



Globotics Driven Digital Transformation: A Bright Future for Internships, Digital Marketing and E-Commerce Education

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Abstract: This paper introduces a new approach, Globotics (Baldwin 2019), with the main focus directed towards the lack of skills in digital marketing and e-commerce. Globotics is assumed to provide insights for the adoption of a pedagogy of experiential learning. Furthermore, the adoption of globotics (ibid) may potentially lead towards a brighter future for tertiary marketing education, as well as fulfil the diverse needs of Asia and Oceania regarding the acquisition of digital marketing talent. The author conducted in-depth interviews with academics and practitioners in order to gain insight into the overall context of marketing practice. Upon reviewing the data, informants have, recognizing its value, highlighted the differences between digital and its counter point – traditional marketing. We assumed that tracking the online search trends can help solidify and feedback some information where past search demands for digital marketing, social media marketing e-commerce marketing and social commerce. An online service using “globotics” (Baldwin 2019) provides a promising approach towards solving the problems of both digital marketing curriculum and scarce talent linking marketing educators and students with practitioners. Importantly, with globotics marketing students as interns have an opportunity to take on tasks well beyond previous undergrad and postgrad entry- level roles of the last century.

Keywords: Digital Marketing, E-Commerce, Experiential, Globotics, Internship, Pedagogy, Social commerce, Social media marketing, Transformation

1. Introduction

This paper aims to introduce a new approach Globotics (Baldwin 2019), steered towards addressing the lack of skills in digital marketing and e-commerce, while also providing suggestions for curriculum development and future design of marketing academic programs. Globotics (ibid) provides a framework for a potentially brighter future in the domain of marketing education, and it has proved promising in the task of addressing diverse digital marketing needs of Asia and Oceania. Globotics is driven by digital transformation built on the technologies of artificial intelligence and telepresence. This transformation combines (i) a network of actual remote marketing internships with (ii) digital marketing, social media, and e-commerce, thus creating a transdisciplinary subject embracing a cross border curriculum.

2. Methodology & Findings

2.1 Research Method

The research approach was developed comprising in-depth interviews with marketing academics and practitioners (Sood and Pattinson 2005; Denzin and Lincoln 1994). Additionally, the author has conducted a content analysis regarding Australian tertiary marketing artefacts associated with university subjects. Course materials provided a context to assess the key area for this research. Google trends (Google 2019) and grey literature or informal publications provide data for analysis. Figure 1 outlines the bricolage approach for the project.

Long or in-depth interviews (McCracken 1988) comprising at least a 30-45 minute discussion with marketing practitioners commence the research activities. The informants supporting the marketing activities included a banking executive, investment advisory firm marketer, logistics expert, telecoms specialist as well as SMEs from retail and

fashion. The interviews were in the form of discussions conducted in office environment settings focusing on marketing trends and challenges for 2020-2025.



Figure 1: Bricolage Method for Research and Findings

Participants consistently recognized that digital marketing differs from traditional marketing, and therefore, requires a heavy emphasis on data. Interviews were specific theme related, and themes emerging from the discussion encompassed the omnichannel customer experiences, website development, content management, use of mobile devices for short-form content production, content-driven transactions, search engine optimisation, e-commerce and the increasing importance of social media for storytelling and sales. This list of themes aligns with digital marketing, e-commerce, social media and social commerce subjects or courses at university and strongly reflects the marketing drivers of digital, social media and mobile marketing (Lamberton and Stephen 2016).

Table 1: Depth Interview Themes and University Subject or Course Alignment

Depth Interview Theme	Digital Marketing	E-Commerce	Social Media	Social Commerce
Omni-channel cx	✓	✓	✓	✓
Website development	✓	✓		✓
Content management	✓	✓	✓	✓
Mobile device content	✓	✓	✓	✓
Content driven trans.		✓		✓
Search Engine	✓	✓	✓	✓
E-Commerce		✓		
Social story and sales	✓		✓	✓

Google Trends (Google 2019) highlighted the search volumes of queries for different locations and may, therefore, be applied as a proxy for global intentions in the study of marketing aspects at university courses. Broadly, the search trends (table 1) highlight the strong demand for digital marketing, social media and surprisingly little to no interest in e-commerce or social commerce in the context of university search. For general searches on “digital marketing”, “social media marketing”, “e-commerce marketing” and “social commerce marketing” (DSMECSC) the trend moves towards equal search volumes in digital and social media marketing.

