/21/2015 11:42 AM
10	4	6/21/2015 11:23 AM
11	3	6/18/2015 10:10 AM
12	5	6/11/2015 3:18 PM
13	2	6/10/2015 9:34 AM
14	3	6/9/2015 12:58 PM
15	4	6/8/2015 4:39 PM
16	1	6/8/2015 3:10 PM
17	3	6/8/2015 2:21 PM
18	1	6/8/2015 12:47 PM
19	5	6/8/2015 10:38 AM
20	3	6/8/2015 10:10 AM
21	3	6/8/2015 9:35 AM
22	2	6/7/2015 3:52 PM
23	3	6/7/2015 3:44 PM
24	4	6/7/2015 3:40 PM
25	3	6/7/2015 3:10 PM
26	4	6/7/2015 3:06 PM
27	3	6/7/2015 3:03 PM
28	4	6/7/2015 2:56 PM
29	4	6/7/2015 2:36 PM
30	3	6/7/2015 2:33 PM
31	6	6/7/2015 2:21 PM

32	3	6/7/2015 2:13 PM
33	3	6/7/2015 2:09 PM
34	1	6/7/2015 2:03 PM
35	2	6/7/2015 2:01 PM
36	2	6/7/2015 1:52 PM
37	2	6/7/2015 1:50 PM
38	1	6/7/2015 1:43 PM
39	4	6/7/2015 1:39 PM
40	3	6/7/2015 1:37 PM
41	3	6/7/2015 1:36 PM
42	3	6/7/2015 1:18 PM
43	5	6/7/2015 1:12 PM
44	3	6/7/2015 12:41 PM
#	**Months**	**Date**
1	3	11/13/2016 10:35 AM
2	0	6/22/2015 2:30 PM
3	9	6/22/2015 2:01 PM
4	9	6/21/2015 12:26 PM
5	0	6/8/2015 3:10 PM
6	11	6/7/2015 3:52 PM
7	6	6/7/2015 3:40 PM
8	40	6/7/2015 3:06 PM
9	6	6/7/2015 2:21 PM
10	9	6/7/2015 2:13 PM
11	10	6/7/2015 2:03 PM
12	4	6/7/2015 2:01 PM
13	5	6/7/2015 1:52 PM
14	8	6/7/2015 1:50 PM
15	2	6/7/2015 1:43 PM
16	6	6/7/2015 1:37 PM
17	0	6/7/2015 1:36 PM

Q7 Do you use the iPad out of class?

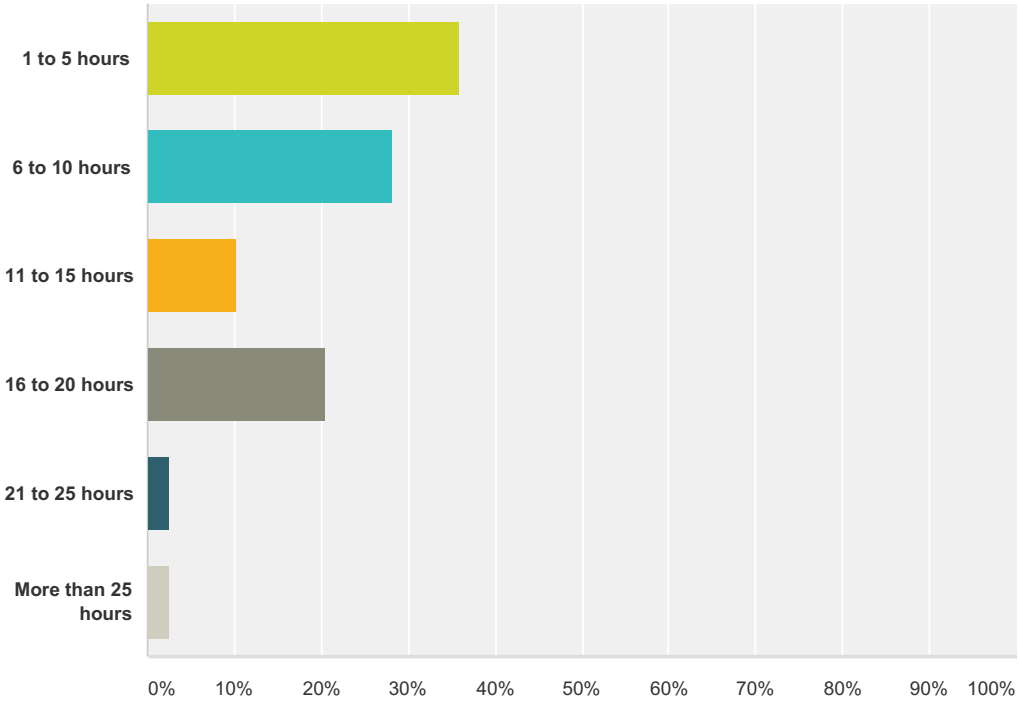
Answered: 44 Skipped: 2



Answer Choices	Responses	
Yes	**86.36%**	38
No - go to question 10	**13.64%**	6
Total		**44**

Q8 In a typical week, roughly how many hours do you use the iPad out of class?

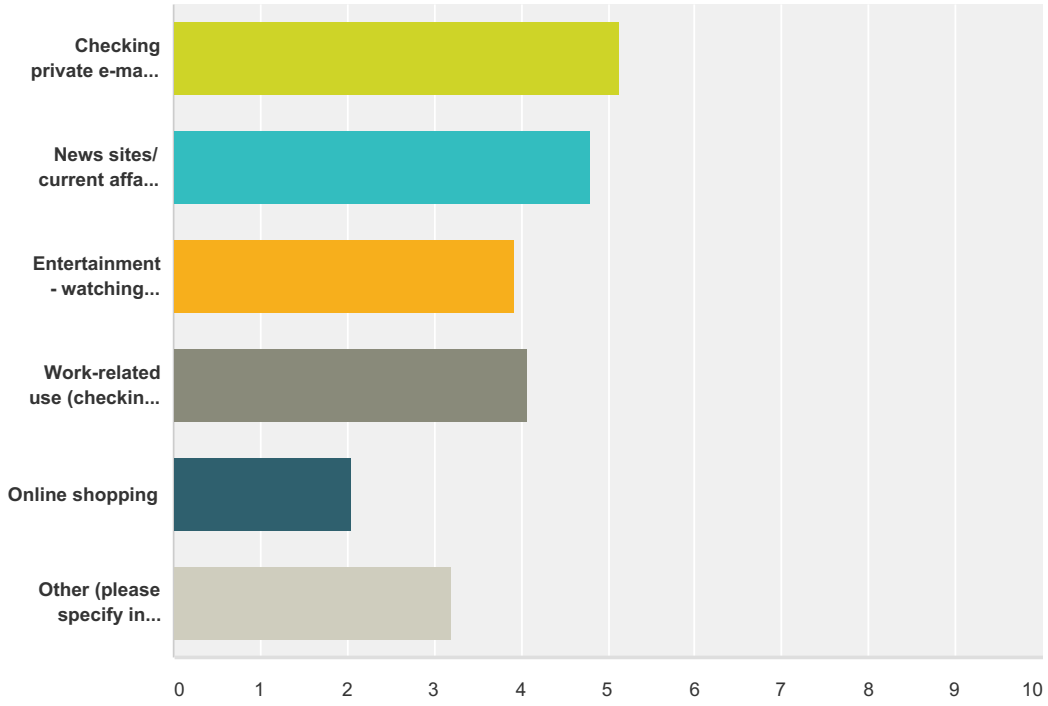
Answered: 39 Skipped: 7



Answer Choices	Responses	
1 to 5 hours	**35.90%**	14
6 to 10 hours	**28.21%**	11
11 to 15 hours	**10.26%**	4
16 to 20 hours	**20.51%**	8
21 to 25 hours	**2.56%**	1
More than 25 hours	**2.56%**	1
Total		**39**

Q9 For what purposes do you use it out of class? Please rank the following in order of use, with the first (#1) being the most used, and #6 being the least used:

Answered: 39 Skipped: 7



	1	2	3	4	5	6	N/A	Total	Score
Checking private e-mail and social media (Facebook, Twitter, personal blogs etc)	**50.00%** 19	**23.68%** 9	**10.53%** 4	**5.26%** 2	**5.26%** 2	**0.00%** 0	**5.26%** 2	38	5.14
News sites/ current affairs media	**27.03%** 10	**35.14%** 13	**24.32%** 9	**10.81%** 4	**0.00%** 0	**0.00%** 0	**2.70%** 1	37	4.81
Entertainment - watching films, YouTube, Music, playing games etc	**12.50%** 4	**15.63%** 5	**31.25%** 10	**21.88%** 7	**12.50%** 4	**0.00%** 0	**6.25%** 2	32	3.93
Work-related use (checking work email, lesson planning etc)	**10.53%** 4	**23.68%** 9	**26.32%** 10	**31.58%** 12	**2.63%** 1	**0.00%** 0	**5.26%** 2	38	4.08
Online shopping	**0.00%** 0	**2.78%** 1	**0.00%** 0	**11.11%** 4	**44.44%** 16	**16.67%** 6	**25.00%** 9	36	2.04
Other (please specify in Q.10)	**8.70%** 2	**0.00%** 0	**4.35%** 1	**8.70%** 2	**21.74%** 5	**0.00%** 0	**56.52%** 13	23	3.20

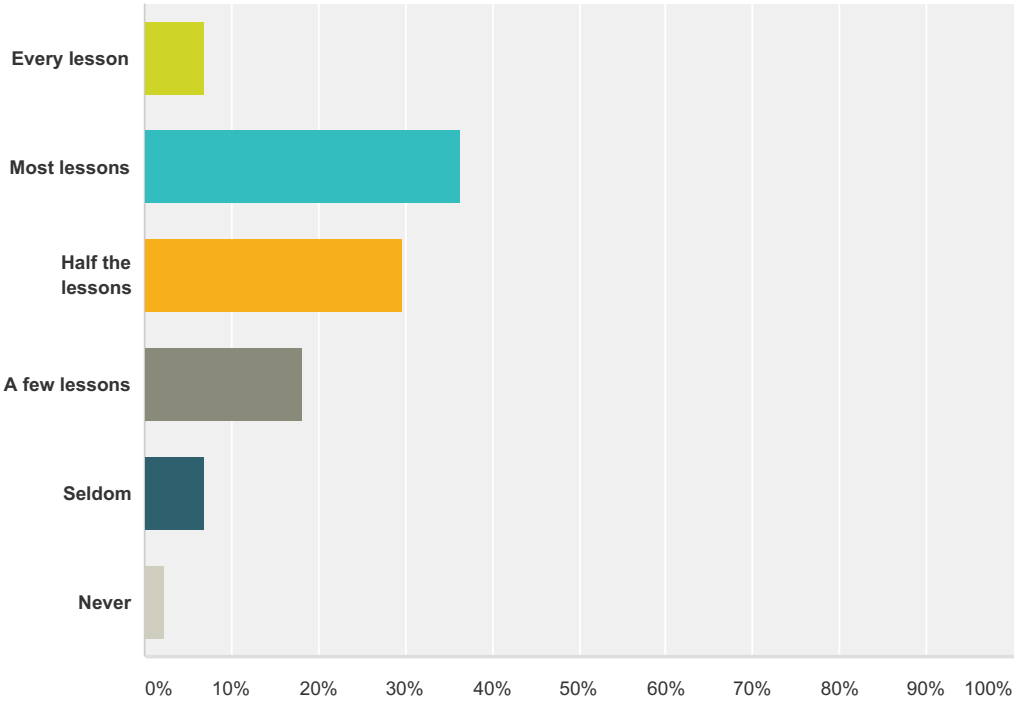
Q10 If you ranked 'Other' in Q.9, please provide details below

Answered: 8 Skipped: 38

#	Responses	Date
1	as a remote control for my hifi system	6/18/2015 10:10 AM
2	Taking photos Reading ebooks (Entertainment)	6/8/2015 12:47 PM
3	reading texts for study	6/8/2015 9:35 AM
4	Skype	6/7/2015 3:44 PM
5	photos/ family videos	6/7/2015 3:40 PM
6	Watching sports.	6/7/2015 2:21 PM
7	Reading through Kindle app. Academic reading - annotating and taking notes on journal articles.	6/7/2015 1:37 PM
8	games	6/7/2015 1:36 PM

Q11 How much are you currently using the iPad in class?

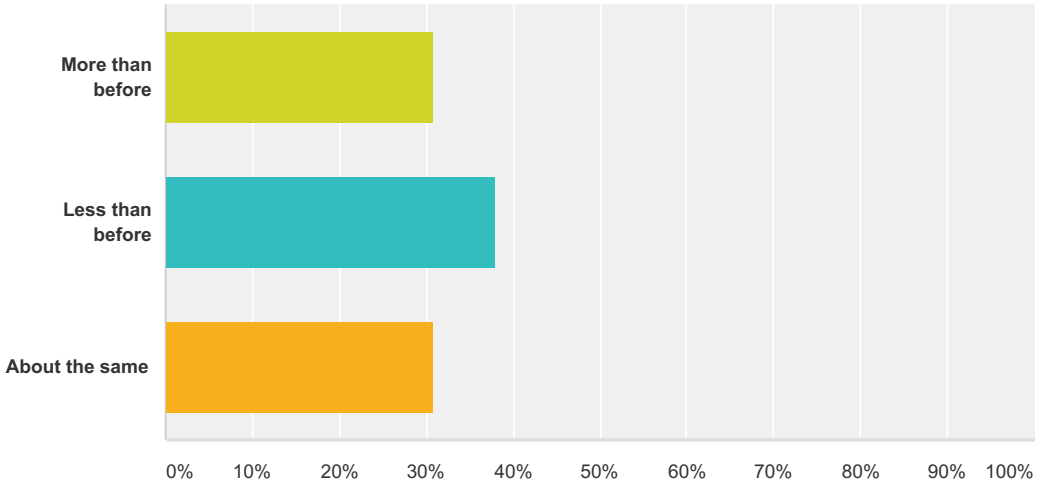
Answered: 44 Skipped: 2



Answer Choices	Responses	
Every lesson	**6.82%**	3
Most lessons	**36.36%**	16
Half the lessons	**29.55%**	13
A few lessons	**18.18%**	8
Seldom	**6.82%**	3
Never	**2.27%**	1
Total		**44**

Q12 Compared to the time of its adoption in 2012, how frequently would you say you are using the iPad in class now?

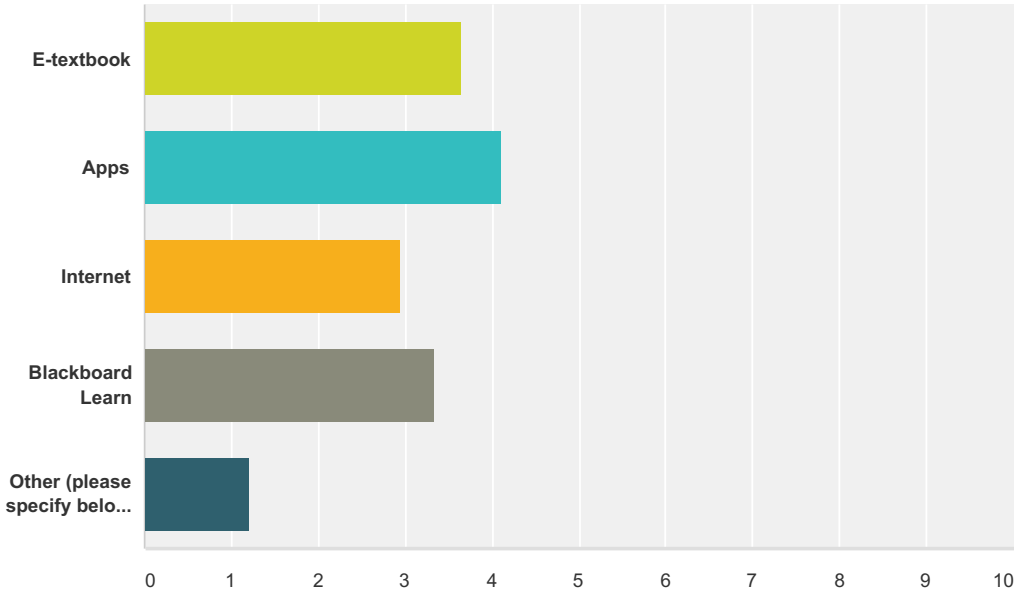
Answered: 42 Skipped: 4



Answer Choices	Responses	
More than before	**30.95%**	13
Less than before	**38.10%**	16
About the same	**30.95%**	13
Total		**42**

Q13 In what ways are you using it in class? Please rank the following in order of use, with the first (#1) being the most used, and #5 being the least used:

Answered: 43 Skipped: 3



	1	2	3	4	5	N/A	Total	Score
E-textbook	**29.27%** 12	**29.27%** 12	**19.51%** 8	**21.95%** 9	**0.00%** 0	**0.00%** 0	41	3.66
Apps	**47.62%** 20	**23.81%** 10	**21.43%** 9	**7.14%** 3	**0.00%** 0	**0.00%** 0	42	4.12
Internet	**2.44%** 1	**26.83%** 11	**31.71%** 13	**36.59%** 15	**0.00%** 0	**2.44%** 1	41	2.95
Blackboard Learn	**21.95%** 9	**24.39%** 10	**24.39%** 10	**24.39%** 10	**4.88%** 2	**0.00%** 0	41	3.34
Other (please specify below in Q.14)	**0.00%** 0	**0.00%** 0	**4.55%** 1	**0.00%** 0	**36.36%** 8	**59.09%** 13	22	1.22

Q14 If you mentioned 'Other' in Q.13 or would like to add any other details about class usage, please give details below.

