

REFERENCIA: Karim, S. & Gide, E. (2017). The effects of electronic devices and social media in the prospects of Australian higher education, teaching and learning. *ENSAYOS, Revista de la Facultad de Educación de Albacete*, 32(2). Enlace web: <http://www.revista.uclm.es/index.php/ensayos> - Consultada en fecha (dd-mm-aaaa)

EFFECTS OF ELECTRONIC DEVICES AND SOCIAL MEDIA IN THE PROSPECTS OF AUSTRALIAN HIGHER EDUCATION, TEACHING AND LEARNING

EFFECTOS DE LOS DISPOSITIVOS ELECTRÓNICOS Y LAS REDES SOCIALES EN LAS PERSPECTIVAS DE LA EDUCACIÓN SUPERIOR, LA ENSEÑANZA Y EL APRENDIZAJE EN AUSTRALIA

Shakir Karim

shakir_83@hotmail.com

Ergun Gide

egide1@cqu.edu.au

School of Engineering and Technology,
CQUniversity, Australia

Recibido: 29/10/2017

Aceptado: 19/12/2017

Abstract:

This paper presents a comprehensive analysis of the effects of electronic devices and social media in the prospects of Australian higher education, teaching and learning. The purpose of this research is to discover teaching and learning when electronic devices and social media are implemented and integrated in Australian education. This paper mainly has used secondary research data and methods to provide a broad investigation of teaching and learning with electronic devices and the roles social media play. The research is subject to academic journal articles, project reports, media articles, corporation based documents and other appropriate information. The study found that electronic devices and social media present both opportunities and challenges to higher education. In addition, they offer advantages for student learning and frustrations from learning with electronic devices. One of the most important advantages is the ability to access information quickly and conveniently such as accessing course contents such as discussion boards, course readings, and video clips they need to watch for class on their mobile devices. In addition, they use their devices to upload and post content to course sites. Overall, the students found using mobile devices very convenient. Also constant connectivity among the devices helps the students to communicate with fellow classmates and the teachers. Social media such as Facebook, Twitter have allowed students to share their thoughts immediately with their classmates within the course of their everyday lives. Finally the review found that though Australian students have considered electronic devices helpful, frustrations from learning with the devices are obvious which include anti-technology instructors in other classes, e-device challenges, and devices as a distraction.

Keywords: Electronic Devices; Social Media; Higher Education; Teaching & Learning; Australia.

Resumen:

Este artículo presenta un análisis exhaustivo de los efectos de los dispositivos electrónicos y las redes sociales en las perspectivas de la educación superior, la enseñanza y el aprendizaje

australianos. El propósito de esta investigación es descubrir la enseñanza y el aprendizaje cuando los dispositivos electrónicos y las redes sociales se implementan e integran en la educación australiana. Este documento ha utilizado principalmente datos y métodos de investigación secundaria para proporcionar una amplia investigación de la enseñanza y el aprendizaje con dispositivos electrónicos y los roles que desempeñan las redes sociales. La investigación está basada en artículos de revistas académicas, informes de proyectos, artículos de medios, documentos corporativos y otra información apropiada. El estudio mostró que los dispositivos electrónicos y las redes sociales presentan oportunidades y desafíos para la educación superior. Además, ofrecen ventajas para el aprendizaje de los alumnos y frustraciones derivadas del aprendizaje con dispositivos electrónicos. Una de las ventajas más importantes es la capacidad de acceder a la información de manera rápida y cómoda, como acceder a los contenidos del curso, tales como paneles de discusión, lecturas de cursos y videoclips que deben ser vistos por la clase en sus dispositivos móviles. Además, utilizan sus dispositivos para cargar y publicar contenido en los sitios del curso. En general, los estudiantes encontraron que usar dispositivos móviles es muy conveniente. También la conectividad constante entre los dispositivos ayuda a los estudiantes a comunicarse con sus compañeros de clase y los profesores. Los medios sociales como Facebook o Twitter han permitido a los estudiantes compartir sus pensamientos de inmediato con sus compañeros de clase en el transcurso de su vida cotidiana. Finalmente, la revisión encontró que aunque los estudiantes australianos han considerado útiles los dispositivos electrónicos, las frustraciones por aprender con los dispositivos son obvias, lo que incluye a los instructores antitecnología en otras clases, los desafíos de dispositivos electrónicos y los dispositivos como una distracción.

Palabras clave: dispositivos electrónicos; Medios de comunicación social; Educación Superior; Enseñanza y aprendizaje; Australia.