Table 2: Search Volumes Since 2004 Country & Query for Marketing and University Areas of Interest (Google 2019)

Google Search Query from 2004 until Sept. 2019 and Peak popularity of term = 100	Australia	Canada	India	UK	USA	Worldwide
“Digital marketing university”	100 (74)	68 (69)	93 (98)	82 (81)	60 (75)	100 (85)
“Social media marketing university”	19 (26)	32 (31)	7 (2)	18 (19)	40 (25)	19 (5)
“E-commerce marketing university”	0 (0)	0 (0)	0 (1)	0 (0)	0 (4)	0 (0)
“Social commerce marketing university”	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: Excludes China as Google not in prevalent use, “digital marketing/social media/e-commerce/social commerce university” not enough volume for search results with postfix university courses, /=switch to, July 2013 search vol for digital and social media at parity, numbers shown in brackets reflect search interest in purely the terms (DSMECSC “course”).

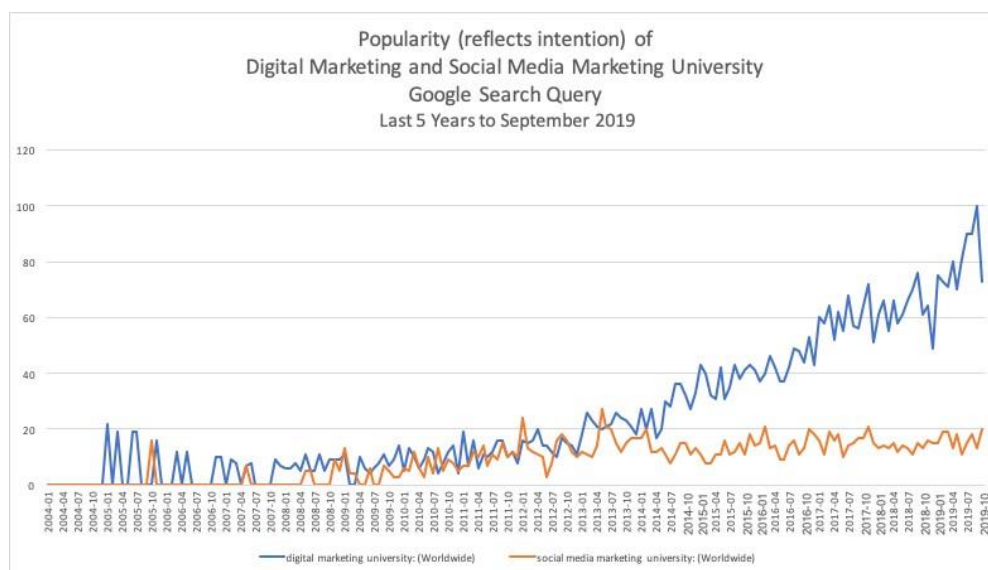


Figure 2: Popularity (intention) of Digital Marketing and Social Media Marketing University

Content analysis of the grey literature, namely, online job advertisements, blogs, trade journals, industry consultant reports and web articles addressing the lack of skills or talent in marketing roles lead us to form a comprehensible framework with a narrative for a plausible future trajectory of tertiary marketing education and opportunities in the fields of DSMECSC.

2.1 Marketing Narratives of DSMECSC, Skills, and Lack of Talent in the Asia Pacific

The marketing narratives express selective description of subject domains students or professionals might use for a conversation or justification in pursuing a course of study. The actual numbers in the narrative development help to highlight significant growth over a specific period or the sheer size of a marketplace and thus support an argument. With a 58% increase in investment in the Asia Pacific over 2018 in martech (marketing technology) investment (Moore Stephens and WARC 2018), budget is not constrained like in UK and Europe but “...lack of understanding of martech and a lack of skills and talent both rank higher...” (ibid). The top 3 skills an applicant for a position in marketing in the Asia Pacific must score high on are customer experience, data analytics and, turning data into action with creativity as equally important (ibid).

In 2021, the Asia Pacific e-commerce marketplace is expected to reach 1.4 trillion USD (Varon 2017). This e-commerce market stands at the precipice of transformation to digital commerce (Sirajuddeen 2017). The future use of IoT systems or disposable electronics, functioning on battery-free, low-cost systems (Wiliot 2019) that may provide a real-time supply chain intelligence, will automate returns and bring about new recycling and anti-counterfeit measures. Furthermore, artificial intelligence conversational (voice) platforms including Apple Siri, Amazon Alexa or Google Assistant, account for the 5 per cent of transactions (Moore 2018) through e-commerce voice orders. A growing middle class of China and Indian outbound travellers is benefiting from social commerce using social networks to checkout and directly buy and sell products and services from within the app’s existing networks. The China WeChat pay builds on a billion monthly users driving over USD8 trillion in transactions (World Bank 2019). Further, the concerns in China about domestic product fuels the growth of imports for everything from luxury goods to infant milk formulae (Pak 2018). Cross-border global shopping sales forecasts for 2022 expect USD627 billion or 20% of all e-commerce. This trade comprises overseas spending of USD 200 billion in 2017 (Pan 2018) by Chinese outbound travellers and residents overseas.