Answered: 7 Skipped: 39

#	Responses	Date
1	We used to use it for the creation of projects or similar artifacts. Now, it is solely used primarily to replace a text, notebook, which is unfortunate and not 'revolutionary'.	11/13/2016 10:35 AM
2	Students frequently record, video, and photo work done in class. This is EXTREMELY useful AND engaging for the students.	6/21/2015 12:26 PM
3	ITunes U	6/21/2015 11:23 AM
4	Online grammar games	6/7/2015 3:44 PM
5	photos, video clips	6/7/2015 3:40 PM
6	Camera and video	6/7/2015 1:52 PM
7	Native iPad features - 'speak selection'; camera; video; notes, etc.	6/7/2015 1:37 PM

Q15 Which Apps do you use most in class? Please rank, with the first (#1) being the app most used.

Answered: 43 Skipped: 3

Answer Choices	Responses	
1	**100.00%**	43
2	**100.00%**	43
3	**95.35%**	41
4	**88.37%**	38
5	**72.09%**	31

#	1	Date
1	TeacherKit	11/13/2016 10:35 AM
2	Pages	6/25/2015 4:55 PM
3	Dropbox	6/22/2015 2:30 PM
4	Adobe Reader	6/22/2015 2:01 PM
5	Annotate	6/21/2015 2:04 PM
6	Dropbox	6/21/2015 1:52 PM
7	Dropbox	6/21/2015 12:26 PM
8	i Tunes U	6/21/2015 12:02 PM
9	Adobe Reader	6/21/2015 11:42 AM
10	Quizlet	6/21/2015 11:23 AM
11	Spellingcity	6/11/2015 3:18 PM
12	Kahoot	6/10/2015 9:34 AM
13	Keynote	6/9/2015 12:58 PM
14	Showbie	6/8/2015 4:39 PM
15	Free Spelling App	6/8/2015 3:10 PM
16	Socrative	6/8/2015 2:21 PM
17	Showbie	6/8/2015 12:47 PM
18	Showbie	6/8/2015 10:38 AM
19	showbie	6/8/2015 10:10 AM
20	Road to IELTS	6/8/2015 9:35 AM
21	Pages	6/7/2015 3:52 PM
22	Showbie	6/7/2015 3:44 PM
23	quizlet	6/7/2015 3:40 PM
24	Showbie	6/7/2015 3:10 PM
25	Pages	6/7/2015 3:06 PM
26	Spelling City	6/7/2015 3:03 PM
27	Mobile Learn	6/7/2015 2:56 PM

28	CBB	6/7/2015 2:36 PM
29	Spelling City	6/7/2015 2:33 PM
30	Popplet	6/7/2015 2:21 PM
31	Pages	6/7/2015 2:13 PM
32	Showbie	6/7/2015 2:09 PM
33	Showbie	6/7/2015 2:03 PM
34	BBLearn	6/7/2015 2:01 PM
35	EDMODO	6/7/2015 1:52 PM
36	iBooks	6/7/2015 1:50 PM
37	Showbie	6/7/2015 1:43 PM
38	socrative	6/7/2015 1:39 PM
39	Socrative	6/7/2015 1:37 PM
40	showbie	6/7/2015 1:36 PM
41	Socrative	6/7/2015 1:18 PM
42	Puppetpals	6/7/2015 1:12 PM
43	Oxford Bookshelf	6/7/2015 12:41 PM
#	**2**	**Date**
1	AdobeReader	11/13/2016 10:35 AM
2	Creative Book Builder	6/25/2015 4:55 PM
3	Adobe	6/22/2015 2:30 PM
4	Quizlet	6/22/2015 2:01 PM
5	keynote	6/21/2015 2:04 PM
6	Adobe Acrobat	6/21/2015 1:52 PM
7	Adobe Acrobat	6/21/2015 12:26 PM
8	Keynote	6/21/2015 12:02 PM
9	Quizlet	6/21/2015 11:42 AM
10	Socrative	6/21/2015 11:23 AM
11	BBlearn	6/11/2015 3:18 PM
12	popplet	6/10/2015 9:34 AM
13	dropbox	6/9/2015 12:58 PM
14	Padlet	6/8/2015 4:39 PM
15	Clarity Road to IELTS	6/8/2015 3:10 PM
16	Keynote	6/8/2015 2:21 PM
17	Spelling City	6/8/2015 12:47 PM
18	NEARPOD	6/8/2015 10:38 AM
19	etextbook	6/8/2015 10:10 AM
20	Spelling City	6/8/2015 9:35 AM
21	Safari	6/7/2015 3:52 PM
22	Spelling City	6/7/2015 3:44 PM
23	tellegami	6/7/2015 3:40 PM
24	Quizlet	6/7/2015 3:10 PM

25	Keynote	6/7/2015 3:06 PM
26	Quizlet	6/7/2015 3:03 PM
27	Pages	6/7/2015 2:56 PM
28	iBooks	6/7/2015 2:36 PM
29	Socrative	6/7/2015 2:33 PM
30	Keynote	6/7/2015 2:21 PM
31	CBB	6/7/2015 2:13 PM
32	Mail	6/7/2015 2:09 PM
33	Tense Buster	6/7/2015 2:03 PM
34	Popplet	6/7/2015 2:01 PM
35	Spelling City	6/7/2015 1:52 PM
36	Active Reading-Clarity	6/7/2015 1:50 PM
37	Active Reading	6/7/2015 1:43 PM
38	nearpod	6/7/2015 1:39 PM
39	Quizlet	6/7/2015 1:37 PM
40	adobe reader	6/7/2015 1:36 PM
41	Spelling City	6/7/2015 1:18 PM
42	iBooks	6/7/2015 1:12 PM
43	Socrative	6/7/2015 12:41 PM
#	**3**	**Date**
1	Showbie	11/13/2016 10:35 AM
2	iBooks	6/25/2015 4:55 PM
3	Nearpod	6/22/2015 2:30 PM
4	Socrative	6/22/2015 2:01 PM
5	pages	6/21/2015 2:04 PM
6	News site apps e.g. BBC World	6/21/2015 1:52 PM
7	Creative Bookbuilder	6/21/2015 12:26 PM
8	TED Talks	6/21/2015 12:02 PM
9	Pages	6/21/2015 11:42 AM
10	Kahoot	6/21/2015 11:23 AM
11	Flashcards	6/11/2015 3:18 PM
12	Oxford Grammar	6/10/2015 9:34 AM
13	quizlet and spelling city	6/9/2015 12:58 PM
14	NearPod	6/8/2015 4:39 PM
15	Tense Buster	6/8/2015 12:47 PM
16	Adobe	6/8/2015 10:38 AM
17	CBB	6/8/2015 10:10 AM
18	CBB	6/8/2015 9:35 AM
19	Dropbox	6/7/2015 3:52 PM
20	Quizlet	6/7/2015 3:44 PM
21	keynote	6/7/2015 3:40 PM

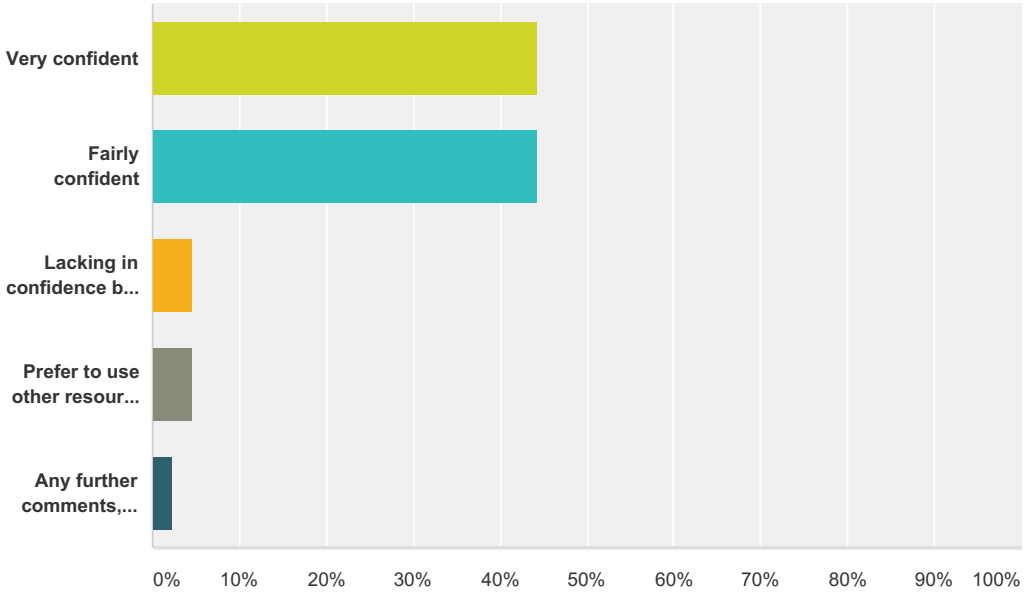
22	iBooks	6/7/2015 3:10 PM
23	Nearpod	6/7/2015 3:06 PM
24	Tensebuster	6/7/2015 3:03 PM
25	Quizlet	6/7/2015 2:56 PM
26	NearPod	6/7/2015 2:36 PM
27	Nearpod	6/7/2015 2:33 PM
28	Pages	6/7/2015 2:21 PM
29	Movie Maker	6/7/2015 2:13 PM
30	Dolphin Browser	6/7/2015 2:09 PM
31	British Council Johnny's Grammar	6/7/2015 2:03 PM
32	iMovie	6/7/2015 2:01 PM
33	Nearpod	6/7/2015 1:52 PM
34	Road to IELTS	6/7/2015 1:50 PM
35	Dragon Dictation	6/7/2015 1:43 PM
36	imovie	6/7/2015 1:39 PM
37	Creative Book Builder	6/7/2015 1:37 PM
38	quizlet	6/7/2015 1:36 PM
39	Quizlet	6/7/2015 1:18 PM
40	Popplet Lite	6/7/2015 1:12 PM
41	SpellingCity	6/7/2015 12:41 PM
#	**4**	**Date**
1	Spelling City	11/13/2016 10:35 AM
2	NearPod	6/25/2015 4:55 PM
3	Bb Learn Mobile	6/22/2015 2:30 PM
4	Mobile Learn	6/22/2015 2:01 PM
5	Bblearn	6/21/2015 2:04 PM
6	Giant Timer	6/21/2015 1:52 PM
7	Popplet	6/21/2015 12:26 PM
8	You Tube	6/21/2015 12:02 PM
9	Creative Book Builder	6/21/2015 11:42 AM
10	Chicktionary	6/11/2015 3:18 PM
11	ready set english	6/10/2015 9:34 AM
12	Kahoot	6/9/2015 12:58 PM
13	Keynote	6/8/2015 4:39 PM
14	Flipquizme	6/8/2015 12:47 PM
15	Softchalk	6/8/2015 10:38 AM
16	iBooks	6/8/2015 10:10 AM
17	Adobe Reader	6/7/2015 3:52 PM
18	iBooks	6/7/2015 3:44 PM
19	adobe reader	6/7/2015 3:40 PM
20	Educreations	6/7/2015 3:10 PM

21	Kahoot	6/7/2015 3:06 PM
22	Socrative	6/7/2015 3:03 PM
23	Creative Book Builder	6/7/2015 2:56 PM
24	Educreations	6/7/2015 2:36 PM
25	Keynote	6/7/2015 2:33 PM
26	Showbie	6/7/2015 2:21 PM
27	Nearpod	6/7/2015 2:09 PM
28	Spelling City	6/7/2015 2:03 PM
29	Pixlr	6/7/2015 2:01 PM
30	Socrative	6/7/2015 1:52 PM
31	Spelling City	6/7/2015 1:50 PM
32	Spelling City	6/7/2015 1:43 PM
33	abobe	6/7/2015 1:39 PM
34	Popplet	6/7/2015 1:37 PM
35	educreations	6/7/2015 1:36 PM
36	Explain Everything	6/7/2015 1:18 PM
37	Creative Book Builder	6/7/2015 1:12 PM
38	Respondus Lockdown	6/7/2015 12:41 PM
#	**5**	**Date**
1	Socrative	11/13/2016 10:35 AM
2	Socrative	6/25/2015 4:55 PM
3	Socrative	6/22/2015 2:30 PM
4	Cambridge Bookshelf	6/21/2015 2:04 PM
5	iBooks	6/21/2015 1:52 PM
6	TED talks	6/21/2015 12:26 PM
7	Cambridge Bookshelf	6/21/2015 12:02 PM
8	Keynote	6/21/2015 11:42 AM
9	Learn Grammar	6/11/2015 3:18 PM
10	spelling city	6/10/2015 9:34 AM
11	Adobe	6/9/2015 12:58 PM
12	SooundCloud	6/8/2015 4:39 PM
13	Prezi	6/8/2015 12:47 PM
14	Road2IELTS	6/8/2015 10:10 AM
15	iMovie	6/7/2015 3:52 PM
16	Socrative	6/7/2015 3:44 PM
17	class dojo	6/7/2015 3:40 PM
18	Creative Book Builder	6/7/2015 3:10 PM
19	Explain Everything	6/7/2015 3:06 PM
20	Popplet	6/7/2015 3:03 PM
21	Showbie	6/7/2015 2:56 PM
22	Pages	6/7/2015 2:33 PM

23	Notes	6/7/2015 2:21 PM
24	Timer	6/7/2015 2:09 PM
25	Educreation	6/7/2015 1:52 PM
26	Explain Everything	6/7/2015 1:50 PM
27	Tense Buster	6/7/2015 1:43 PM
28	popplet	6/7/2015 1:39 PM
29	Adobe Voice	6/7/2015 1:37 PM
30	ibooks	6/7/2015 1:36 PM
31	Edmodo	6/7/2015 1:18 PM

Q16 How confident do you feel using the iPad in the classroom?