1. Introduction

Australian higher education students are driving the adoption of electronic devices, such as smart phones, tablet computers; desktop, laptop, iPod, iPad, smart white board etc and they strongly believe electronic devices are important to their academic success. The increased usage of electronic devices on education and the discovery of social media have the potential to create new options and opportunities for higher education students in Australia. Electronic devices and social media provide educational opportunities for Australian students to access course contents, as well as interact with teachers and student colleagues wherever they are located. These also help to improve active interaction, smooth communication and enhance learning between teachers and students.

1.1 Research Purpose and Scope

The increased usage of electronic devices on education and the discovery of social media have the potential to create new options and opportunities for higher education students in Australia. This research mainly presents a comprehensive analysis of the effects of electronic devices and social media in the prospects of Australian higher education, teaching and learning.

It is hypothesised that if Australian higher education learners are satisfied with electronic devices and social network:

- Higher education will more develop and more Australians will use it.
- Small to Mid-Sized education and learning centres will also enter into it.

- Australian Government will spend money for higher education and new legislations to protect teachers and learners.

- Electronic devices and social media will help Australia's education development as online services will level the playing field (DeLone 2014).

Australia is the selected country for this research because it is the developed country with a well-built in ICT industries:

- Huge number of higher educated workforce in Australia including potential young generation.

- Australian learners and professionals who are working overseas can be encouraged to share the knowledge and contribute to the economy.

- Australian educational institutions have the capacity to provide more quality graduates in IT, e-commerce and security related courses every year.

- Australian higher educators and learners will be more motivated to do research in this sector (Hoq 2014).

1.2 Objectives

- To identify and describe the features of electronic devices and social media and discuss their business significance in Australia.

- Finding out the background and current status of electronic device and social media in Australia.

- To explain the evolution of social media in Australia from its early years to today.

- To identify the challenges and opportunities of e-device and social media implementation in Australian higher education, teaching and learning.

- Finding out the reasons of the slow improvement in some ICT sector in Australia.

- Extending a successful assess for electronic devices and social media for education Service in Australia.

- Learning how social media can help in the economic growth of Australian higher education.

- Analysing educational issues in the context of electronic devices and social media in Australia.

- Identifying the issues can assist in a better and clear understanding of social networking sector of Australian higher education (Ferose 2015).

1.3 Aim of the Research

The aim of this research is to discover teaching and learning strategies when electronic devices and social media are implemented and integrated in Australian education.

1.4 Research Questions

This research aims to try answering the following Research Questions about electronic devices and social media in Australian higher education, teaching and learning:

- What is the background and current status of e-device and social media in Australia?
- What are the reasons of the fastest improvement in IT and electronic devices industry in Australian higher education?
- What is the current status of higher education, teaching and learning using in electronic devices and social media in Australia?
- What structures for evaluating satisfaction with social media have been accepted in higher education, teaching and learning in Australia?
- How secured electronic devices and social media can help in the growth of Australia higher education?
- How could Australia build up the opportunity to develop social media satisfaction for its own economic growth?

1.5 Importance of the Research Study

This study is extremely important for Australian educators and learners be able to reach the strategy makers for Australia and forward the concerns in relation to financial development through e-devices and social media. Electronic devices and social media are being widely used and moving speedily to become the widespread fixture of current socio-economic life. In addition,

- This study is very significant for learners and educators of higher education in Australia.
- Government will be benefitted because they will learn from the outcomes. So they can develop legal and ethical policy and procedures for electronic devices and social media.
- It will help higher education industry to move rapidly to help becoming the common fixture of modern social and economic life in Australia (King 2016).

2. Literature Review

This part delivers the definition and obtainable understandings on e-devices and social media.

2.1 Electronic Devices

Electronic devices are components for controlling the flow of electrical currents for the purpose of information processing and system control. Prominent examples include transistors and diodes. Electronic devices are usually small and can be grouped together into packages called integrated circuits (Hew 2015).

Social network comes together a range of key issues such as:

- Social networks can be used to enhance awareness (e.g. capturing population data), understanding (e.g. explaining changes in food prices), and/or forecasting (e.g. predicting human migration patterns).
- Mediums that provide effective sources of big data include satellite, mobile phone, social media, internet text, internet search queries, and financial transactions.
- The popularity of communication among people on social networks has been significantly increased in recent years (Mayer 2015).

Social Networks used by Higher Education Students:

- General distribution of social networks used by students:
- Facebook
- YouTube
- Twitter
- Netlog
- LinkedIn
- Flickr
- MySpace
- Blogs
- Others

2.2 The Existing statistics of E-devices and Social media in Australia

Internet usages and e-services for education by the educators and learners rely on the motivation and have capability to use standards as well as that of the consumers of e-services (Bhargava 2015).