The dynamics of the Indian market are different from Chinese, with “online retail sales growing at 140 per cent per year” (FIAL 2017) and “around 14 per cent of India’s internet users shop online, compared with almost 64 per cent in China” (Varghese 2018). At the same time, India is hosting successful e-commerce giants with Paytm, an electronic payment provider with over 200 million users (ibid). Despite the evident increase in digital marketing budgets, e-commerce, and social commerce revenue growth, there is the pressing issue of “marketers in Australia reporting one of their key challenges is a lack of digital talent” (Pash 2019). Furthermore, “the lack of cutting-edge marketing talent has never been

higher, and the demand for high-caliber marketers will continue growing in 2020” (Rossum 2019). The talent and skills issues are worsening with “traditional marketing skills will no longer be viable, and there's an extreme of creative and scientific capability required in marketing teams” (Mitchell 2019). Educating students at marketing university classes is not enough, i.e., not just digital marketing or e-commerce skills but also the emerging digital commerce is essential for expertise to move forward Carroll 2018; Farveen 2018; Scorsone 2017; Korn Ferry 2016; Beven 2016).

The gap in skills poses a challenge and creates a significant issue with not only the growth of an online business but the need for requisite skills build on the knowledge of big data and analytics. For the last decade demand for these skills continues (Manyika et al, 2011) and the shortage worsens into 2019 with “only 3% of all marketers are competent in crunching large sets of data at every job level” (McCready 2019). While addressing this global lack of analytics and data skills, we should take into account that through embracing big data courses and data science degree programs (Smith 2018), there is vague visibility in enhancing the development of e-commerce talent amongst tertiary sector players. The problem of the “lack of talent has become the most fundamental and the most pressing problem regarding E-commerce development in China” (Lei 2012) and “75% of e-commerce companies suffer from talent shortages” (Hong’ e 2016). Even jobs and internships in logistics, a key driver of e-commerce find it challenging to meet the demands, as these include the requirements for blending traditional roles for finance, accounting, sales, and marketing or even supply chain management with e-commerce (Pattinson 2018) or a DSMECSC orientation. Overcoming the lack of talent by enhancing the traditional discipline roles through bolstering the award degree course with e-commerce or digital marketing is problematic. Discipline degrees fail in maintaining pace and rigour with the professions and practice. Reporting on the state of play with accounting degrees “most programmes failed even to be loosely aligned with the profession’s expectations” (Bayerlein and Timpson 2017).

2.1 Existing University Courses and Internships

Regarding the lack of data analytics talent, the tertiary curriculum is lunched to prepare students for the newly emerging digital commerce workplace. Surprisingly, only a paucity of Australian tertiary education award courses covers e-commerce with a marketing orientation. Available courses originate from private training providers and vendors of e-commerce software or service including Alibaba (NTUC 2018) the Chinese e-commerce giant (Chiu 2018). Internships provide the best potential for students to gain skills and experiences for jobs of the future. This experience is particularly critical, given the prediction of soft skills contributing towards 63% of all jobs by 2030 (Deloitte 2017). The U.S. Department of Labor/Employment occupational information database (O*NET 2018a) for marketing occupations, highlights marketing strategists, market research analysts and marketing specialists having a bright outlook from 2014-2024 (O*NET 2018b), building on the scarce skills of analytics, search engine marketing, and marketing automation.

Fortunately, no matter the academic perspective, the use of tools including marketing automation and the popular Google Analytics for websites and e-commerce measurement harks back to the origin of the “apprenticeship”. During the training and the sharing of knowledge amongst artisans, the use of tools plays a fundamental role in overseeing the craft within guilds. Ironically, the guilds help promulgate the universities of Bologna, Oxford, and Paris during the 11th and 12th centuries. With this history insight, no reason exists as to why students do not receive explicit instruction on the use of tools and hands-on skills within tertiary institutions.

However, feedback from an academic summarises the prevailing view and challenges across marketing academia on software and applications:

We do not teach them [tertiary students] to use other software and applications, so why these? [Google or Facebook analytics]. The marketplace is continually evolving;

I question the value of teaching such “hands on' skills”. Especially since these skills could become redundant during any given semester!