Answered: 43 Skipped: 3

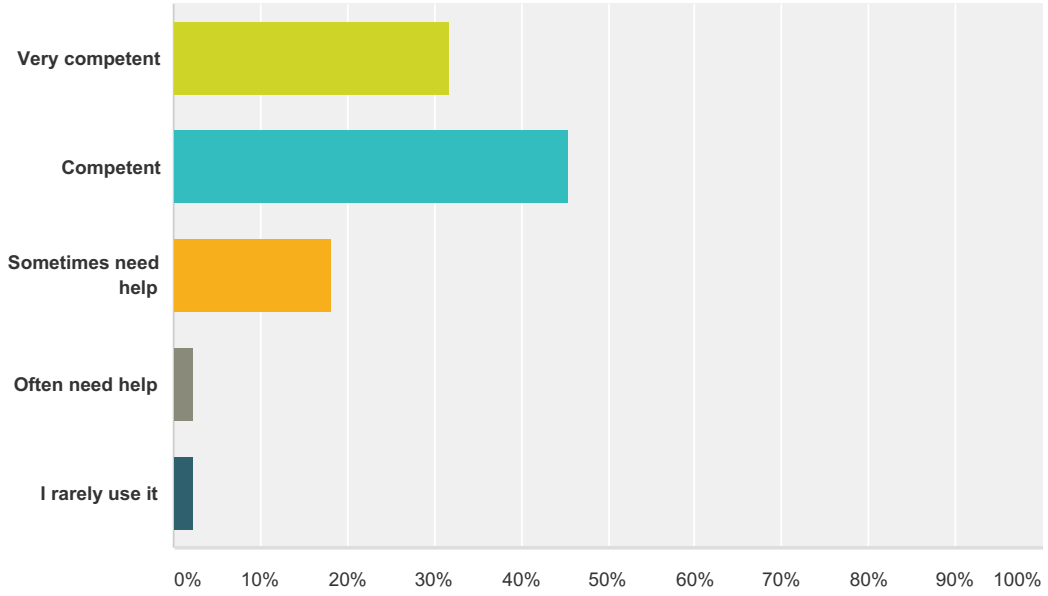


Answer Choices	Responses	
Very confident	**44.19%**	19
Fairly confident	**44.19%**	19
Lacking in confidence but use it some of the time	**4.65%**	2
Prefer to use other resources such as textbooks and photocopies	**4.65%**	2
Any further comments, please enter below	**2.33%**	1
Total		**43**

#	Any further comments, please enter below	Date
1	Would be better with regular skills update sessions and skills progress evaluation	6/7/2015 1:18 PM

Q17 How technically competent do you feel using the iPad

Answered: 44 Skipped: 2



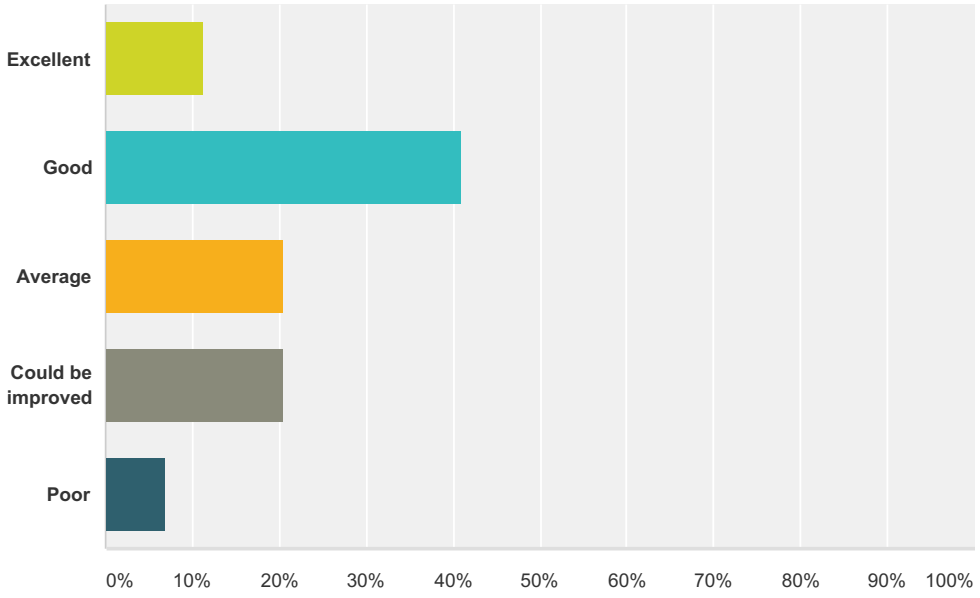
Answer Choices	Responses	
Very competent	**31.82%**	14
Competent	**45.45%**	20
Sometimes need help	**18.18%**	8
Often need help	**2.27%**	1
I rarely use it	**2.27%**	1
Total		**44**

#	Any further comments, please enter below	Date
1	I prefer to use texbooks and photocopies in most of the level 4 IELTS reading lessons as the IELTS exam is paper based and therefore demands different skills and strategies than those required on an iPad.	6/21/2015 2:04 PM
2	It is easy to use; it is a stable platform, and students like it.	6/21/2015 12:26 PM
3	As a Level 4 teacher preparing students for a paper-based exam I don't use the iPad as much as I did in the lower levels.	6/21/2015 12:02 PM
4	This is my first year at DWC, so I can't give a realistic answer to Question 12.	6/8/2015 12:47 PM
5	Always willing to learn tips and tricks from more techy people! Enjoy learning form those who like to use it well!	6/7/2015 3:40 PM
6	Despite attending many workshops, it has taken about 2 years to really learn how to handle all the little glitches that come with ipad use, especially when used for assessments.	6/7/2015 2:56 PM
7	#12 - I started working at the college in 2013	6/7/2015 2:03 PM
8	iPads aren't that complicated. What is sometimes worrying is not knowing whether or not networks will function at the times you have activities planned.	6/7/2015 1:50 PM
9	Students face a variety a problems with iPads that cannot always be remedied quickly or efficiently in class-time	6/7/2015 1:18 PM

10	Teachers have been forced to learn the ins and outs of working with apps and etexts because of a lack of support from edtech.	6/7/2015 12:41 PM

Q18 What best describes the Professional Development training sessions offered for the iPad?

Answered: 44 Skipped: 2



Answer Choices	Responses	
Excellent	**11.36%**	5
Good	**40.91%**	18
Average	**20.45%**	9
Could be improved	**20.45%**	9
Poor	**6.82%**	3
Total		**44**

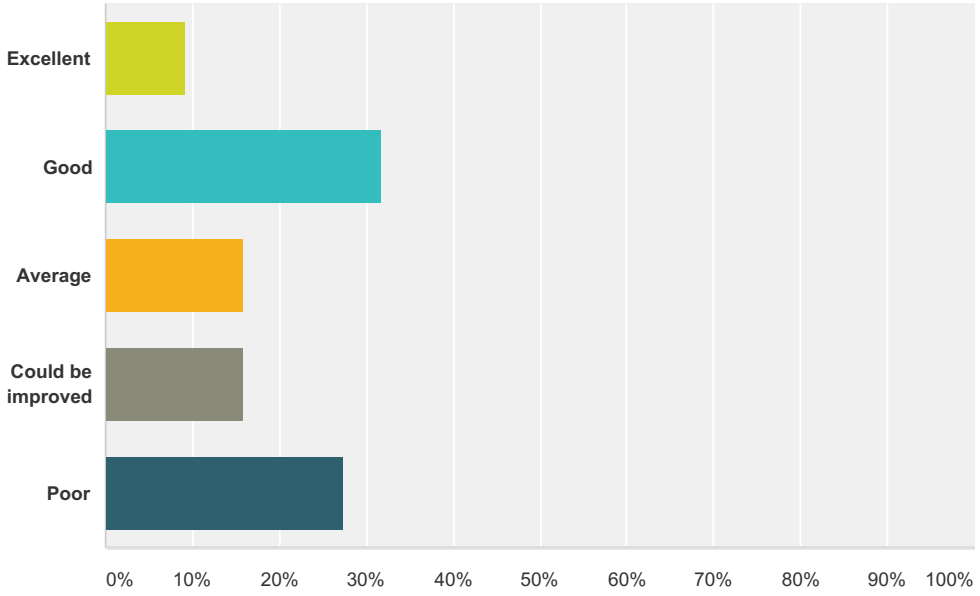
#	Could you briefly say why?	Date
1	PD is offered by faculty and changes to what constitutes '20 hours' a week has left little time for this. At my campus, I'm the only one who has offered iPad PD this academic year.	11/13/2016 10:40 AM
2	Need training on the advanced features of the tools and integration of the different tools.	6/25/2015 4:57 PM
3	Very anecdotal stuff ala "Check out this cool app". It's ok if you're looking for something to change it up, but i would prefer something a bit meatier. What about looking at how students read on the iPad vs. reading off paper. How is the interaction w/ the text different?	6/22/2015 2:07 PM
4	The staff who offer the PD sessions are not teachers and therefore have problems communicating their knowledge and information.	6/21/2015 3:08 PM
5	Hah! Most of these, especially early on, mainly told us how great the iPad is and/or why we should be using it. However, they never seemed to get down to the nuts and bolts ... i.e. practical ways to use the iPad that were in fact superior to more traditional ways of teaching. In the end, many of us just figured that part out on our own ... or ... in the case of some teachers ... abandoned it all together.	6/21/2015 12:26 PM
6	If the PD is useful for me, i.e., an app which would provide students with learning activities (like TED Talks) that they find enjoyable, then I would describe the training session as good.	6/21/2015 12:06 PM

7	They give practical tips for teachers.	6/21/2015 11:45 AM
8	In terms of number of hours, we had more than enough training at the beginning. Unfortunately the PD seems very repetitive.	6/21/2015 11:28 AM
9	It is too app focused, not pedagogical	6/18/2015 10:12 AM
10	Usually about things we can figure out on our own! E.g. Kenote. We can watch a youtuibe video and learn everything we need to know about it but we still have Keynote workshops.	6/11/2015 3:23 PM
11	Most of my knowledge of apps comes from my own hands on experience. Most of the apps are designed to be self explanatory with the exception of BB learn which is rather complicated and requires training.	6/10/2015 9:37 AM
12	The good thing about PD training is that we share ideas with colleagues and be introduced to new useful apps	6/9/2015 1:06 PM
13	The sessions have been very practical. You can hit the ground running in class with a new app.	6/8/2015 3:13 PM
14	Most PD I have attended has been presented by fellow faculty. Not to disparage them, but much of what we see in these sessions is what we have already encountered in conversations with our colleagues.	6/8/2015 2:30 PM
15	In the first semester there was very little training for new faculty (who had not taught with an ipad before), and there was no guidance for the new students. It was inadequate and resulted in chaos in the classroom. Lots of teaching time was wasted.	6/8/2015 1:03 PM
16	Teacher led professional development was the best	6/8/2015 10:20 AM
17	Mostly pro forma by yes men	6/7/2015 3:54 PM
18	iPad is more limiting in terms of functionality	6/7/2015 3:51 PM
19	The best training has come from other teachers who have used it successfully for various purposes, and who can inspire and train other like minded teachers.	6/7/2015 3:44 PM
20	Supported my needs at the time.	6/7/2015 3:29 PM
21	They vary in usefulness depending on the presenter's ability to communicate and the longterm usefulness of the apps. Many apps are interesting but difficult to incorporate into current learning outcomes and curriculum.	6/7/2015 3:26 PM
22	The training sessions offered are varied and is held through out the academic year. We have a lot of in house sessions which are informal and a good way to learn and share. There are opportunities to attend webinars, and proper pds too that are very informative, walks us step by step and offers assistance throughout. There's a lot of sharing among colleagues too.	6/7/2015 3:15 PM
23	There aren't many PD sessions for the IPAD, other than the initial training. With Apps, the teachers have to work those out for themselves.	6/7/2015 3:08 PM
24	PD offered by EdTech doesn't hit the mark because they haven't always liaised with those at the chalk face to find out what issues there are and how we use them. PD offered by FDNS faculty is more relevant for this reason.	6/7/2015 2:39 PM
25	There is a wealth of in house expertise out there.	6/7/2015 2:37 PM
26	I get familiar with technology by experimenting and playing with it myself, and all our sessions are catered to "step-by-step" explanations on how something works. So they really only explain how to use it, and even then, how to use it in only one way. When the app changes, or updates, or if there is something unexpected, teachers can get stuck. Also, frankly, I find these sessions extremely boring. I want to know "what app" and "possibilities for the classroom", not "what to press on next". There is too much emphasis on the "step-by-step" explanations and less emphasis on various ways to use the app in the classroom, or actual examples of activities that teachers have done (here and there people will point out 'oh you might use this for x, or y activity in your classroom", but the dominant format is "and then you press here", "then if you want to move this, you press here", etc.	6/7/2015 2:37 PM
27	Applicable to students' needs.	6/7/2015 2:25 PM
28	Many people are learning to use the ipad and most people are still unsure how to use it in the classroom.	6/7/2015 2:15 PM
29	Most things you can learn through trial and error, so extensive training sessions are sometimes not necessary.	6/7/2015 2:08 PM
30	There are numerous sessions offered during PD week but not so many during the semester.	6/7/2015 2:05 PM
31	A lot of the training is repeated and is focused on what the College is trying to push (e.g. BlackBoard Learn). I'd rather see innovative new apps showcased with useful classroom applications.	6/7/2015 1:56 PM
32	There are many professional development training sessions, however, they are usually only very brief and there's very little follow-up. It would be more beneficial if we had sessions sharing how we use the app for specific lessons and so on.	6/7/2015 1:52 PM

33	Many of the sessions offer very clear and useful explanations of how apps work but I find that focusing more on the 'pedagogical gain' of the app/device would make the sessions even more useful.	6/7/2015 1:43 PM
34	Difficult to answer since I often provided the training to faculty without having had any formal training	6/7/2015 1:42 PM
35	a wide variety of different sessions offered and often repeated. Aimed at the right level of user	6/7/2015 1:38 PM
36	Presenters are well prepared and have experience in using the apps. However, some sessions are not very useful for classroom teaching.	6/7/2015 1:21 PM
37	Usually covers basics of what is required. But, no follow up to check on whether use or competence has increased.	6/7/2015 1:18 PM
38	Lack of will from edtech to explore the possiblities of iPads in the classroom. Only through continued use in the classroom, does the value of the iPad become clear.	6/7/2015 12:54 PM

Q19 How do you find College-based technical support services for the iPad?

Answered: 44 Skipped: 2



Answer Choices	Responses	
Excellent	**9.09%**	4
Good	**31.82%**	14
Average	**15.91%**	7
Could be improved	**15.91%**	7
Poor	**27.27%**	12
Total		**44**

Q20 What is the procedure at your campus when you or a student needs iPad support in the classroom?

Answered: 43 Skipped: 3

#	Responses	Date
1	We try to sort it out for them on the spot, at the cost of class momentum. If we can't solve it, we send them to IT.	11/13/2016 10:40 AM
2	Go to Ed Tech	6/25/2015 4:57 PM
3	If the teacher is unable to resolve the problem(e.g. setting up the mailbox again, helping w/ changed passwords), then students can try and go to IT. They have either been given wordy documents to fix these issues. Naturally, if it's a hardware problem, the IT department provides no assistance.	6/22/2015 2:07 PM
4	I have PM students so there is no support unless they miss class by seeking help when they arrive from work at 3pm.	6/21/2015 3:08 PM
5	I could either send a student directly to IT or log the issue on the HCT Service Portal	6/21/2015 1:57 PM
6	We go to the tech support counter. I regularly tell my students not to mess with the controls; simply take your iPad down and let the 'professionals' handle it.	6/21/2015 12:26 PM
7	Go to the counter in the Tech Support department.	6/21/2015 12:06 PM
8	We can go to the IT helpdesk directly, or log in a request online.	6/21/2015 11:45 AM
9	We send the students to IT but they are often sent away and told to follow the instructions on a handout.	6/21/2015 11:28 AM
10	send them to the tech centre	6/18/2015 10:12 AM
11	Go to ThinkAid which isn't useful if you're a pm teacher because no one is around.	6/11/2015 3:23 PM
12	They will go to tech support.	6/10/2015 9:37 AM
13	Most of the times teachers try to solve the problems, if they can't students are sent to the IT centre.	6/9/2015 1:06 PM
14	We have great team of IT Support that teachers and students can go to for iPad support. Students can also get help through the teacher or other able students. At the beginning of the semester, 2 students are offered trained on how to trouble shoot iPad problems and then these students support peers with IT issues.	6/8/2015 4:47 PM
15	I send the student to Think Aid and go myself if I have an issue.	6/8/2015 3:13 PM
16	Teacher looks at it first, then if necessary refers student to IT, requiring the student to visit the IT office.	6/8/2015 2:30 PM
17	In the first semester of this year, there were not formal procedures in place other than sending students to Think Aid. In the second semester, we had the Ipad Tools program, so there was some kind of system in place and the key players were identified and pro-active. We also has Student Tech Leaders that we could call on in class for help when other students had problems. This worked really well in my classroom.	6/8/2015 1:03 PM
18	Ask it department	6/8/2015 10:40 AM
19	I send them to Think Aid but I am not aware of a procedure as such	6/8/2015 10:20 AM
20	Send them to the CALM?	6/8/2015 10:14 AM
21	Who knows? Probably nothing...or something ad hoc	6/7/2015 3:54 PM
22	Online request	6/7/2015 3:51 PM
23	Think aid! Students seem reluctant to go there in their own time, prefer to go in class time!	6/7/2015 3:44 PM
24	1. Student Technical Reps 2. College Technical Support	6/7/2015 3:29 PM
25	We can request workshops for students and assistance for faculty through EdTech website and we were supposed to have a person assigned to Foundations but I don't think that went ahead. Students can visit the ThinkAid centre for help.	6/7/2015 3:26 PM
26	There are two ways. One is to write a request in the portal and the other is to contact the ED tech support team.	6/7/2015 3:15 PM
27	Email tech support	6/7/2015 3:08 PM

28	IT Service request or drop in to the IT Centre.	6/7/2015 2:39 PM
29	They go to the IT help desk. Invariably they will ask their teacher first.	6/7/2015 2:37 PM
30	I usually am able to solve the problem myself, but as stated above in the previous question, there are different procedures depending on the problem area, and these procedures change each semester, along with the people responsible for these areas. To be honest, I don't think I could tell you a specific procedure at the moment.	6/7/2015 2:37 PM
31	The student is sent to the IT Help Desk.	6/7/2015 2:25 PM
32	I try and help and if I cant I send them to it center.	6/7/2015 2:15 PM
33	Teachers are supposed to fill out the online form for support and students can go to the help desk in the Knowledge Center.	6/7/2015 2:08 PM
34	I try to help first and then refer them to tech support if the issue is not resolved.	6/7/2015 2:05 PM
35	Uh, I help the student or wait until I can go to wherever support is available. If I can figure that ou where that ist. I don't know of any help we can rely upon for the classroom.	6/7/2015 1:56 PM
36	Do-it-Yourself! Send students to the IT Helpdesk or give up.	6/7/2015 1:55 PM
37	The procedure is to submit a request for support on the portal. However, I usually call them or go to the center myself.	6/7/2015 1:52 PM
38	We send them to the Knowledge Centre and they get the support the	6/7/2015 1:43 PM
39	There is supports staff to contact but the reality is that we often ask each other as there are no properly trained iPad support staff on campus	6/7/2015 1:42 PM
40	IT services help desk	6/7/2015 1:38 PM
41	We should contact the IT Support office for technical help. We can just go in and get the support we need.	6/7/2015 1:21 PM
42	Contact EdTech	6/7/2015 1:18 PM
43	Teachers will ask each other and muddle through, generally. If it is a technical issue that teachers can't handle, then student is sent to IT support.	6/7/2015 12:54 PM

Q21 Is there any additional PD or technical support that should be offered?