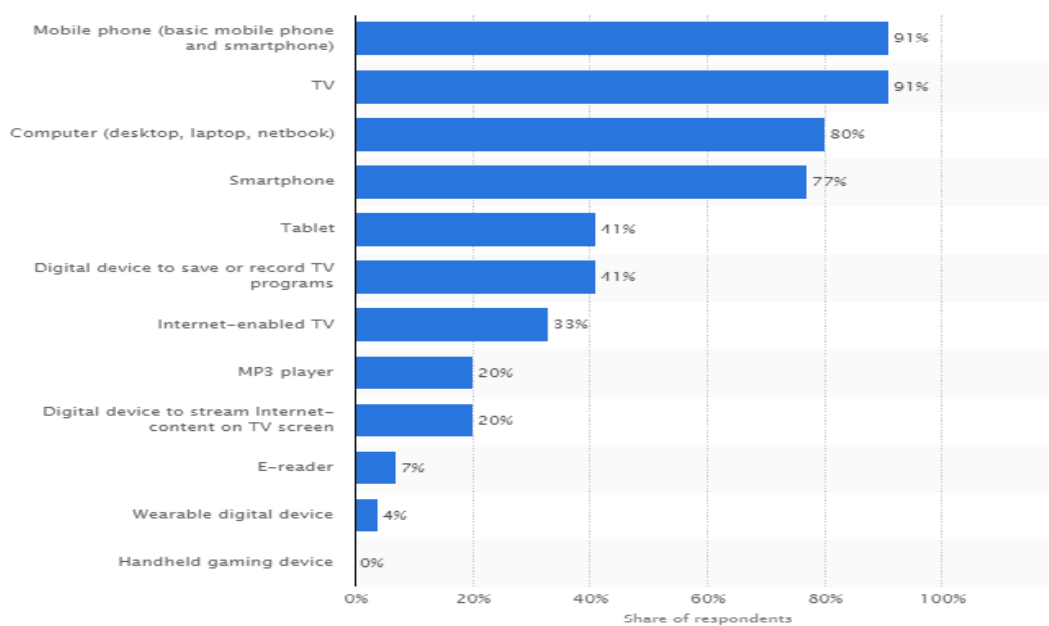


Figure 1: Australian Electronic Devices' Statistics in Australia (Cognology 2015, n.p.)

2.3 Social Media Statistics in Australia 2017

1. Facebook – 16,000,000 users (up 1 million since last update)
2. YouTube – 14,800,000
3. WordPress.com – 5,150,000

4. Instagram – 5,000,000 Monthly Active Australian Users (Facebook/ Instagram data)
5. Snapchat – 4,000,000 DAILY Active Australian Users (Snapchat data)
6. Tumblr – 4,000,000
7. LinkedIn – 3,600,000
8. WhatsApp – 3,100,000 Active Australian Users (30% increase since 2015)
9. Twitter – 2,800,000 Monthly Active Australian Users approx
10. TripAdvisor – 2,800,000
11. Tinder – 2,000,000 Australian users (my estimation)
12. Blogspot- 1,700,000
13. Yelp – 1,550,000
14. Flickr – 500,000
15. Pinterest – 280,000
16. Reddit – 100,000
17. MySpace – 80,000
18. Google Plus – 60,000 monthly active Australian users approx (my estimation *revised*)
19. StumbleUpon – 39,000
20. Foursquare/Swarm – 11,000
21. Digg – 10,000
22. Periscope – 9,000
23. Delicious – 8,000 (Social Media Statistics Australia, 2017)

2.4 Electronic Device and Internet Tradition in Australia

The communication sector in Australia, including Internet facilities has considerably improved within last couple of years including countryside and rural areas. The encouragement both from government and public sectors has encouraged this sector significantly. 94% of Australian population has full access to internet. Out of which everyday 79% go online on a daily basis and 60% go multiple times a day (ASQA 2016).