However, the Google analytics (GAs) tools monitor over half of the websites across the world, translating into a market share of website traffic analysis tools of over 85 per cent (W3Techs.com 2019). The use of GAs is unlikely to change overnight, thus the concern of skills becoming invalid over night, despite rapid changes in software and technology is

not justified. Indeed, Globotics (Baldwin 219) presents a game-changing opportunity for tertiary marketing educators by providing the potential for hands-on with the tools, techniques and soft skills employers seek.

3. Conceptual Framework for Globotics

Fulfilment of what is an emerging yet massive talent gap in Asia Pacific markets can be achieved only by the implementation of an innovative approach. An online service using “globotics” (Baldwin 2019) can prove to be a promising approach, even revolutionary for Asia Pacific tertiary marketing education. It enables the development of new digital marketing and commerce skills blending with work-related learning for tertiary student internships. More specifically, globotics (ibid) is a driver of globalisation and robotics, harnessing the trends of virtual globalisation using AR/VR (augmented reality/virtual reality) headsets, robotic software, and telemigrants. These include freelancers or virtual assistants whose telepresence is meant to create a perception of being ever-present in a remote workplace. The result is a displacement of not lower-skill workers but professional, white-collar and service employees, as according to Wharton (2019), claiming “the biggest arbitrage or gain for your employers will be to hire people who can do more or less what you can, but for a tenth of the price” (Wharton 2019).

The impact of a globotics perspective is consistent with the “future of professions” (Susskind and Susskind 2016) and the displacement of an expensive professional workforce. They are found to be replaceable with school leavers and graduates working in concert with the artificial intelligence and telepresence systems evolving online. Telepresence technologies, including human height video screens or projectors, bestow the quality or feeling for a person to be present at a remote location. In 2019, this means a “teleanalysis” is frequently undertaken using online videoconferencing platforms or meeting room systems such as Skype or Zoom (Richards 2001). Unlike traditional outsourcing where employees were moved where the job was, telepresence allows for the job to be brought to the worker. By applying readily available online services with translation features, such as Skype Translator or Google translate, potential jobs available for globotics were extended to include administrative tasks requiring knowledge of the law, medicine, accounting, and architecture. Removing the language barrier is the final impediment to a truly global workforce. However, the use of AR/VR headsets (smartglasses; Haselton; Microsoft; North 2019) further transforms the work providing an opportunity for globotics to emerge as a pervasive work style. In 2020/21 office workers and interns donning glasses and holding collaborative sessions with global team members in a quiet corner of the university campus or office become commonplace. The most immediate workers adopting globotics are the gig economy workers. These individuals have begun the journey using freelancing platforms such as Freelancer, Fiverr, 99Designs and Upwork, as well as the emerging Sherpa platform for interns. They were connecting with customers by using the early stage globotics of Skype, Slack or other collaboration technologies. This human cloud revenue already surpasses USD126Bn (Staffing Industry Analysts 2019).

Thus, a globotics framework comprises of:

1. Early-stage collaboration platform, e.g. Microsoft Teams or Skype, Google Suite, Slack or Zoom and moving to smartglasses (post 2020) and language translator
2. A network of human talent including interns available via collaboration platform
3. Remote work encompassing digital marketing, social media or e-commerce
4. Employer’s and student’s work monitoring
5. Online training and reporting of curriculum undertaken including micro credentials.

4. Globotics Enablement of Deweyan Pedagogy and Strategy

Globotics directly supports the Deweyan (Dewey 1938) approach for experiential learning and disrupts the traditional classroom teaching as well as work-integrated learning internship. By providing an immersive environment, the technology fosters experiential learning through virtual engagement in the workplace and classroom. Here, the bundle of technology, also known as globotics aims to solve a significant pedagogical problem. Namely, to allow students to directly put into practice the new knowledge and informing experiences directly from the workplace into the learning environment (Weick and Obstfeld 2005).

The use of the globotics platform transforms the education and student internship opportunities from a manually intensive traditional classroom and placement environment into a highly scalable, practical real-time learning environment. Students interface directly with tools and workplaces across Australia and Asia. This technology and supporting processes represent a globotics driven digital transformation of internships, digital marketing, and e-commerce education.

5. Globotics Strategy for a Renaissance in Marketing Education and Internships

Despite the dire skills prognosis and the known issues, a renaissance in tertiary marketing education is attainable and executable through an innovative and unifying approach using Globotics solution. The concept builds on the creation of a virtual classroom community for educators and students straddling the digital marketing and e-commerce activities of fledgeling Oceania locations, including Australia and Fiji to the dense cities of Asia. The vision overcoming existing issues with systems and people builds around a 2-prong strategy for delivery in 2020, embracing the following:

- a) An online community of marketing educators and students encompassing Oceania and Asia

The online community of practice building upon marketing educators and students tied to practitioners is essential for ongoing conversations, development, test, co-creation, and sharing of knowledge on contemporary marketing thinking and practice. This initiative fits like a glove with the modus operandi of the original John Dewey “Laboratory School” (Durst 2010).