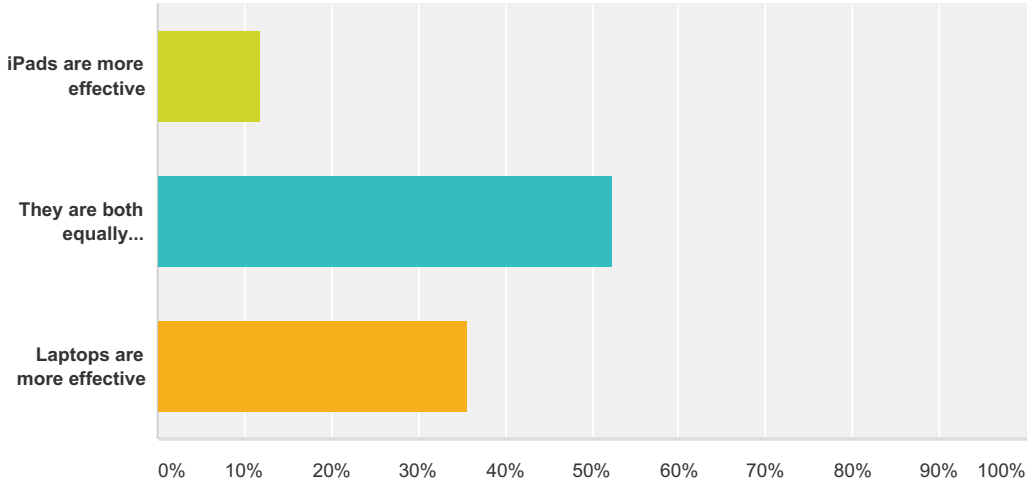
Answered: 38 Skipped: 8

#	Responses	Date
1	It should be the way it was before; else, we need to move on to something else. Perhaps BYOD.	11/13/2016 10:40 AM
2	I'm comfortable, but I would guess a lot of my team wouldn't know how to install Exchange mail on a new iPad.	6/22/2015 2:07 PM
3	Setting up of iPads at the beginning of the semester.	6/21/2015 1:57 PM
4	Not really ... other than to make sure that each tech person understands the fundamentals of the iPad and is able to intuitively deal with the tech issues on which he/she is presented.	6/21/2015 12:26 PM
5	At the beginning of the academic year, we need a lot more support to help students set up their ipads.	6/21/2015 11:45 AM
6	It would be nice for new students to have help and training if they are new to ipads. The teacher is often too busy, especially with students who start the semester late.	6/21/2015 11:28 AM
7	No, there is far too much PD that doesn't really work.	6/18/2015 10:12 AM
8	No. But there should be a group ready during working hours for any questions or problems that crop up. It should be done online through perhaps an app like messenger. We don't all need to know about Pages, it's obvious, the steps are there in the app but we sometimes need someone to be there to answer questions when we are in class. It saves everyone time.	6/11/2015 3:23 PM
9	Not necessary unless the app is particularly complicated.	6/10/2015 9:37 AM
10	PD are offered during PD week to staff and as mentioned above, 2 students in every class are offered technical training on the use of ipad	6/8/2015 4:47 PM
11	We need a dedicated team of Foundations i-Pad support technicians.	6/8/2015 3:13 PM
12	I think that as tablets become commodified there will be less need for IT support.	6/8/2015 2:30 PM
13	The PD is fine, and the technical support is fine. The problem is that there is nothing in the curriculum devoted to development of technology/computer skills. I would advocate that we go back to the days when Foundations offered a Comp 101 course.	6/8/2015 1:03 PM
14	No	6/8/2015 10:40 AM
15	I don't think we need more PD we have enough of that. We need full technical support during online exams - support tends to disappear when the exam has started and you have to phone them to get them to come back	6/8/2015 10:20 AM
16	Yes, both.	6/8/2015 10:14 AM
17	No. There should be empty time scheduled so that people can gently and mindfully relax and help each other.	6/7/2015 3:54 PM
18	I'm sure there is, but can't be specific	6/7/2015 3:51 PM
19	I would like BBlearn traing offered by teachers rather than IT staff.	6/7/2015 3:44 PM
20	More for PM students. e.g. basic technical training	6/7/2015 3:29 PM
21	There should be someone that can provide assistance by phone or email when needed.	6/7/2015 3:26 PM
22	There should be an orientation in the first week for fresh students on ipad knowhow.	6/7/2015 3:15 PM
23	Yes, but I'm not sure how this could be offered without employing a dedicated staff member.	6/7/2015 3:08 PM
24	iPad-specific support	6/7/2015 2:39 PM
25	I believe there is enough PD support offered. Usually I can figure our the technical glitches myself, or I'll ask a colleague.	6/7/2015 2:37 PM
26	The focus has become all about "apps", and I think what we're missing now is "websites". Before it was all about "websites" could be used for class activities, and now recent PD has ignored these and it's all about "apps". What people don't really understand is that nowadays, an "app" is really just a "website". Many websites do not have associated apps (for example, educanon). It would be beneficial to focus on 'websites' more than 'apps'.	6/7/2015 2:37 PM

27	None that I can think of at this time.	6/7/2015 2:25 PM
28	not sure.	6/7/2015 2:15 PM
29	None that I can think of.	6/7/2015 2:08 PM
30	More iPad PD's during the semester would be helpful.	6/7/2015 2:05 PM
31	Loads.	6/7/2015 1:56 PM
32	I find 'one size fits all' training to be ineffective and frustrating. I situate my professional development beyond the institution and refer to my own personal learning network for professional growth. However, that said, the college could provide teaching teams the time and space to properly design the teaching and learning 'blend'. This would involve taking an inventory of all the resources available (digital and physical) and discussing and mapping curriculum and pedagogy (something akin to TPACK but more learner-centric). Indeed, it is this discussion with my community of practice that I find helps me grow professionally. I think the institution needs to shift its focus from teacher PD to the learners themselves. What digital skills and tools do they need to master to learn and study effectively within the Foundatons program and beyond? At present students' exposure to different tools and skills depends on individual teacher preference and I believe that students are under-exploiting the iPad as a tool for learning.	6/7/2015 1:55 PM
33	I believe there should be more support for our students. In the classroom teachers spend a significant amount of time training students on how to use the iPad, download apps and troubleshoot problems. Tech support should be more readily available for our students and be offering them workshops.	6/7/2015 1:52 PM
34	More structured support for newbies (like myself) would have helped me. There were certain procedures in class that needed to be done on ipads and I lacked the knowledge to do this early on. Colleagues were helpful but training that would have pre-empted the inclass difficulties would have been ideal.	6/7/2015 1:43 PM
35	yes-It support should actually use the apps so they can help us and they should be tasked with finding new edn apps for students and teachers	6/7/2015 1:42 PM
36	I think we get enough PD to do. However, the sessions should be related to teaching so that students get the maximum benefit.	6/7/2015 1:21 PM
37	Regular class sessions and assessment of upgrading skills for students and teachers	6/7/2015 1:18 PM
38	Point people should be identified with appropriate troubleshooting training and experience of classroom exploitation of iPads.	6/7/2015 12:54 PM

Q22 How does the iPad compare to laptops in terms of teaching and learning?

Answered: 42 Skipped: 4



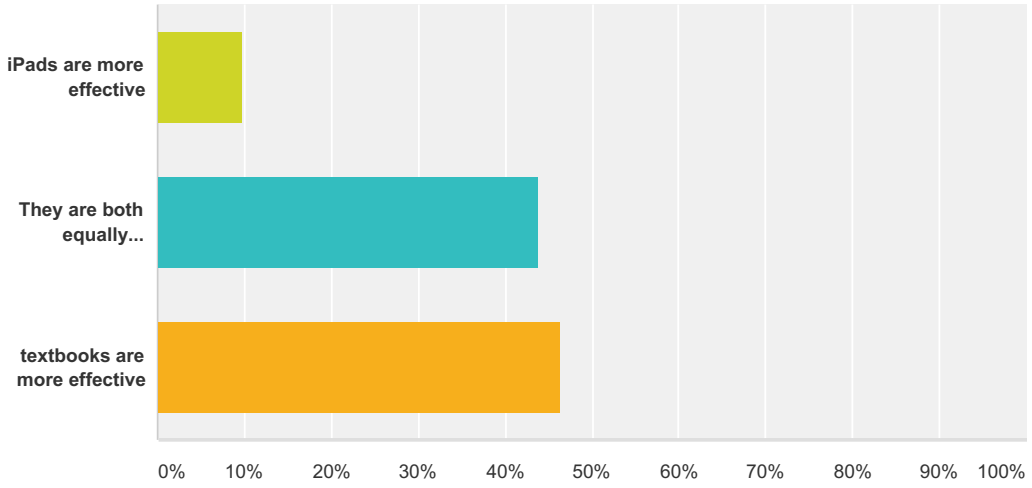
Answer Choices	Responses	
iPads are more effective	**11.90%**	5
They are both equally effective	**52.38%**	22
Laptops are more effective	**35.71%**	15
Total		**42**

#	Comments (optional)	Date
1	iPads or tablets are flexible and have potential, but we require time for preparation and planning, maintenance, and further support for student set up. They need to be more responsible and expectations need to be clearer for them.	11/13/2016 3:44 PM
2	I don't use laptops, but I would argue that typing on a laptop is far easier. iPads provide access to better apps that can engage the students more.	6/22/2015 2:22 PM
3	It really depends on the task at hand ... but the bottom line is that with Dropbox, there is not much a laptop can access that an iPad can't.	6/21/2015 12:26 PM
4	iPads are faster to use, with laptops I can use CDs for Listening.	6/21/2015 12:21 PM
5	They are more portable, faster and more interactive.	6/21/2015 11:46 AM
6	A laptop is a better device, which is why it costs more. You can type and create things.	6/18/2015 10:24 AM
7	Don't consider there to be a major difference between the two. Laptops are more effective for typing.	6/10/2015 9:47 AM
8	For the students iPads are more effective, but teacher are more familiar with the iPads.	6/9/2015 3:23 PM
9	Laptops have a wider variety of pedagogical 'tools', i,e. Powerpoint (and the projector screen resolution is better and bigger on a laptop) , it's easier to write academic reports on a latop, make movies, use Excel and so on and so forth.	6/8/2015 3:20 PM
10	Tablets are suitable for reading, but laptops are still superior for producing work - films, slideshows, text documents.	6/8/2015 2:44 PM
11	iPads are fine for Apps, but they are not user friendly for reading texts and writing papers.	6/8/2015 1:25 PM
12	It depends. IPads better for games and apps. Laptops better for work on documents, reading (due to bigger screen size and less scrolling IPads can be frustrating for students when they are typing Orr edit documents.. Also, they get distracted by other apps and things	6/8/2015 10:53 AM

13	they are different - ipads are quicker to get up and running in the class - you can dip in and out of them more easily while laptops can be clunky. However laptops are better for extensive writing	6/8/2015 10:39 AM
14	E.g. flash supported on laptops	6/7/2015 4:07 PM
15	Although some of the iPad's apps are novel and appealing, nothing can compete with optional intrinsic student motivation.	6/7/2015 4:02 PM
16	Laptop is more comprehensive and easier to use, though the iPad allows access to more variety of Apps and interfaces (at present).	6/7/2015 4:01 PM
17	I like them both. Use them both for different purposes.	6/7/2015 3:54 PM
18	Students need word processing, excel, internet etc much more than most apps. E-textbooks can be accessed on laptops. the ipad screen is small and the availability of social media apps like instagram and snapchat makes ipads a huge distraction.	6/7/2015 3:43 PM
19	Each has its own advantages: the IPAD has apps which students enjoy, and laptops have a keyboard that is easier to use.	6/7/2015 3:21 PM
20	Despite the problems, the camera on the iPad allows for more possibilities in the classroom, and the portability means it's easy to use anytime/anywhere. On the other hand, it's much easier to type and flip from one program to another on the computer. So they both have advantages and disadvantages.	6/7/2015 2:59 PM
21	Depending on what you are doing in the classroom, there are pros and cons for both devices. The iPad is easier to transport, takes up less space, and is good for using interactive apps. Laptops are better to type on, can be used for things that require flash, and are easier to set up certain things like presentations.	6/7/2015 2:24 PM
22	My preference would be for students to have both a laptop and a tablet. The iPad is a great multimedia/ mulit-modal tool - which is great for language learning; while a laptop is better for lengthy writing assignments and projects. I have found that the iPad redresses the privileging of the written word over the spoken word in terms of assignments. I require much more audio and video work than previously because it is so much more 'seamless'. We are in an interesting position at the colleges because we replaced 1:1 laptops with 1:1 iPads. Many schools that are adopting 1:1 iPads did NOT have 1;1 laptops before. We already had a decade's experience of 1:1 laptops, so we suffered a different kind of 'disruption' to how we did things. The biggest problem for me has always been assessment - online assessments work so much better on a laptop and there are just too many workaraounds for assessing on iPads.	6/7/2015 2:21 PM
23	Not so much for teaching but for learning yes. There is so much more students can do on the iPad in terms of supplementary activities. Unfortunately, writing still happens on paper as the iPad in my opinion does not facilitate writing practice.	6/7/2015 2:12 PM
24	I think it's impossible to compare the two as they are intrinsically different	6/7/2015 1:49 PM
25	for teachers equally effective, but ss like using them and are motivated to	6/7/2015 1:47 PM
26	For English language acquisition, technology is an addition, not a solution. Sometimes students need a book to keep with them and remind them that this is what they are doing.	6/7/2015 1:18 PM
27	Laptops are better suited to the needs of our institution ie producing students with work-ready skillsets. The iPad should be considered for what it was intended for ie checking email and watching youtube. These activities can be done at home. As a tertiary college with a critical role for the country, we should be training our students from the outset in the use of workplace and office technology, hardware and software.	6/7/2015 1:12 PM

Q23 How does the iPad compare to textbooks in terms of teaching and learning?