In addition, the below tables and statistics give more real view and data about the internet users and total population of Australia.

| Social Networks | Estimated Number of Users |
|-----------------|---------------------------|
| Facebook | 10,968,120 |
| Twitter | 1,800,000 |
| LinkedIn | 2,200,000 |
| Tumblr | 12,00,000 |
| Pinterest | 510,000 |
| MySpace | 420,000 |

Table 1: Estimated Australian Users on Popular Social Networks (DeLone 2016, p. 31)

| Male | Comparison | Female |
|-------|-----------------------------|--------|
| 2,996 | Page Viewed per Month | 2,681 |
| 81 | Number of Sessions | 76 |
| 82:00 | Time Spent Online per Month | 73:05 |

Table 2: Gender Breakdown (DeLone 2016, p. 31)

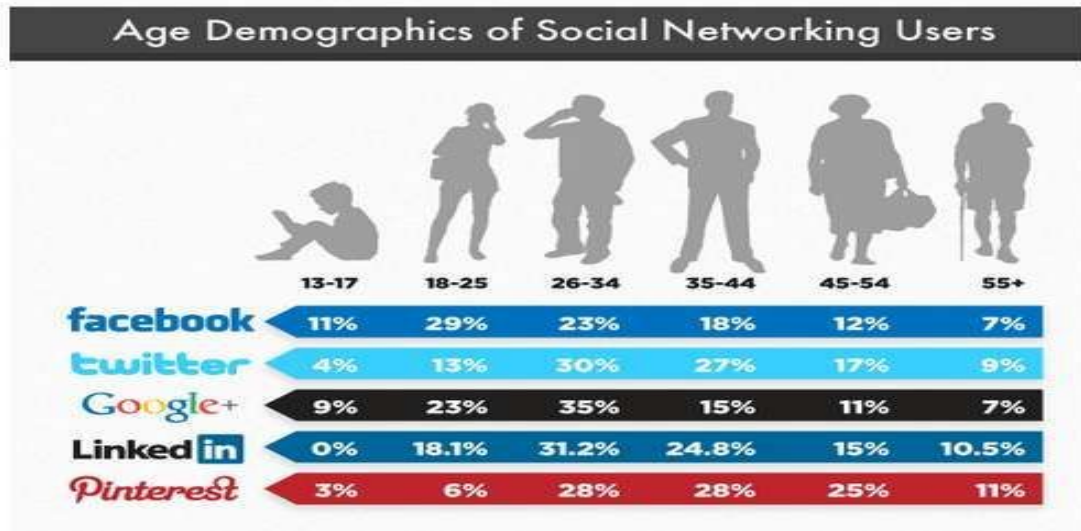


Figure 2: Social Networking Users [The Statistics of AGES, 2016, n.p.]

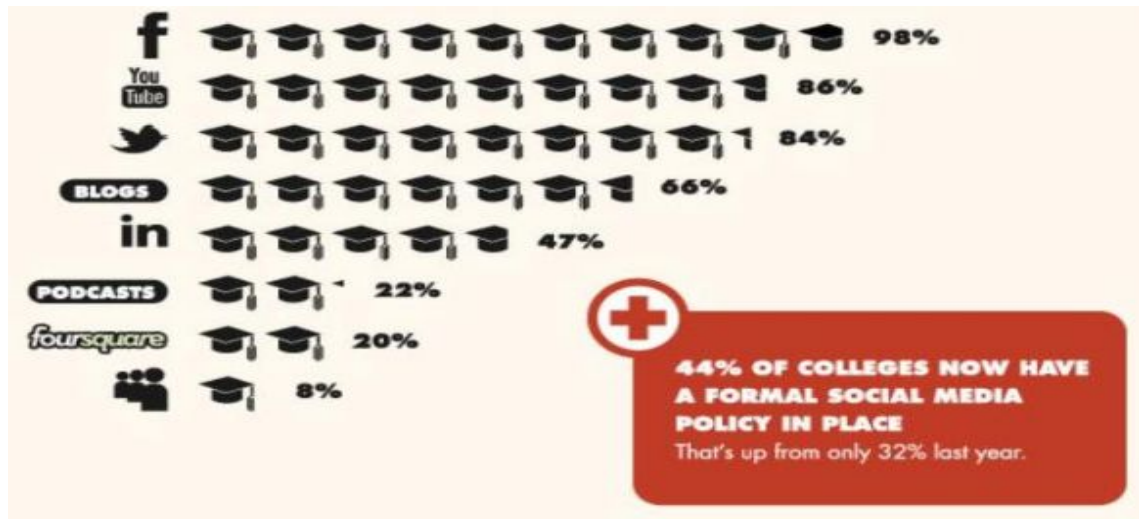


Figure 3: Electronic Devices and Social Media Usage in Australian Teaching and Learning [ICEF Monitor 2016, n.p.]

| | | | | | |
|--------|--------|-------|--------|-------|------|
| Female | Female | Male | Female | Male | Male |
| 18-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ |
| 61% | 69% | 73% | 65% | 52% | 40% |