Answered: 41 Skipped: 5



Answer Choices	Responses	
iPads are more effective	**9.76%**	4
They are both equally effective	**43.90%**	18
textbooks are more effective	**46.34%**	19
Total		**41**

#	Comments (optional)	Date
1	Students don't value the device and it frequently appears in class broken, in need of crucial updates, without iTunes account to download apps, or without charge.	11/13/2016 3:44 PM
2	Students like textbooks as something tangible. I think we should have textbooks but use the iPad for teaching along with them. The e-texts have always had lots if issues!	6/22/2015 2:36 PM
3	From a reading and writing perspective, I just think we're better of w/ papers, books and pencils. Practice for listening, pronunciation, spelling, grammar could occur as successfully on the iPad as they do in book form. But is that a matter of the iPad and access to apps or is that more about access to the internet?	6/22/2015 2:22 PM
4	It depends on the learner but most students, especially the mature PM students prefer paper!	6/22/2015 11:37 AM
5	This is an area where I believe the traditional mode of learning is more effective. Pointing and clicking will just never compare to engaging actively with a book, making notes, underlining, turning pages, checking the index, contents, revisiting introductions etc. Again, I strongly believe that reading has to be done actively in order for the writer's message to come through. E-textbooks are best used as a supplemental tool to reinforce concepts learned that students can make use of on their own time.	6/21/2015 12:26 PM
6	iPds offer distractions that textbooks do not, plus there is no spell check in a textbook.	6/21/2015 12:21 PM
7	After lots of trail and error I have come to the conclusion that the book works much better for teaching IELTS. In terms of interacting with reading texts, underlining, making notes, looking at the questions and text at the same time, all of these are better done on paper. I know that the e-texts have work arounds for some of the above but the book is much easier. Also students can flip back and forth quickly to review and check what they did before.	6/21/2015 11:46 AM
8	It's a no-brainer. iPads are an amusement park. It's impossible for students to resist.	6/18/2015 10:24 AM

9	In my experience teaching level 4 textbooks are preferred for reading exercises. Many of the ebooks have technical problems (pages don't turn) students lose work they have done. Level 4 is an IELTS prep course which is paper based so prefer to teach using paper based materials.	6/10/2015 9:47 AM
10	iPads have interactive tasks and teachers and students can use audio and visual materials.	6/9/2015 3:23 PM
11	Depends often on the age and experience of the learner. Younger ones seem comfortable with etexts, older ones with paper. Paper is obviously more reliable, but etexts - if designed properly and not something more than a pdf - can offer more variety of activities.	6/8/2015 2:44 PM
12	Textbooks are more effective for reading skill development. Students can flip pages more easily in the textbook than scrolling on the ipad. Students prefer having a textbook. Students are also distracted by social media, movies, and websites on their ipads.	6/8/2015 1:25 PM
13	I think students get more of a sense of order and progression in what they are learning when they have a hard copy of a book. it is easier for them to revise and they can 'see' their learning better. I think iPad learning is fragmented	6/8/2015 10:39 AM
14	Students often prefer paper/books. Not easy to teach specific skills that involve note-taking, underlining (reading, listening). A writing task on the iPad not possible (e.g. timed - some students have poor typing skills (could apply to laptops too).	6/7/2015 4:07 PM
15	(same as answer in #22)	6/7/2015 4:02 PM
16	Students seem to value books more, and they are less of a strain on the eyes; although the iPad allows easy access to information without the weight of books. As a teacher, I tend to use the iPad or laptop to present information, but when sentences are required in answers, I often give out paper worksheets. Students definitely prefer that.	6/7/2015 4:01 PM
17	Again, I like them both, and when recently asked, many students would also like to have a paper based text book!	6/7/2015 3:54 PM
18	Since we use e-textbooks, this is not straightforward. Most students seem to prefer a book to e-textbooks. E - textbooks have some useful links to videos, etc but they often also allow students to see the answers. Students tend to view work on the ipad as not real work. They also miss the progression of learning as they work their way through a textbook.	6/7/2015 3:43 PM
19	Reading is definitely better when done on paper. Students don't engage fully with the e-text, and when the answers are shown they tend to guess then check. The thought processes are not the same.	6/7/2015 3:21 PM
20	The advantages of the ebook is that you can have more interaction, but the problem at the moment is that the textbook companies are not taking advantages of this. Our textbooks ideally would be scattered with videos, weblinks, interactive exercises (involving moving things around on the page), and trackable exercises, but they're not. The disadvantage is that you cannot 'flip' through an ebook, and we've had numerous technical issues, including not being able to save annotations or answers to exercises (not to mention that page-turning is much slower than it should be). The ebook is theoretically better, but it's still in it's development stage. For teaching, I need a textbook, because being able to flip through pages in seconds is key for planning lessons. I don't have time to wait for the book to load the index, type in the page number I want, find out it's not the right exercise, go back to the index, repeat, each step taking longer than it should as the book loads.	6/7/2015 2:59 PM
21	I believe iPads are more effective, as long as the student grasps how to harness its strengths. Teacher and college guidance is important here.	6/7/2015 2:52 PM
22	iPads make learning more interactive and are a great way to engage students because you can show videos, play games, and do other activities to keep students interested. However, textbooks are also a great resource when students want to actually touch paper and might be easier to annotate. Plus, sometimes reading from a screen is very draining and tiresome to the eyes, so textbooks would offer a good break for your eyes.	6/7/2015 2:24 PM
23	I would like both the eText and the print book and I think my students would like that, too.	6/7/2015 2:21 PM
24	Students may forget their textbooks, iPads not as frequently. iPad also provides interactive listening and video's	6/7/2015 2:12 PM
25	wrong platform for textbook-too glitchy	6/7/2015 1:49 PM
26	iPads have a greater range of content. However, students tend to see iPads as entertainment tools. iPads are usually introduced in institutions by more mature people who assume everyone will use iPads for educational benefits. However, this is not often the case.	6/7/2015 1:18 PM
27	For the purposes of text manipulation and annotation, textbooks are still the most useful medium. Etexts are simply a compromise for the purposes of sales.	6/7/2015 1:12 PM

Q24 What three reasons/things would you cite to continue using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

Answered: 41 Skipped: 5

Answer Choices	Responses	
#1	**100.00%**	41
#2	**92.68%**	38
#3	**85.37%**	35

#	#1	Date
1	mobility	11/13/2016 3:44 PM
2	The flexibility to walk around class and show students things 1 to 1	6/22/2015 2:36 PM
3	Ease of access to soft copies of course materials in Bb Learn	6/22/2015 2:22 PM
4	we only have ebooks now.	6/22/2015 11:37 AM
5	Students ALWAYS bring them to class	6/21/2015 2:13 PM
6	ease of materials delivery	6/21/2015 12:26 PM
7	Quick and easy access to a wide range of information.	6/21/2015 12:21 PM
8	For teachers, it's easier to display lessons bc we can walk around the room with the iPad.	6/21/2015 12:05 PM
9	Practicing vocab	6/21/2015 11:46 AM
10	None	6/18/2015 10:24 AM
11	None	6/11/2015 3:38 PM
12	Save paper- less photocopying	6/10/2015 9:47 AM
13	more interactive	6/9/2015 3:23 PM
14	Has a lot of resources	6/8/2015 5:02 PM
15	Students like them	6/8/2015 3:20 PM
16	Cost - cheaper than a laptop	6/8/2015 2:44 PM
17	There are some great Apps.	6/8/2015 1:25 PM
18	Engaging Interactive Apps like NEARPOD	6/8/2015 10:53 AM
19	Useul apps for specific skills like spelling or IELTS listening	6/8/2015 10:39 AM
20	Being interactive	6/8/2015 10:28 AM
21	Blended learning	6/7/2015 4:07 PM
22	iMovie and GarageBand allow for more multimedia creation	6/7/2015 4:02 PM
23	lightweight mobility	6/7/2015 4:01 PM
24	Dynamic	6/7/2015 3:54 PM
25	introduces students to concept of learning using technology	6/7/2015 3:43 PM
26	The apps and its capacity to store in as much information/materials as possible	6/7/2015 3:28 PM
27	Keeping up with technological advances	6/7/2015 3:21 PM

28	Tracking student progress and giving feedback with an app like Showbie is ideal.	6/7/2015 2:59 PM
29	Everything is stored in one tablet.	6/7/2015 2:52 PM
30	Portability	6/7/2015 2:46 PM
31	iPads can make materials more interactive.	6/7/2015 2:34 PM
32	Independent Learning	6/7/2015 2:30 PM
33	Increases student engagement	6/7/2015 2:24 PM
34	Multimedia and multimodality is good for speaking.	6/7/2015 2:21 PM
35	Ease of distributing information and activities	6/7/2015 2:12 PM
36	There are good sources of information and support online which can be accessed easily with iPads.	6/7/2015 2:08 PM
37	IPads are convenient for students and teachers.	6/7/2015 2:05 PM
38	engaging	6/7/2015 1:49 PM
39	mobility	6/7/2015 1:47 PM
40	Variety of content	6/7/2015 1:18 PM
41	Mobility	6/7/2015 1:12 PM
#	**#2**	**Date**
1	scale-ability of text (pinch and zoom features)	11/13/2016 3:44 PM
2	Apps like Nearpod give instant feedback	6/22/2015 2:36 PM
3	Students can access a range of resources such as dictionaries	6/22/2015 2:22 PM
4	light to carry and boys rarely forget it	6/22/2015 11:37 AM
5	Easier to move students around the classroom	6/21/2015 2:13 PM
6	witrh Dropbox and Adobe Acrobat, students work is never lost or forgotten	6/21/2015 12:26 PM
7	Students have to pay for it.	6/21/2015 12:21 PM
8	For students, it's lighter and more portable than a laptop.	6/21/2015 12:05 PM
9	research	6/21/2015 11:46 AM
10	none	6/18/2015 10:24 AM
11	Some interactive aspects can be engaging	6/10/2015 9:47 AM
12	easy to use	6/9/2015 3:23 PM
13	Light weight	6/8/2015 5:02 PM
14	Easy to carry	6/8/2015 3:20 PM
15	Taking exams and quzzes on the ipad makes it easier to grade.	6/8/2015 1:25 PM
16	Apps like Showbie where sts can send work and get feedback	6/8/2015 10:53 AM
17	they are light and portable	6/8/2015 10:39 AM
18	the variety of apps	6/8/2015 10:28 AM
19	Apps improving all the time (but have to pay for them)	6/7/2015 4:07 PM
20	YouTube-uploaded student content can be shared	6/7/2015 4:02 PM
21	range of interactive features	6/7/2015 4:01 PM
22	intercative	6/7/2015 3:54 PM
23	some apps are useful as support - quizlet, creative book builder	6/7/2015 3:43 PM
24	interactive features that enliven the class enviroment.	6/7/2015 3:28 PM
25	Using the extra dimension which appeals to some students	6/7/2015 3:21 PM

26	Students appear more responsive to email than before - for whatever reason (one press to check, red number on icon showing they have an email - much better interaction with students via email.	6/7/2015 2:59 PM
27	It encourages student-centric learning, as long as the student is mature enough.	6/7/2015 2:52 PM
28	Students are now accustomed to them	6/7/2015 2:46 PM
29	iPads allow studnts more access to the internet and information at their fingertips.	6/7/2015 2:34 PM
30	Interesting Apps	6/7/2015 2:30 PM
31	Easy to access information	6/7/2015 2:24 PM
32	Not so many cables to trip over.	6/7/2015 2:21 PM
33	Having access to additional supplementary materials/Apps	6/7/2015 2:12 PM
34	Students are more willing to carry them than bulky heavy laptops.	6/7/2015 2:08 PM
35	There are many resources that are compatible with iPads (etextbooks and apps)	6/7/2015 2:05 PM
36	allows collaboration	6/7/2015 1:49 PM
37	Apps	6/7/2015 1:18 PM
38	Video/camera feature can be useful.	6/7/2015 1:12 PM
#	**#3**	**Date**
1	potential to create tangible artifacts and employ target language	11/13/2016 3:44 PM
2	Much more flexible for students	6/22/2015 2:36 PM
3	the less dilligent students lose papers	6/22/2015 11:37 AM
4	Up-to-date technology	6/21/2015 2:13 PM
5	saving paper (this is very important consideration for me)	6/21/2015 12:26 PM
6	The system has a focus on using technology.	6/21/2015 12:21 PM
7	For students, it's cheaper than a laptop.	6/21/2015 12:05 PM
8	online dictionaries	6/21/2015 11:46 AM
9	none	6/18/2015 10:24 AM
10	Digital games	6/10/2015 9:47 AM
11	safe a lot of time on preparing lessons	6/9/2015 3:23 PM
12	Easy to use	6/8/2015 5:02 PM
13	Works well with simple apps like spelling and Kahoot!	6/8/2015 3:20 PM
14	Students like technology	6/8/2015 1:25 PM
15	Portability	6/8/2015 10:53 AM
16	materials are colourful - they look nice	6/8/2015 10:39 AM
17	Easy to manage	6/8/2015 10:28 AM
18	Easy to carry	6/7/2015 4:07 PM
19	Continual trying out of apps appeals to those with short attention spans	6/7/2015 4:02 PM
20	quality of images	6/7/2015 4:01 PM
21	Innovative	6/7/2015 3:54 PM
22	students need to be entertained in order to maintain focus - the ipad has games, apps etc that allow the teacher to continually vary activities	6/7/2015 3:43 PM
23	Great management tool, organization tool, tracking tool	6/7/2015 3:28 PM
24	Providing another source of information	6/7/2015 3:21 PM
25	There is still untapped potential, we just haven't reached it yet.	6/7/2015 2:59 PM

26	It facilitates real time responses, and answers to questions. Students can track their progress in quizzes easily.	6/7/2015 2:52 PM
27	Teachers are now accustomed to them	6/7/2015 2:46 PM
28	Easier to manage	6/7/2015 2:30 PM
29	Easy to transport	6/7/2015 2:24 PM
30	Bigger variety of activities available	6/7/2015 2:12 PM
31	They make good coasters for setting drinks on.	6/7/2015 2:08 PM
32	IPads are very user-friendly	6/7/2015 2:05 PM
33	variety	6/7/2015 1:49 PM
34	Recording of scores, progression	6/7/2015 1:18 PM
35	Sorry, can't think of another.	6/7/2015 1:12 PM

Q25 What other aspects of teaching/learning have been enhanced by the iPad (if any)?

Answered: 29 Skipped: 17

#	Responses	Date
1	Vocabulary may have seen some improvement. Handwriting has not.	11/13/2016 3:44 PM
2	Games and quizzes are much easier to play. Also, you can see what students are doing on the iPad.	6/22/2015 2:36 PM
3	Students almost always show up to class with what they need. I think the iPad also allows for some independent learning during the day, so if you want them to plug in their earphones and read, listen, practice vocabulary, etc., they can do that at a different rate from their classmates. I think the iPad allows us to have a range of resources at the ready, whereas you would have to photocopy "extension" activities for those who worked faster. It also means students can access practice on the internet, if you are organised enough to compile work in a one place (e.g. Blackboard Learn). But again, I'm not sure this makes the iPad better than a laptop.	6/22/2015 2:22 PM
4	offers some variety in management of the classroom and lessons.	6/22/2015 11:37 AM
5	It is easy to have access to all of your material all of the time.	6/21/2015 12:26 PM
6	Educational apps like TED Talks provide learning opportunities that don't exist with textbooks. Students don't have to carry/use/misplace paper.	6/21/2015 12:21 PM
7	Students can take photos and record videos easily.	6/21/2015 12:05 PM
8	I love showing the reading texts etc on apple TV and being able to annotate etc	6/21/2015 11:46 AM
9	None	6/18/2015 10:24 AM
10	Spelling revision can be more student centered with programs providing pronunciation and independent practice.	6/10/2015 9:47 AM
11	Because ipad is light weight, students are happy to carry it around rather than carry books and as a result, they have no excuse for not accessing work from anywhere.	6/8/2015 5:02 PM
12	No comment.	6/8/2015 3:20 PM
13	Really, I can't think of other compelling reasons to prefer a tablet over a laptop. Weight these days is not much of an issue.	6/8/2015 2:44 PM
14	There are great listening sites available and they work well on the iPad. This allows us to have a language lab (as in the old days) setting without the expense.	6/8/2015 1:25 PM
15	none especially	6/8/2015 10:39 AM
16	None	6/7/2015 4:07 PM
17	None	6/7/2015 4:02 PM
18	screenshots of work e.g. from the board, easy recording, photos.	6/7/2015 4:01 PM
19	Motivation, differentiation, individualized learning, kinesthetic learning. authentic tasks.	6/7/2015 3:54 PM
20	easy access to support materials on the internet. Creative book builder - i books for portfolios.	6/7/2015 3:43 PM
21	Helps in bringing about variety in the classroom. Makes the classroom interactive and engaging. Saves paper.	6/7/2015 3:28 PM
22	Possibly listening and speaking, because the record function allows students to listen then practice saying the phrases.	6/7/2015 3:21 PM
23	The three above pretty much cover it for me.	6/7/2015 2:59 PM
24	With regards to reading, students can read books online while listening to a CD, so it makes reading more accessible, easier, and interesting for them.	6/7/2015 2:24 PM
25	I honestly can't think of anything iPads can do that laptops can't do better.	6/7/2015 2:08 PM
26	We use a lot less paper.	6/7/2015 2:05 PM
27	Collaboration	6/7/2015 1:49 PM

28	using apple TV allows the teacher to monitor the class. you are not attached to the front desk as you might be with a laptop	6/7/2015 1:47 PM
29	can contact students more easily for homework assignments.	6/7/2015 1:18 PM

Q26 What three reasons/things would you cite to discontinue using the iPad in class, with the first (#1) being the most important, and # 2 and #3 being the second and third most important?

Answered: 39 Skipped: 7

Answer Choices	Responses	
#1	**100.00%**	39
#2	**89.74%**	35
#3	**76.92%**	30

#	#1	Date
1	No time to be revolutionary with it. Go back to books.	11/13/2016 3:44 PM
2	More integration between different software	6/25/2015 5:00 PM
3	Students cannot keep a record of their work that they would look back at.	6/22/2015 2:36 PM
4	Ultimately, we prepare students for the IELTS-a paper and pencil test. We know readers have a different experience with texts in print form vs. soft copy.	6/22/2015 2:22 PM
5	It is a huge distraction	6/22/2015 11:37 AM
6	Students are unable to produce long reports easily	6/21/2015 2:13 PM
7	E-textbooks	6/21/2015 12:26 PM
8	It is not powerful enough for many engineering applications.	6/21/2015 12:21 PM
9	The screen is much smaller than a laptop screen and makes it harder for students to read from.	6/21/2015 12:05 PM
10	distraction level	6/21/2015 11:46 AM
11	It is a blind alley, a trivial distraction from what we are trying to do.	6/18/2015 10:24 AM
12	Breaks easily and then you have to pay to get it either repaired or get a new one	6/11/2015 3:38 PM
13	Technical issues	6/10/2015 9:47 AM
14	Students can be distracted by them	6/8/2015 3:20 PM
15	Lack of computing power	6/8/2015 2:44 PM
16	Students are limited by what they can do on the iPad.	6/8/2015 1:25 PM
17	Distracting - students lose focus	6/8/2015 10:53 AM
18	they are not good for exams	6/8/2015 10:39 AM
19	Reading, students need to read from books to develop their reading skills	6/8/2015 10:28 AM
20	Limited functionality	6/7/2015 4:07 PM
21	thinking skills require meaningful reflection and discussion	6/7/2015 4:02 PM
22	I wouldn't discontinue using it in class.	6/7/2015 4:01 PM
23	real writing still important	6/7/2015 3:54 PM
24	a huge distraction from learning	6/7/2015 3:43 PM
25	ebook creates issues at times	6/7/2015 3:28 PM
26	It distracts students, and affects their focus.	6/7/2015 3:21 PM

27	It's too easy for students to go off task (how many times do I need to reprimand students for going on Instagram, Snapchat, etc.)	6/7/2015 2:59 PM
28	Perhaps there are too many distractions. Students tune out after a while.	6/7/2015 2:52 PM
29	Distraction (students associate iPads with play)	6/7/2015 2:46 PM
30	they can distract the students with games and youtube that can distrat the students from learning.	6/7/2015 2:34 PM
31	Tech problems	6/7/2015 2:30 PM
32	Disctracts from the lesson (social media, selfies, etc.)	6/7/2015 2:24 PM
33	Online assessments don't work as well as on laptops.	6/7/2015 2:21 PM
34	They are easy distractions for the students.	6/7/2015 2:08 PM
35	IPads should be used as a supplementary resource, along with laptops.	6/7/2015 2:05 PM
36	costly tool which will be replaced by laptop on degree course	6/7/2015 1:49 PM
37	use of ebooks	6/7/2015 1:47 PM
38	Students use iPads for non-academic purposes	6/7/2015 1:18 PM
39	Deskilling element in a vocational college.	6/7/2015 1:12 PM
#	**#2**	**Date**
1	Insufficient time to inculcate good iPad habits with our learners	11/13/2016 3:44 PM
2	More professional looking product	6/25/2015 5:00 PM
3	They're bad for typing and the Pages app experienced a lot of issues for much of the last academic year. We just stopped using it. Students might as well be writing on paper.	6/22/2015 2:22 PM
4	had technical issues with downloading the books	6/22/2015 11:37 AM
5	Distracting	6/21/2015 2:13 PM
6	using childish Apps or doing waste of time activities that do not further learning	6/21/2015 12:26 PM
7	It doesn't do Flash.	6/21/2015 12:21 PM
8	Touch typing on the ipad is cumbersome for both teachers and students.	6/21/2015 12:05 PM
9	difficulty of filing etc	6/21/2015 11:46 AM
10	It is unethical; look at the business model and e-waste.	6/18/2015 10:24 AM
11	Everything is checked. So there's no need to do any spelling or grammar lessons.	6/11/2015 3:38 PM
12	Apps that are not developed properly	6/10/2015 9:47 AM
13	Limited use if teaching a more academic course	6/8/2015 3:20 PM
14	Being locked into Apple's ecosystem	6/8/2015 2:44 PM
15	Textbooks are much better for reading practice.	6/8/2015 1:25 PM
16	Ineffectiveness for reading	6/8/2015 10:53 AM
17	e-texts have glitches and are not ideal	6/8/2015 10:39 AM
18	Writing, students need to write on paper	6/8/2015 10:28 AM
19	Not flash supported	6/7/2015 4:07 PM
20	study skills require adult tasks, not games and entertaining distractions	6/7/2015 4:02 PM
21	distraction for some students	6/7/2015 3:54 PM
22	laptop is more effective	6/7/2015 3:43 PM
23	students tend to forget to charge and get distracted	6/7/2015 3:28 PM
24	They don't learn the additional skills that one can learn on a laptop	6/7/2015 3:21 PM
25	It's a terrible input tool for typing... students can only look at one thing on the screen at a time, the keyboard takes up half the screen (which doesn't allow them to see the entire format of their work as they type)	6/7/2015 2:59 PM

26	It requires a great deal of organisation on the part of students to organise their apps into folders.	6/7/2015 2:52 PM
27	exam security - still find exams more secure via the laptops	6/7/2015 2:46 PM
28	Distractions	6/7/2015 2:30 PM
29	Not good for students who are more tactile	6/7/2015 2:24 PM
30	Would the alternative be BYOD? That has another set of problems.	6/7/2015 2:21 PM
31	They aren't a "real world" tool (e.g. a keyboard) they will need in the workplace, or at the very least that they need college training for.	6/7/2015 2:08 PM
32	IPads are rarely used in the workplace to communicate, complete tasks and so on.	6/7/2015 2:05 PM
33	not designed as a testing tool	6/7/2015 1:49 PM
34	Time wasted through technical issues	6/7/2015 1:18 PM
35	Limiting resource, device for reception not production.	6/7/2015 1:12 PM
#	**#3**	**Date**
1	No support for faculty - out of the box sessions, PD, clear policies	11/13/2016 3:44 PM
2	More powerful in all areas	6/25/2015 5:00 PM
3	IELTS is paper based	6/22/2015 11:37 AM
4	Needs to be updated regularly	6/21/2015 2:13 PM
5	if tech-related issues made using the iPad onerous (example programs take too long to load etc)	6/21/2015 12:26 PM
6	Difficult to flick back and forth like you can with paper.	6/21/2015 12:21 PM
7	There are a lot more technical problems with the iPad regarding passwords, Apple ID, apps not working, WiFi connection.	6/21/2015 12:05 PM
8	It is precicely the opposite of what students need.	6/18/2015 10:24 AM
9	Students are beginning to have eye probelms! I had to deal with at least 3 this semester!	6/11/2015 3:38 PM
10	Tests (ie IELTS) are paper based tests.	6/10/2015 9:47 AM
11	If one student has a problem with their i-Pad they cannot participate in the activity	6/8/2015 3:20 PM
12	Inability to upgrade or expand system or peripherals	6/8/2015 2:44 PM
13	Students should also be learning to use a laptop.	6/8/2015 1:25 PM
14	they are not good for extensive writing	6/8/2015 10:39 AM
15	Distraction, very often, students could be doing other things on ipad but we don't know	6/8/2015 10:28 AM
16	Have to pay for apps	6/7/2015 4:07 PM
17	iPad tech support demands of students reduce chances to truly learn language	6/7/2015 4:02 PM
18	multitasking less effective	6/7/2015 3:54 PM
19	screen is too small	6/7/2015 3:43 PM
20	Access to games etc feeds the technological addiction, and students are no longer on task.	6/7/2015 3:21 PM
21	No matter what, there always seem to be technical issues.	6/7/2015 2:59 PM
22	It is a tool for learning, not a replacement for the teacher. Sometimes you feel that you have to use it because you are provided with it and are required to use it in the class.	6/7/2015 2:52 PM
23	Money spent on paid apps	6/7/2015 2:30 PM
24	Not goof for your eyes	6/7/2015 2:24 PM
25	Wikis don't work on iPads.	6/7/2015 2:21 PM
26	They're too handy as a discreet entertainment tool for the students. They can easily become distracted with games and videos and do it so that teachers can't catch them and stop them.	6/7/2015 2:08 PM
27	IPads can be very distracting (social media sites)	6/7/2015 2:05 PM

28	students dont like reading and writing longer texts on iPads-neither do teachers	6/7/2015 1:49 PM
29	Students uninterested in other media	6/7/2015 1:18 PM
30	Distraction.	6/7/2015 1:12 PM

Q27 What other issues/problems have you had with the iPad (if any) ?

Answered: 32 Skipped: 14

#	Responses	Date
1	Freezing. Bandwidth issues. AppleTV drops broadcast, etc.	11/13/2016 3:44 PM
2	IT department does not know enough to help students fix issues.	6/22/2015 2:36 PM
3	Last year Keynote and Pages experienced a lot of bugs. We stopped using them both for a long time. I don't mind some of the course textbooks on the iPad, but I don't like everything to be on the iPad.	6/22/2015 2:22 PM
4	technical problems/poor internet connections/ it distracts the boys	6/22/2015 11:37 AM
5	None really. it is a very stable platform.	6/21/2015 12:26 PM
6	Students sometimes forget to charge them, with a book you don't have to charge it.	6/21/2015 12:21 PM
7	Students are used to using the iPad at home to play games, use Instagram and Snapchat, and for other fun purposes. They don't like using the iPad for academic purposes and it's very tempting and easy to switch to fun apps in the middle of a lesson. It can be a distraction for students.	6/21/2015 12:05 PM
8	Most problems are with the apple TV or projector.	6/21/2015 11:46 AM
9	As with all e-technology, they waste time by having glitches.	6/18/2015 10:24 AM
10	Technological	6/11/2015 3:38 PM
11	connectivity to internet, students not being able to log in, forgetting password etc. Wastes time.	6/10/2015 9:47 AM
12	When students bring their iPads to class and they are not fully charged.	6/9/2015 3:23 PM
13	There are a destruction at times especially when students use it to play games rather than be on task. Running out of charge.	6/8/2015 5:02 PM
14	e-textbook did not work properly on the i-Pad.	6/8/2015 3:20 PM
15	Having to use iTunes to manage files. I would prefer an OS in which the tablet is readable just like any other device, with drag and drop copy functions	6/8/2015 2:44 PM
16	Technical issues for students with Apple ID, passwords, batteries not being charged. Distractions of other sites. Instructors cannot always monitor what students are doing.	6/8/2015 1:25 PM
17	Sore eyes,	6/8/2015 10:53 AM
18	none	6/8/2015 10:39 AM
19	Technical issues - e.g. freezing or other issues that IT can't solve (e.g. HCT portal app)	6/7/2015 4:07 PM
20	While play can be appealed to via iPad use, conventional assessment continues.	6/7/2015 4:02 PM
21	Teething problems with using it in assessment delivery, though these have largely been resolved. It is difficult to reproduce the efficiency and range of Word on the iPad. Some problems with eBooks, such as freezing pages, but most are fine.	6/7/2015 4:01 PM
22	main issue is students going off task! (men particularly, games, snap chat, instagram etc)	6/7/2015 3:54 PM
23	it takes weeks to get all students set up with ipads, necessary apps and ability to use them.	6/7/2015 3:43 PM
24	The mirroring function, which is essential when using e-texts, is erratic.	6/7/2015 3:21 PM
25	If I have a wifi connection at DWC, I can't get a wifi connection at DMC without going through a fairly lengthy procedure involving a fair amount of technical stuff (e.g.: setting the encryption method). Colleagues have had this problem too. My iPad is also really heavy, otherwise I might take it with me more often.	6/7/2015 2:59 PM
26	Sometimes the iPad freezes up and 'does things' by itself. The problem is usually solved by turning the iPad off and on again.	6/7/2015 2:52 PM
27	when students break their iPad and are without one for a series of lessons they are unable to access the learning material.	6/7/2015 2:34 PM

28	-	6/7/2015 2:24 PM
29	iPads lack proper writing tools	6/7/2015 2:12 PM
30	Very slow to recharge. Very difficult to troubleshoot. Glass covers shatter and are then difficult for students to read through and work with.	6/7/2015 2:08 PM
31	connectivity	6/7/2015 1:49 PM
32	Weekly vocabulary tests not always available for all students	6/7/2015 1:18 PM

Q28 If you had any recommendations for the future, what would they be?

Answered: 34 Skipped: 12

#	Responses	Date
1	BYOD, all the way. Presenting about this at coming TESOL conference.	11/13/2016 3:44 PM
2	To buy useful licences and promise to continue them for a certain amount of time! For example, if we make resources in an app but then it is discontinued, we have wasted our time.	6/22/2015 2:36 PM
3	All books we buy from OUP or CUP come with ability to print out reading texts. Students could still use the iPad to record their answers, but the actual texts would be available to them in hard copy form.	6/22/2015 2:22 PM
4	ned books and iPads	6/22/2015 11:37 AM
5	Bottom line: I am glad the college has adopted the iPad. However, I do not believe and will never advocate using it simply for the sake of using it. Sometimes it is better to use the whiteboard or paper and pen or a textbook. the trick is to mix it up and use common sense.	6/21/2015 12:26 PM
6	Stick with the laptop, we don't really need 2 devices.	6/21/2015 12:21 PM
7	In light of the fact that all students are required to buy a laptop when they start the Bachelor's program anyways, it would make more sense to be sticking with laptops for Foundations.	6/21/2015 12:05 PM
8	I would prefer to but the IELTS textbooks as hardcopies. They don't disappear and the student can access them anytime. But use the ipad for Road to IELTS etc	6/21/2015 11:46 AM
9	Ditch the iPad and admit it was a mistake. If this means losing face, too bad. You will feel good in the long run.	6/18/2015 10:24 AM
10	Students will eventually change to laptops in bachelors so rent an iPad rather than buy one.	6/11/2015 3:38 PM
11	E-textbooks should be at the same quality as those ebooks are found on Amazon.	6/10/2015 9:47 AM
12	They should be more use of iPads at college and university levels.	6/9/2015 3:23 PM
13	Limit their use in class.	6/8/2015 3:20 PM
14	Ditch Apple, go back to laptops, or at least a hybrid laptop.	6/8/2015 2:44 PM
15	There is a time and place for iPad use in the classroom. iPads should not be used to replace other language tools but to supplement the learning process. I strongly recommend that students have hard copies of their textbooks.	6/8/2015 1:25 PM
16	I see no problem with continuing with iPads if they are used in conjunction with other materials and are not seen as a silver bullet for learning	6/8/2015 10:39 AM
17	iPads can be an assistive device, but hard copy books are essential. It is wrong to get rid of books.	6/8/2015 10:28 AM
18	Ditch the iPad, bring in androids or reintroduce the laptop - preferably not from Apple.	6/7/2015 4:07 PM
19	Stop focusing on currently popular tech, and hold people more accountable for substandard study attempts.	6/7/2015 4:02 PM
20	Continue down the same road: for the teacher, use the iPad as a delivery OPTION, not a delivery MUST, dependent on need; for the student, provide a balance of iPad activities with paper-based activities when necessary.	6/7/2015 4:01 PM
21	Balance! Paper and screen !	6/7/2015 3:54 PM
22	switch to laptops	6/7/2015 3:43 PM
23	We should go for the newer version .	6/7/2015 3:28 PM
24	Balance the use of the IPAD with paper.	6/7/2015 3:21 PM
25	More focus on websites than devices. "App" is a catchword everyone likes to throw around, but we get all caught up in the technicality of how something works, without focusing on how to apply it.	6/7/2015 2:59 PM
26	Consider iPads an additional tool, not a mandatory central component.	6/7/2015 2:46 PM
27	-	6/7/2015 2:24 PM
28	Develop the learner focused iPad Tools for Learning program into a proper digital literacy course.	6/7/2015 2:21 PM

29	Incorporate social media into lessons	6/7/2015 2:12 PM
30	Go back to textbooks or, at the very least, laptops.	6/7/2015 2:08 PM
31	It would be great if our students could start using laptops in the classroom. They could use iPads or mobile phones for supplementary activities that we do using apps.	6/7/2015 2:05 PM
32	don't use them for longer texts and def not for exams	6/7/2015 1:49 PM
33	Students should have a textbook available.	6/7/2015 1:18 PM
34	Return to laptops, focus from FNDs on office skills (numeracy and tech hard skills).	6/7/2015 1:12 PM

Q29 What advice would you give to teachers who are about to use iPads?