Table 3: Age Group: 73% of Online Users from Age Group 35-44 have stopped online (Smith 2016, p. 88)

| | | | |
|------------------------------|-------------------------|--------------------------|---------------------------|
| 74% Travel/ Accommodation | 45% CD/Music/DVD | 34% Clothes/Jewellery | 31% Computers/Software |
| 29% Sport Equipments | 21% Electrical Goods | 21% Insurance | 13% Food/Groceries |
| 9% Lotteries/Betting | 8% Home Furnishing | 6% Medical Items | 3% Others |

Table 4: Popular Categories Purchased Online by Online buyers (Smith 2016, p. 88)

| Number of Orders placed | % of Online Consumers (Australia) | % of Online Consumers (Major Cities) | % of Online Consumers (Inner Regional) | % of Online Consumers (Outer Regional) | % of Online Consumers (Remote and Outer Regional) |
|-------------------------------|---|--|---|---|---|
| 1-5 Times | 52% | 52% | 52% | 52% | 52% |
| 6-10 Times | 25% | 26% | 25% | 25% | 27% |
| 11-15 Times | 10% | 10% | 10% | 6% | 16% |
| 16+ Times | 13% | 12% | 13% | 16% | 5% |

Table 5: Frequency of Online Purchasers (per 6 months) (Smith 2016, p. 93)



Figure 3: Social Media Participation: Australia (Petryni 2016, p. 129)

2.4 Electronic Devices and Social Media in Higher Education Sector of Australia in Future

Electronic Devices and Social Media are incredibly essential and appropriate to the developed education system of Australia and especially to the online study. The Information Technology (IT) uprising has been too extraordinary to forecast its prospects and development and its use in higher education. Noticeably, Electronic Devices and Social Media in education sector originate developing boosted by Internet access growth; and it's on the modest phase of development in Australia. It's important that this environment increases the GDP expansion in Australia (Smith 2016).

This below figure gives more close information on Electronic Devices and Social Media in Australia from 2015 to 2021. In 2016, online based study amounted to 9.5 billion U.S. dollars and these are projected to grow to 15.4 billion U.S. dollars in 2021.

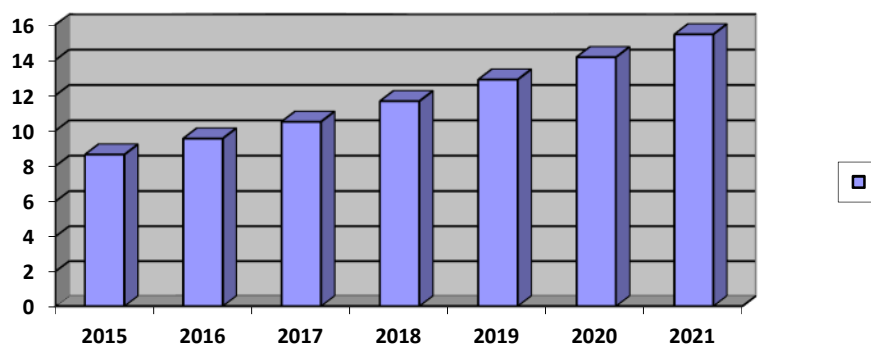


Figure 4: Electronic Devices and Social Media in Australia from 2015 to 2021 (in Billion US Dollars) (Smith 2016, p. 89)

2.5 Australia is the Biggest Market for Online Education

Australians unquestionably live in the Techno developed country and the online higher education figures are proof of that. Here are just some of the recent statistics as below:

- 71% of Australian consumers do online activity.
- Online education revenue in Australia is achieved more than \$47bn AUD most recently.
- More than 50% of educators use Australian based systems, tools and applications rather than overseas items.
- 73% of online educators are in the age group of 35-44 years old.
- Credit card, BPay, EFTPOS, PayPass and PayPal are the most popular online payment methods to purchase study materials (Hew 2016).