Answered: 40 Skipped: 6

#	Responses	Date
1	Make exemplars of everything you want your students to create - that way you'll see the challenges they're going to face. Have students bring headphones and a stylus. I recommend buying yourself a good stylus too. iPads are germ magnets.	11/13/2016 3:44 PM
2	Do not think that everything should be done on the iPad, especially writing. Give reading texts separately and on paper or other means where necessary.	6/22/2015 2:36 PM
3	Take a page out of ZU's playbook. For the upcoming academic year, their Academic Bridge Programme has ordered hard copies of the Unlock series. Also, don't put all your proverbial eggs into the iPad basket. It can be a great resource, but don't allow it to run the classroom.	6/22/2015 2:22 PM
4	always have a back up paper-based lesson Make sure you are confident using it Give the students the choice of iPad or paper - 80% with opt for paper!	6/22/2015 11:37 AM
5	Use the iPad yourself socially, to get familiarize yourself with the settings and how an iPad works. If possible, consider changing your phone to an iPhone. Be aware that your students will probably know a lot more about the iPad and its uses than you will - look to them for advice on its uses if you need to.	6/21/2015 2:13 PM
6	Learn how to use it; familiarize yourself with the many settings available; check IN ADVANCE that everything works prior to class ... this includes Apple TV in the your room.	6/21/2015 12:26 PM
7	Recognize the limitations, it is not an all-purpose machine.e	6/21/2015 12:21 PM
8	Start with a few basic apps. Don't have students using iPads in every lesson bc they will quickly lose interest.	6/21/2015 12:05 PM
9	Use the ipad when it is useful and use paper books etc when that is better. Don't feel its all or nothing.	6/21/2015 11:46 AM
10	Only use it if when you are sure it adds teaching and learning value, not bling or cool value. Don't think it will motivate students. You need to do that.	6/18/2015 10:24 AM
11	Good Luck	6/11/2015 3:38 PM
12	Ensure you are familiar with all the different aspects of the application that you are using in class.	6/10/2015 9:47 AM
13	Just go for it, when you start you will learn more by yourself.	6/9/2015 3:23 PM
14	Take advantage of the Ed Tech support. Familiarize yourself with the ipad so you can guide and trouble shoot ipad problems in class	6/8/2015 5:02 PM
15	Attend some training sessions on general navigation and also for the apps that you are likely to use. It's also important to know how to troubleshoot problems.	6/8/2015 3:20 PM
16	Don't expect miracles. It's just another tool. Use it and learn how to make it work for you.	6/8/2015 2:44 PM
17	Get to know the pros and cons of using the iPad. Don't feel pressured to use iPads all the time. Rely on student help in the classroom--especially for students to help each other. Use a plan such as the iPad Tools Programme and devote an hour or two a week for iPad exploration and training.	6/8/2015 1:25 PM
18	They and student use need to be managed. Do not rely on them for T and L.	6/8/2015 10:53 AM
19	Work out how to deliver and share material with students ie which platform for sharing you're going to use and stick with it. Don't be afraid of students knowing more than you	6/8/2015 10:39 AM
20	You should learn to use it to teach, as it makes teaching more interesting, especially for doing exercises and activities.	6/8/2015 10:28 AM
21	Attend as many PD sessions as you can or get peer help on useful apps	6/7/2015 4:07 PM
22	Don't worry. Another machine will replace this one in the next couple of years.	6/7/2015 4:02 PM
23	Embrace Apps such as Showbie to make class and time management much easier.	6/7/2015 4:01 PM
24	Experiment, don't be frightened, just have a go, learn from others, read about tech initiatives.... learn from your own children and their schools.	6/7/2015 3:54 PM

25	Don't plan to use ipads for everything. Use ipads in combination with other types of materials, including books and other printed materials. Really think about what value there is in using the ipad for a particular task or lesson.	6/7/2015 3:43 PM
26	Sit with the Edtech team to know how to set up the device, the apps that are useful and the ipad protocol. Sit with colleagues, ask for assistance and try and use it as much as possible to understand its features and use.	6/7/2015 3:28 PM
27	Become proficient in a small number of apps to begin with. Be wary of using it exclusively.	6/7/2015 3:21 PM
28	I'd recommend a list of key apps that most teachers use all the time, and they can try one at a time in class as they need them - not too many.	6/7/2015 2:59 PM
29	Check what etextbooks you are required to use. Attend PD sessions to orientate themselves. Use a few apps in teaching to start with. Ask for help whenever you need it!	6/7/2015 2:52 PM
30	It's okay to make mistakes in using it, it's how you handle when things go wrong that counts (and things will go wrong). Pretending you know everything about them will only stress you out.	6/7/2015 2:46 PM
31	Do not go App happy. Become familiar with a few basic apps and learn how to use them well and how you can use them in your classroom. Then you can lean new ones as you go!	6/7/2015 2:34 PM
32	Ask others for advice about which apps they prefer and dislike; play around on the iPad to learn more.	6/7/2015 2:24 PM
33	Take time to discuss your pedagogy and curriculum with your colleagues and think about all possible resources available. Then design your teaching and learning blend.	6/7/2015 2:21 PM
34	Stay calm and make the most of it	6/7/2015 2:12 PM
35	Lobby publishers to make something useful for your content area. If your content is language learning, you have a long wait.	6/7/2015 2:08 PM
36	I would advise them to not stress. IPads are very user-friendly and there are a lot of experts on campus that would be willing to help them learn.	6/7/2015 2:05 PM
37	don't try to use more than 4 or 5 apps when you start, and don't look for content specific apps-thing about productivity	6/7/2015 1:49 PM
38	don't be afraid of using it	6/7/2015 1:47 PM
39	Don't expect students to use them for educational matters, don't expect them to work all the time. They will give you a greater range of content and use of apps is beneficial.	6/7/2015 1:18 PM
40	Focus on what makes it unique: mobility for creating video/audio content and creating content from that eg CBB.	6/7/2015 1:12 PM

Q30 What advice would you give to educational managers regarding iPads?

Answered: 38 Skipped: 8

#	Responses	Date
1	Not to go down that road. I recommend BYOE - Bring your own EVERYTHING. That's not facetious - I mean that. Students have to have responsibilities, and when we supply them with things they don't learn the skill of coming prepared. It's a learned helplessness that creeps in instead.	11/13/2016 3:44 PM
2	Set up a proper Ed Tech support team and get management to buy in to them.	6/25/2015 5:00 PM
3	Provide laptops as well - I mean labs in the college which you can book for a change or to do some things which remain easier on a laptop.	6/22/2015 2:36 PM
4	Trust your teachers' collective judgment for when and where the iPad suits their individual classroom environments. However, you can't give a pass to some team members who are Luddites. Ultimately, we all need to be iPad-friendly enough to set it up for system-wide assessments. Some members of our team are unable to do even this.	6/22/2015 2:22 PM
5	they are fun but limited as the final exam is the rather traditional IELTS test	6/22/2015 11:37 AM
6	Teachers who are unfamiliar or uncomfortable with technology should be 'buddied' with teachers who have a higher skill-set in this area.	6/21/2015 2:13 PM
7	Hard to say ... take a hands on approach with teachers and encourage them constantly to make use of the iPad. Here at DMC, we do a periodic Face2Face in house PD session in which teachers highlight what they are doing with the iPad. This goes a long way to keeping the whole initiative alive.	6/21/2015 12:26 PM
8	Don't be overly keen to be infatuated with new technology without realizing the cognitive ramifications.	6/21/2015 12:21 PM
9	Don't pressure teachers to use the iPad all the time.	6/21/2015 12:05 PM
10	They are just a tool like a pen or a book. They don't improve learning just by being in the classroom.	6/21/2015 11:46 AM
11	It's a (flawed) tool, not a methodology. Don't value it above good teaching. Don't put a box to tick for teacher evaluations - it is irrelevant. Don't believe that it will motivate students. Think outside the box - ignore the marketers, make decisions based on learning.	6/18/2015 10:24 AM
12	This is not a tool for college and uni education. It's a personal tool just like the smartphones used to check on emails and communicate with friends and sometimes play games not to learn about writing and reading and listening in college!	6/11/2015 3:38 PM
13	Ensure that the apps that are used have been thoroughly tested.	6/10/2015 9:47 AM
14	To provide more training sessions for their staff.	6/9/2015 3:23 PM
15	Tread with caution!	6/8/2015 3:20 PM
16	Look for Apple alternative. Pilot if possible, and then listen to your teachers and students.	6/8/2015 2:44 PM
17	Train the students on using laptops from the beginning of Foundations. Use iPads as part of the program but be aware that they have limitations.	6/8/2015 1:25 PM
18	They are relatively ineffective for teaching reading and students prefer reading on paper based materials.	6/8/2015 10:53 AM
19	Provide ongoing mentorship and support to new teachers - there is a tendancy to forget that new teachers may never have used one and to provide plenty of up front training before a project begins and then assuming its ticking over nicely	6/8/2015 10:39 AM
20	Ipads can only be assistive.	6/8/2015 10:28 AM
21	Get feedback from the teachers and act upon it	6/7/2015 4:07 PM
22	Focus on the fundamentals of education without so much tech and assessment. Appeal to people's natural curiosity, and follow through with procedures that purport to legitimately punish distracted/toxic student behavior.	6/7/2015 4:02 PM
23	To view them as a tool, along with other components, in the delivery of a programme.	6/7/2015 4:01 PM
24	Follow best practice. Be supportive Have guidelines in place for their use in class! Know how to use them yourself!	6/7/2015 3:54 PM

25	same as above.	6/7/2015 3:43 PM
26	Go for a balance.	6/7/2015 3:21 PM
27	We still need better technical support, but as we've been saying this for a while, I think it might be better to rephrase it as "we need a better technical support system".	6/7/2015 2:59 PM
28	Have a program in place to orientate staff and students to the educational use of iPads.	6/7/2015 2:52 PM
29	Realize it is one of many tools we use in the classroom, not a magic wand.	6/7/2015 2:46 PM
30	That they can be beneficial but they will not make weak students into super students.	6/7/2015 2:34 PM
31	Do not place a blanket statement with regards to always using iPads in the classroom. They are a helpful educational tool but should be used as a supplementary device in addition to laptops, paper, etc.	6/7/2015 2:24 PM
32	Try to provide time and space for teachers to discuss the curriculum, pedagogy and resources, and design an effective teaching and learning blend as a community of practice.	6/7/2015 2:21 PM
33	Promote iPads in the class	6/7/2015 2:12 PM
34	Keep them in elementary schools. Adults need more powerful tools.	6/7/2015 2:08 PM
35	I would advise them to only use the iPads as a tool in the classroom, not the main source of information.	6/7/2015 2:05 PM
36	it's one of many tools that teacher's can use	6/7/2015 1:49 PM
37	Students will not see iPads in the same way as you may. Students will use the iPads for a far greater time in non-academic pursuits.	6/7/2015 1:18 PM
38	Liaise closely with daily users (faculty and students) to understand the potential. Then produce best practice training/workshops in collaboration with veteran users.	6/7/2015 1:12 PM

Q31 Overall, how have you found the iPad experience in terms of teaching and learning?

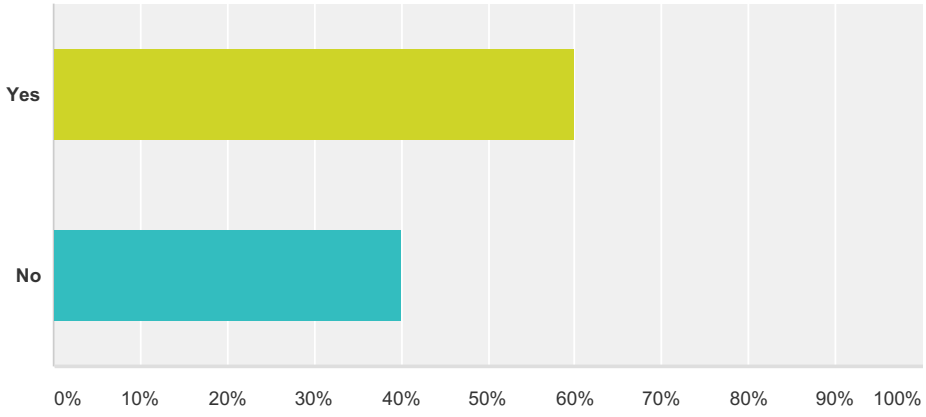
Answered: 41 Skipped: 5

#	Responses	Date
1	First year, it was exciting and full of potential. Now, our program has been gutted and the iPad presents an obstacle to learning. I like it for teaching, but my learners need to get away from the distractions it can cause and get on with their work. Overall, this has not been a good experience for the learners. It has been a beneficial learning curve for the faculty in our Foundations (or bridge program). Our college program teachers were meant to be employing it too, but we saw very few adopters at all in that faculty.	11/13/2016 3:44 PM
2	Interesting, but laptops are more effective.	6/25/2015 5:00 PM
3	Very informative - and very mobile.	6/22/2015 2:36 PM
4	I'm flexible and tech-savvy, so I just go on with it. It's been positive in terms of challenging my skills as an educator.	6/22/2015 2:22 PM
5	I have improved my technical knowledge more than the students have improved their English skills. Students prefer paper and computers.	6/22/2015 11:37 AM
6	Very challenging at first. Once I used it for a semester it became easier.	6/21/2015 2:13 PM
7	It has contributed positively to my teaching, allowing me to easily access all of my materials as and when I need them. In this way, I can accomplish more in a shorter time. Ultimately, this enhances student learning.	6/21/2015 12:26 PM
8	There is no evidence that students learn language any better from a device than they do from books, although the audio the device provides is certainly useful.	6/21/2015 12:21 PM
9	It's been a good learning experience personally, but it also presents more of a challenge regarding classroom management. Sometimes students forget to bring the iPad, or don't have charge, or forget a password, or can't download an app, or have smth go wrong with their payment method...there are many technical issues that waste classroom time and many times the students end up preferring to use pen and paper.	6/21/2015 12:05 PM
10	I had an ipad before we got them at college and I use it constantly so I enjoy having them in the classroom.	6/21/2015 11:46 AM
11	A great distraction, a sad affair that has set everyone back. it has shifted attention away from our goals.	6/18/2015 10:24 AM
12	Unpleasant	6/11/2015 3:38 PM
13	Have not replaced textbooks in terms of effectiveness. Can be used an an engagement tool. Suitable for game based learning. In every class there is always usually one or two who has some kind of problem with either logging in or being able to open the app etc. Students prefer reading exercise on paper based materials.	6/10/2015 9:47 AM
14	It's a useful tool for learning and teaching.	6/9/2015 3:23 PM
15	Excellent! I love using the ipad and I still have plenty to learn regarding the use of the ipad	6/8/2015 5:02 PM
16	Quite useful for some activities. It can be a useful learning tool but should not be made the 'engine' of teaching and learning in the classroom. It can provide some of the 'fuel'.	6/8/2015 3:20 PM
17	Overall it's been an interesting experience, but clearly the device was never the revolution it was made out to be.	6/8/2015 2:44 PM
18	It's great that students have their own iPads in the classroom and there is no need to have a dedicated computer lab or classroom (as in the old days). Students have access to great resources and materials on the iPad, but it is one of many tools for teaching and learning.	6/8/2015 1:25 PM
19	. There are some good apps that are engaging and interactive, but sadly They are up,to the hype we were given	6/8/2015 10:53 AM
20	I am neutral about iPads - I found them interesting at the beginning as they were a novelty - I felt like a child with a new toy. Now I am not really that interested in them	6/8/2015 10:39 AM
21	Useful.	6/8/2015 10:28 AM
22	Not that useful to be honest, but a fun/immediate diversion	6/7/2015 4:07 PM
23	Irrelevant	6/7/2015 4:02 PM

24	Initially frustrating time-wise, just coming to terms with discrete marking on the iPad, for example. However, once you have established how certain Apps can help you in your specific level, the advantages of the iPad are easier to see.	6/7/2015 4:01 PM
25	I love it.	6/7/2015 3:54 PM
26	I enjoy using ipads as I like being able to vary activities and try new things, but overall, I think ipads have not really improved the quality of my teaching or the quality of students' learning. I think it may actually have diminished it.	6/7/2015 3:43 PM
27	Helpful and interesting. It's a great learning/teaching tool but if a teachers wishes to create materials and resources , then a laptop is a must. The ipad is more of a Launchpad.	6/7/2015 3:28 PM
28	Frustrating with Reading, because I believe it has had a detrimental effect. However, with vocabulary and listening it has added another dimension which has added value.	6/7/2015 3:21 PM
29	Despite the negative things I've said, I value the potential, and if I go back to teaching out of this region, I'm pleased with all the things I've learned regarding mobile learning. Motivated students could benefit massively.	6/7/2015 2:59 PM
30	Overall, its been positive. I've been given an early opportunity to develop my skills in using iPads in the classroom.	6/7/2015 2:52 PM
31	Personally it has been fine, but I realize it's about attitude more than teaching. I don't mind fluffing up in the classroom and admitting to students that I need to figure something out and come back later with an answer. For those teachers who feel uncomfortable with this approach I can imagine it is very stressful. My stresses have come more from how to securely administer assessments.	6/7/2015 2:46 PM
32	It has helped me to learn and develop my understanding of using technology in the classroom.	6/7/2015 2:34 PM
33	I like having the flexibility to incorporate iPads into my teaching but do not believe that they should always be used.	6/7/2015 2:24 PM
34	From the teacher perspective, the introduction of the iPad was 'disruptive', but it is now another tool in the teacher toolbox. For students, I think it is still under-exploited as a tool for learning - the focus should shift to what digital literacy and technology skills need to master.	6/7/2015 2:21 PM
35	Very positive	6/7/2015 2:12 PM
36	Distracting, not all that helpful.	6/7/2015 2:08 PM
37	Overall, I have found using the the iPads in the classroom to be fine. I enjoy using the various apps with my students. However, I find that I spend a lot of time troubleshooting technical problems. Also, the students are easily distracted by social media sites while using iPads.	6/7/2015 2:05 PM
38	Interesting-but everyone has to start admitting to its limitations	6/7/2015 1:49 PM
39	great	6/7/2015 1:47 PM
40	Very good for content and variety. However, can be extremely distracting and disruptive as students do not see them as educational tools.	6/7/2015 1:18 PM
41	Overall, I feel that the iPads have held the students back to a shocking degree. We blindly followed the Apple trend without reflecting on our students and our mission. We are striving to prepare our students for a Bachelors in a vocational major, yet they can barely format a document, produce or edit a spreadsheet, write a professional email, use standard industry presentation software. We need to look beyond just teaching them English. We need to think bigger.	6/7/2015 1:12 PM

Q32 Would you be willing to do a short (30 min max) follow up interview? Y/N

Answered: 40 Skipped: 6



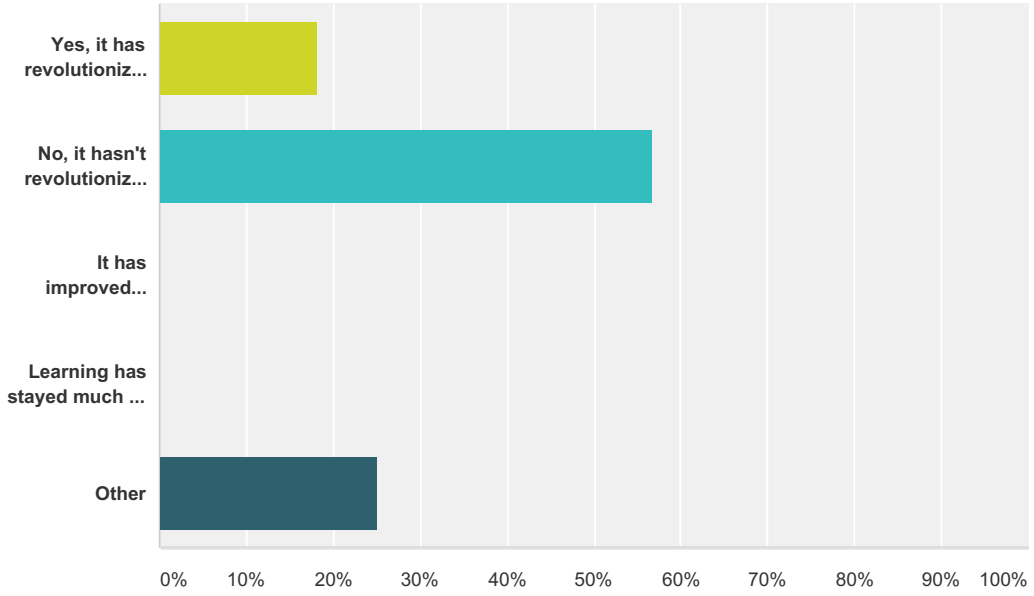
Answer Choices	Responses	
Yes	**60.00%**	24
No	**40.00%**	16
Total		**40**

#	If you answered 'Yes', please include your contact details below	Date
1	XXXXXXXXXXXXX@gmail.com 050XXXXXXXXXX	11/13/2016 3:44 PM
2	XXXXX@hct.ac.ae 050 XXX XXXX	6/22/2015 2:22 PM
3	XXXXXXX XXXXXXX 050 XXX XXXX XXXXXX@hct.ac.ae	6/21/2015 12:26 PM
4	050 XXX XXXX	6/21/2015 11:46 AM
5	050 XXX XXXX	6/18/2015 10:24 AM
6	XXXXXXXXXXXXXXXXX@outlook.com	6/11/2015 3:38 PM
7	XXXXX XXXXXX 056 XXX XXXX XXXXX@gmail.com	6/8/2015 2:44 PM
8	XXXXXXXXXX XXXXXXX XXXXXXX@yahoo.com	6/8/2015 1:25 PM
9	XXXXXXX.XXXXXX@hct.ac.ae	6/8/2015 10:39 AM
10	XXXX XXXXXXXX	6/7/2015 4:07 PM
11	XXXXXXXXX@yahoo.com	6/7/2015 4:01 PM
12	XXXXX@hct.ac.ae	6/7/2015 3:54 PM
13	050XXXXXXX hXXXXXXXXXXX@gmail.com	6/7/2015 3:43 PM
14	XXXXXXX@hct.ac.ae	6/7/2015 3:28 PM
15	XXXX 050XXXXXXX	6/7/2015 2:59 PM
16	055 XXX XXXX	6/7/2015 2:24 PM
17	XXXXX	6/7/2015 2:21 PM
18	055XXXXXXX	6/7/2015 2:12 PM
19	XXXXX@hct.ac.ae.	6/7/2015 2:08 PM

20	XXXXXXX@gmail.com	6/7/2015 2:05 PM
21	XXXXXXXXXX@hct.ac.ae	6/7/2015 1:18 PM
22	XXXXXXXXX@yahoo.com	6/7/2015 1:12 PM

Q33 Based on your experience, has the iPad been an "EFL Revolution"?

Answered: 44 Skipped: 1



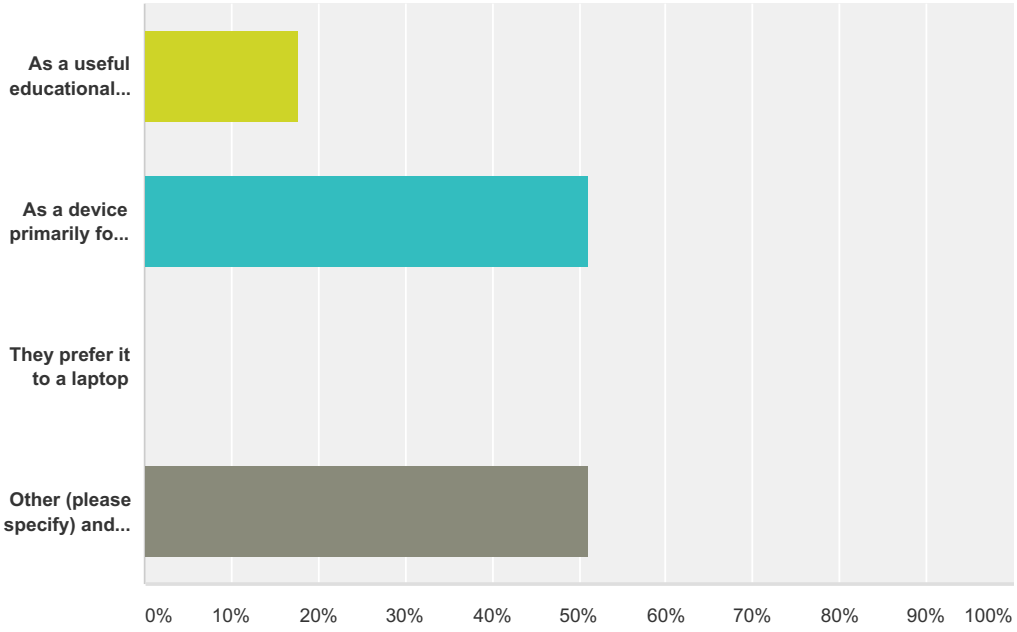
Answer Choices	Responses	
Yes, it has revolutionized learning	**18.18%**	8
No, it hasn't revolutionized learning	**56.82%**	25
It has improved learning	**0.00%**	0
Learning has stayed much the same as before	**0.00%**	0
Other	**25.00%**	11
Total		**44**

#	Other (please specify) and any additional comments	Date
1	We had an opportunity to do this, but it has been squandered. On the SAMR model, we are back to the beginning: Substitution (for a textbook).	11/13/2016 10:48 AM
2	Just another tool to use in the classroom.	11/10/2016 5:22 PM
3	No, it's another tool. One with its own limitations and workarounds.	11/1/2016 1:02 PM
4	It is just another tool that enables learning with its own benefits and drawbacks.	10/24/2016 12:45 PM
5	I would say that the iPad has allowed me better control of the way students organize information. Using Dropbox and Adobe Reader, I can insure students always have at their disposal the material I gave them, and that it is maintained in an organized way.	10/20/2016 10:09 AM
6	I don't think it's been specifically an 'EFL' revolution, but initially it changed the way that teaching was approached, so it has probably had an impact on teaching and learning overall.	10/20/2016 8:32 AM
7	I think it has been a barrier to real progression, a blind alley if you like.	10/19/2016 9:48 AM
8	In terms of my own work place, the impetus didn't last so that the back up needed wasn't provided. The students didn't get help setting up etc. In addition the course became so short and intense that there is no time to train the Ss to use the Ipad and the apps and we don't have time for creative learning activities like projects etc	10/18/2016 2:57 PM

9	I would say Yes and No. On the one hand, it has facilitated learning with the variety of apps, the ability to do creative multi-media projects, the ability to access teacher materials, and exchange information with the teacher and other students. On the other hand, I wouldn't use the word 'revolutionize' bc most of the same things were done with laptops before.	10/18/2016 1:12 PM
10	My response refers to our context rather than the world of EFL in general. I have seen no evidence that the use of the iPad has changed the way our students learn both in and outside the classroom primarily because they are not intrinsically motivated to make the most of its capabilities as a learning tool.	10/18/2016 1:07 PM
11	I wouldn't say 'revolutionized ' EFL particularly at the level the HCT Foundations students. However, I found it enhanced my teaching and I could create interesting, innovative materials for the students. My new position is Head of EAL in a school in UK and I intend to introduce iPads into the 6th form. The students are predominantly Chinese girls - the exact opposite to our students - should be interesting!	6/23/2016 7:23 PM
12	I wouldn't say it has revolutionised EFL but it has enabled teachers to make some significant add ons to teaching language. For me the internet is what has revolutionised EFL and language learning in general.	5/18/2016 6:25 PM
13	It has provided EFL learning with another very useful tool. It has enabled portability and interactivity, in addition to instant access to information; however, many students still say they prefer paper in the classroom for exercises and reading texts. The constant glare of the screen is a factor, combined with occasional connectivity problems. All in all, though, it has been a positive addition. Perhaps the word 'revolutionized' implies a level of exclusivity I personally don't attach to it, preferring to encourage a more eclectic approach to learning dependant on the nature of the task.	5/17/2016 9:31 PM
14	Yes, for those places in the world that can afford them and of course have access to good wi fi!	5/17/2016 4:29 PM
15	If properly supported, it could be a more powerful tool. If not, teachers are left reverting to paper and not much has changed apart from students and teachers not having access to coursebooks.	5/17/2016 1:21 PM
16	It has been a bit of a mix. clearly ipads are not preferred by students doing some basic skills like reading (esp long texts). Many prefer paper handouts for grammar also. At the same time there are apps out there that allow for student centred teaching, getting feedback to students and are good for engaging them (e.g. Nearpod) and others that enable them to be creative.	5/17/2016 1:10 PM
17	I would say to some extent , yes. Technology, mainly using the iPad has made access of resources easy. Resources have inbuilt audio and video which makes it all the more interesting to use. It has made learning available anytime, anywhere.	5/17/2016 12:18 PM
18	Too many technical issues.	5/17/2016 12:00 PM
19	It is a supplemental tool that can be used in the class but at this stage it would not be described as "revolutionary"	5/16/2016 5:32 PM
20	It tends to be seen by older, implementers as a useful learning tool. However, younger people see it primarily as entertainment.	5/16/2016 2:37 PM

Q34 How would you say students regard the iPad?

Answered: 45 Skipped: 0



Answer Choices	Responses	
As a useful educational resource	**17.78%**	8
As a device primarily for entertainment / personal use	**51.11%**	23
They prefer it to a laptop	**0.00%**	0
Other (please specify) and any additional comments	**51.11%**	23
Total Respondents: 45		

#	Other (please specify) and any additional comments	Date
1	As a nuisance that they cannot use in the program area. We should return to laptops. Students are not interested in the iPad anymore. It has lost its allure. Their phones are more important to them.	11/13/2016 10:48 AM
2	A bit of both really, but they need direction to use it educationally - without this. it's just used for entertainment	11/10/2016 5:22 PM
3	A bit of both, but mainly entertainment.	11/10/2016 7:31 AM
4	Mainly the latter.	11/7/2016 3:20 PM
5	As another way of doing what they can do on most other devices, but one with its own workarounds and limitations. There are a plethora of such devices, they are just another gateway to the internet/ cloud and the apps are mostly cross-platform anyway. Our students in their first few years here need to be introduced to the tools they can use for their studies. They really are quite 'old-fashioned' and do not really understand how they can collaborate and share online, often emailing each other work rather than using a Google doc, for example.	11/1/2016 1:02 PM
6	Nevertheless, most use it predominantly as an entertainment vehicle. What this tells us in my view is that a student using the iPad must first possess a certain level of maturity/discipline re his/her ability to engage study before this device can be utilized to its full potential.	10/20/2016 10:09 AM
7	I would say a bit of both. At home primarily for personal use/entertainment, while during class as an educational resource. I think it also depends on the student - there will always be students who see it as one or the other, but overall I would say both.	10/20/2016 8:32 AM

8	The students sometimes feel as if the iPad is useful as an educational resource, but they don't know how to use it in this manner without supervision. Even the most focused student is distracted by other apps or pop-ups.	10/19/2016 10:02 AM
9	They do like using it in class but I get the impression that they think it is only a small aspect of the lesson. In fact many students are reluctant to buy one in level 4 as it is not vital to the course.	10/18/2016 2:57 PM
10	I believe that students 'regard the iPad as a device primarily for entertainment'. However, I think students do like the aspects of the useful teaching apps (there are many but I give the example of Nearpod for reading which students seem to enjoy for a change); however, I think iPads should be used as a teaching tool and not as the sole provider of all their learning needs. I also think students like the flexibility the teacher has to walk around the classroom with the iPad while being able to control the projected screen content, rather than being tied to the front of the class. However, again I don't think this should be the only thing used - ie replaces a reading text book etc.	10/18/2016 1:17 PM
11	I would say both bc most of our students use the iPad to play games or watch movies before they come to college, so many of them still enjoy the iPad for personal use during free time. When they are in class, I think most of them regard it as a useful educational tool but they don't want to use it all the time for every lesson. Especially to practice writing, they find typing on the iPad very cumbersome and would prefer to write on paper. When it's time to review before exams, I've noticed that they're more likely to look back at their handouts rather than to look up materials saved in their iPads.	10/18/2016 1:12 PM
12	I haven't sought learner views on the educational value of the i-pad but i would think that some learners would say it is a useful educational resource.(perhaps the more aware and studious one who see its benefits for learning) but I feel most would see it primarily as an educational tool.	5/18/2016 6:25 PM
13	A bit of both, with the entertainment / personal side probably winning the lion's share.	5/17/2016 9:31 PM
14	I think they see it as a bit of both.	5/17/2016 4:50 PM
15	I would say they use it for both, just as I do!	5/17/2016 4:29 PM
16	I think it's a mixture of both, as some students regard the iPad as a tool for entertainment, some of them might watch movies, play games, checking their personal mail ... etc. inside the classroom.	5/17/2016 2:50 PM
17	I think they see it as a combination of the two but are more inclined to use it for entertainment and personal use.	5/17/2016 1:03 PM
18	It is only useful when the teacher manages the resources carefully. In my experience, the students don't voluntarily use it for educational purposes. It is a huge distractor, and has led to many classroom management issues.	5/17/2016 12:23 PM
19	Students are yet to develop the maturity and the willpower to control temptation. Often, the iPad becomes a distraction and hampers learning because of the different types of content that students have access too. It also brings about alienation and detachment. I see this as having a negative impact on communication and connection.	5/17/2016 12:18 PM
20	It is useful tool that can work in conjunction with traditional learning.	5/16/2016 5:32 PM
21	The iPad is a very useful educational resource if used properly. It's up to the teacher to create meaningful lessons that keep the students focused on the learning objective. However, if iPads are used simply for show or without a clear focus you will find students distracted and using it for personal reasons instead of learning. Basically, if you want students to regard their iPad as a learning tool, then the teacher needs to plan their classes carefully, deciding when technology will support their lesson and when it will inhibit the students learning.	5/16/2016 3:31 PM
22	I think it a mix of the two statements. Primarily they regard it as useful for entertainment and personal use, but will do educational activities when directed. However, at this institution the teaching load makes it very difficult for teachers to develop iPad compatible lessons. It would be a full time job to more than an occasional lesson. Existing online or commercially available resources are either not clearly appropriate for our students or not purchased by the college. Publishers of materials appropriate to the Middle East either don't exist or are developing materials for the bachelor level, not for the Foundations-level students we teach.	5/16/2016 2:39 PM
23	both as an educational resource and for entertainment (but for entertainment the phone may be more important than the ipad)	5/16/2016 11:22 AM