2.6 Electronic Devices and Social Media Boost Top and Bottom Line Detailed Results

- Faster Education Decisions
 - o Prompt Decision Making
 - o Provide More common, Precise Analysis
- Better Decisions

- o Approximate Contact and Investigation
Measure Impact of Judgment
- Proactive Decisions
 - o Predict Educators and Study place Dynamics
 - o Gain Operational Insights
- Progress Capabilities
 - o Skills of Current Analyst
 - o Free Employees from Low Value Activities
- Increase Automation
 - o Reduce Efforts to Produce Reports
 - o Free Management
- Eliminate Redundant Tools
 - o Eliminate Tools for Data Extract, Reporting and Analysis
- Streamline Process
 - o Standardize Metrics by Global Stakeholders
 - o Demand Management Process (Bhargava 2015)

2.7 Electronic Devices and Social Media in Action for Education Development

In addition to providing insight to make small to midsized study centres more profitable:

- Electronic Devices and Social Media are showing huge promise to improve and substantively change the education development sector in novel ways.
- Various education industries in Australia are exploring the potential of Electronic Devices and Social Media.
- Electronic Devices and Social Media in Australia show assurance to develop real-time responsiveness, look forward to test, and extend understanding of social systems by governments and other institutions (AustLII 2016).

2.8 Challenges and Considerations

- The data can be biased when conducting statistical analyses.
- Data may be difficult to access, especially if it is held by private institutions.
- Even in the case of public institutions, datasets are often available but difficult to find due to limited metadata.
- Challenges in social networking around ensuring privacy and safety arise. This is also linked with the issue of personal data ownership.
- Preparing data and ensuring its scalable and efficient use presents challenges such as the time and effort required to clean data.

- Australian students have considered electronic devices helpful, frustrations from learning with the devices are obvious which include anti-technology instructors in other classes, e-device challenges, and devices as a distraction [Daas 2016].

2.9 Issues in the Context of Electronic Devices and Social Network in Australia

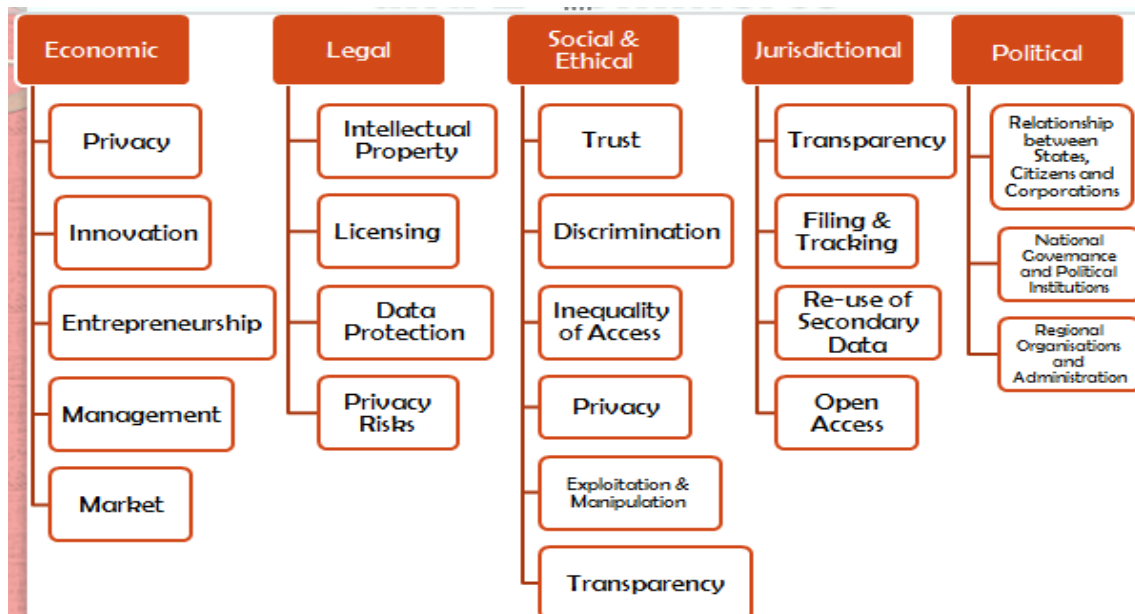


Figure 6: Electronic Devices and Social Network in Australia (Eady 2015, p. 71)

3. Research Methodology

In this study, the Secondary research method was chosen. It starts with analysing available secondary resources to offer a broad representation of the topic and a broad investigation of the positive and negative consequences of each issue relevant to Big Data, the architects of the consequences and those affected by the consequences.

Qualitative Method and Data Analysis (in Future)

- Interviews will be carried out to bring together significant data from ICT and e-commerce specialists, private and public sector representatives, ICT students, and University School of Engineering and Technology academics.
- The qualitative stage of data collection, the participants' communication process, their selection method, ethical clearance procedure, and the semi-structured and in-depth individual interviews.
- An invitation letter will be sent prior to the consultation to increase an increased number of participants.
- The departments/faculties of the universities will be contacted by sending a request letter to identify the potential students. Thirty potential students will be chosen who will respond positively by email and telephone.

- Qualitative data analysis with relevant scale based method will be used in future. A relevant computer software (NVivo) will be used.
- All of the transcripts will be categorised by alphabetical order of the interviewees' surname.
- Key issues will be checked systematically and noted in the list. Also the researchers will discuss and prioritise the provider and the respondents who will do significant contribution.

4. Data Collection and Research Analysis

Qualitative results

The results will be developed from the interview participants namely ICT and e-commerce experts, Government and Non-Government representatives, University Academics, and ICT students, identified by I1, I2, I3, I4, I5.....,G1, G2, G3, G4, G5....., A1, A2, A3, A4, A5 and S1, S2, S3, S4, S5.....

5. Research Results and Key Findings

As electronic devices and social media are speedily increasing in the urbanized country: Australia although electronic devices and social media are considered significant instruments for development to the Australian higher education system. Higher education over internet has been quickly accepted in Australia for the reason that there are very minor obstacles that have mitigated electronic devices to appropriately take off. It is clear that Australia has fitted in the move for electronic devices and social media because it both has the potential and at the same times the importance. The Australian government has commenced several programmes to support further for this tactic of education.

This section has valued some research Key findings which are as below:

- Electronic devices and social media have emerging business potentials in Australian education.
- The current situation of network infrastructure and operations to provide secured social network services in Australia are quite advanced.
- High speed internet, smart phones and tech savvy young generation are main reasons for great potential of social networking in Australia.
- Many education firms can come up with different levels of solutions and opportunity for employment will be broadened.
- Proper use of electronic devices and social networking are steadily transforming the way businesses to be conducted and changing the enterprises in Australia.
- Electronic devices usage in higher education can provide speedier, faster and reliable services to the customers for which they are relatively happy.
- They can improve relationships between students and educators and boost the economy by increasing efficiency and supporting education models and innovation.
- Collaboration between the learners and educators where the educators will ensure the business structure & learners will come up with different business ideas.

- This report examines transparent practices that produce positive and negative implications for electronic device users and social networkers.
- Social media increases efficiency in the higher education sector including sectors: retail; manufacturing; healthcare; public; and life sciences.
- In terms of negative issues, maintaining data subjects' privacy is one of the major obstacles for social networking.
- Transparency is the key to building user trust, which in turn, leads to a greater amount of overall success.

6. Conclusion & Recommendations

This study details Australian higher education in relation to Electronic devices and social media practices and technologies. These issues are significant because they enlighten positive and negative areas that require address. To identify these significant issues and understanding the positive and negative matters they raise is key to the Electronic devices and social media industry success.

For achieving the best possible results from the Electronic devices and social media, the researchers have offered some recommendations. These are as follows:

- This study mainly details effects of electronic devices and social media in the prospects of Australian higher education, teaching and learning.
- The purpose of this research is to discover teaching and learning when electronic devices and social media are implemented and integrated in Australian education.
- Electronic devices and social media present both opportunities and challenges to higher education.
- They offer advantages for student learning and frustrations from learning with electronic devices.
- The most important advantages is the ability to access information quickly and conveniently such as accessing course contents such a discussion boards, course readings, and video clips they need to watch for class on their mobile devices.
- The students found using mobile devices very convenient.
- constant connectivity among the devices helps the students to communicate with fellow classmates and the teachers
- Social media such as Face book, Twitter have allowed students to share their thoughts immediately with their classmates within the course of their everyday lives.
- Australian students have considered electronic devices helpful, frustrations from learning with the devices are obvious which include anti-technology instructors in other classes, e-device challenges, and devices as a distraction.

References

ACARA (Australian Curriculum Assessment and Reporting Authority) (2015), *The shape of the Australian Curriculum, Version 3*. Sydney: Australian Curriculum Assessment and Reporting Authority.

- Ahsan, A. F. M. (2014), *Computer Crime*, retrieved from <http://www.thefinancialexpress-bd.com/2009/01/12/55733.html>
- AustLII. (2016, September 13) *New South Wales Consolidated Acts*. Retrieved from Privacy and Personal Information Protection Act 1998: http://www.austlii.edu.au/au/legis/nsw/consol_act/papipa1998464/
- A world that counts: mobilizing the data revolution for sustainable development. Technical report, United Nations, 2014, <http://thenextweb.com/insider/2015/11/17/the-state-of-e-commerce-in-the-us-state-by-state-report-2/>
- Australian Skills Quality Authority Australian Government (2016) *Australian Skills Quality Authority*. Retrieved from ASQA: <http://www.asqa.gov.au/>
- Bhargava, R., (2015), Toward a concept of popular data, MIT Centre for Civic Media
- Board of Regents of the University of Wisconsin System, (2007). *DOIT Project Management Advisor*. Retrieved from Stage 3: Plan the Project: <https://pma.doit.wisc.edu/plan/3-2/what.html>
- Cognology. (2015), *Goal Setting*, Retrieved from How to Write Smart Goals and Objectives: http://www.cognology.com.au/learning_center/howtowritesmartobj/
- Eady, M. J. & Lockyer, L. 2015, 'Tools for learning: technology and teaching strategies', Learning to Teach in the Primary School, Queensland University of Technology, Australia.
- Daas, P. and Loo, M., (2013) Big Data (and official statistics) Working paper prepared for the Meeting on the Management of Statistical Information Systems Dekkers, J. (2016), *COIS 19701: Research Methods: Study Guide*, Central Queensland University, Rockhampton, Queensland Australia.
- Department of Premier and Cabinet. (2012, May 16). *NSW Premier & Cabinet*. Retrieved from C2012-08 NSW Government Website Management: <http://arp.nsw.gov.au/c2012-08-nsw-government-website-management>
- DeLone, W. H. & McLean, E. R. (2014), Measuring E-commerce Success: Applying the DeLone & McLean Information Systems Success Model, *International Journal of E-Commerce*, Vo1.9, No.1, p.31, retrieved from <http://www.gvsu.edu/business/ijec/v9n1/p031.html>.
- E-commerce and cybercrime*, (2016, March 21), retrieved from http://www.ibls.com/internet_law_news_portal_view.aspx?s=articles&id=C6F6A7A6-CA63-469A-B4BB-3BE84CB6F9BE
- Ferose, K., (2015, March 29) E-commerce, retrieved from <http://nation.ittefaq.com/issues/2012/07/19/news0019.htm>
- Hoq, Z, Kamal, M. & Chowdhury, A. H. M. E. H, (2015), The Economic Impact of E-commerce, *BRAC University Journal*, Vol. 02, No. 02, pp. 49-56.
- Hamid, S., Chang, S., & Kurnia, S. 'Identifying the use of online social networking in higher education. In Same places, different spaces', *Proceedings ascilite Auckland 2009*, Retrieved from <http://www.ascilite.org.au/conferences/auckland09/procs/hamid-poster.pdf>.
- Hew, K. F. & Brush, T. (2015). Integrating technology into K–12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational Technology Research & Development*, 55(3), 223–52.

Indicators and a monitoring framework for the sustainable development goals (2015), *Technical report*, United Nations.

King, G., (2013), Big Data is not about the data! Presentation, *Harvard University USA*

Letouzé, E., (2012), Big Data for development: opportunities and challenges, *UN Global Pulse*, retrieved from:

<https://www.theguardian.com/social-enterprise-network/2014/may/06/data-open-social-impact-tips-tools>

Levy, S. (2015). Are MySpace users now spacing out? *Newsweek*, 149 (22), p. 26; Ronn, K. Social Networking: Closer Than You Think.

Business Week Online.

Mayer, R. E. (2015). Applying the science of learning: Evidence-based principles for the design of

multimedia instruction. *American Psychologist*, 63(8), 760–9.

Mueller, J., Wood, E., Willoughby, T., Ross, C. & Specht, J. (2016). Identifying discriminating variables between teachers who fully integrate computers and teachers with limited integration. *Computers and Education*, 51(4), 1523–37.

OECD (Organization for Economic Co-operation and Development). (2015), *Are the new millennium learners making the grade? Technology use and educational performance in PISA*: Centre for Educational Research and Innovation, OECD.

Online shopping, (2014), retrieved from: <http://oregonbookreport.com/2014/09/poll-on-online-clothes-shopping/>

Petryni, M. (2016), *Small Business*. Retrieved from Difference between Strategic & Operational Objectives, retrieved from: <http://smallbusiness.chron.com/difference-between-strategic-operational-objectives-24572.html>

Smith, E. (2016), *Australian Management Association*. Retrieved from The Critical Link between Requirements and Project Quality: <http://www.amanet.org/training/articles/The-critical-link-between-Requirements-and-Project-Quality.aspx>

The New Nation, (2016), *Computer Cheating*, retrieved from www.cnn.com

Yildirim, A., & Simsek, H. (2008). *Sosyal Bilimlerde Nitel Ara t rma ntemleri*, (6th ed.). Ankara, Seçkin Press.