A platform for students and academics to observe in an immersive manner technical and creative processes in the classroom and workplace; tending digital marketing and e-commerce internships while exchanging ideas and experiences. This would represent the development of new knowledge occurring at the interplay of the classroom and workplace (Dewey 1938).

- b.) Transdisciplinary Digital Marketing and E-Commerce Curriculum

Inputs on the curriculum from academics and industry vendors Facebook, Apple, Amazon, Netflix and Google (FAANG; Gerber 2018) and Chinese e-commerce players (including Alibaba, JD.com Tencent, and Baidu) help to ensure the viability and sustainability of the course materials major employers have supplied students with.

Case studies on digital marketing and e-commerce activities make up for the important aspect of teaching. Within the classroom and due to the absence of real-world data, students are unable to achieve an optimum learning outcome. The scientific method is the primary teaching approach, but access to real big data flows helps illuminate analytics as an essential paradigm for addressing business problems (Delen and Zolbanin 2018). Tools from significant vendors of analytics software enable students as interns to solve real problems through the exploration and analysis of data and to discover new and meaningful patterns. This data approach has the potential to immediately impact marketing activities contrasting with the traditional scientific paradigm.

Beyond a discovery in data approach, the curriculum requirement is transdisciplinary, in order to be consistent with the emerging jobs as a hybrid of Digital Marketing and eCommerce Manager (Muse 2019; Seek 2019). This includes covering new and emerging digital marketing principles and e-commerce business models (e.g. Airbnb, Uber, Didi, Deliveroo and Marley Spoon), Asian social networks and Martech (marketing technology; Brinker 2018). Nevertheless, a focus on skills development in cross-border e-commerce is highly appropriate (Lu and Zhang 2017). Other areas for study include foreign language knowledge, cross border trade, and e-commerce trade business rules including the China E-Commerce law (PRC 2018). Furthermore, understanding of consumer online shopping behaviour, culture, digital psychology, international marketing, sales techniques, global logistics, content development, international social networking services, and items for sale photography are paramount.

- c.) Establishing Digital Marketing Internships Using the Tools of Globotics

Traditionally, marketing educators build upon existing theoretical frameworks. But digital marketing and commerce require a balance between theory and practice, leveraging contemporary trends with skills of customer service, logistics,

and sales. Internships not only overcomes the employer tensions of thinking degree programs as overly theoretical but provides the student or professional with the necessary soft skills. The internship represents an opportunity for the first wave of outsourcing service jobs using “globotics” (Baldwin 2019). The “off the shelf” commercial technologies of globotics substitute face to face activities with telepresence and represent an opportunity for the performance of white-collar digital marketing or e-commerce marketing activities directly impacting the business of prospective employers. Placement of internship students alongside existing marketing and e-commerce teams virtually accelerates knowledge development through co-creation activities online as well as the development of soft skills working in groups and managing interpersonal relationships.

6. Conclusion and a Sense of Urgency

The future of globotics implies the replacement of professional jobs in the service sector and creative roles such as flower arranging with tele-migrants. The opportunity should be explored and exploited by Australian tertiary institutions and marketing educators before it becomes too late. By applying Globotics, educators can show marketing students and interns how to temporarily outsource highly sought digital marketing and e-commerce services in the free-time. This insourcing is the reverse of what traditionally occurs in real-world outsourcing. The approach under consideration is appealing to many industries, including healthcare, architecture, animation, e-commerce, marketing and many other. Until now, professional jobs came under a “cognitive monopoly”, but the globotics technologies put these jobs at risk with artificial intelligence replicating cognitive skills. The challenge is not just technological, the pace of human adaptation factor is also relevant. As the title of the book suggests “The Globotics Upheaval” (Baldwin 2019), the pace of convergence of telepresence and AI technologies is beyond the ability of society to absorb. At a much faster pace “than automation, industrialisation, and globalisation disrupted lives in previous centuries” (Baldwin 2019). The road ahead is apparent:

- Encourage marketing students to work with globotics rather than competing in the workplace against emerging technologies.
- Seek out friendly geography like Japan, happy to accommodate telemigrants and commence the globotics driven the digital transformation of marketing education and beyond.
- Allow student interns to be at the forefront of the emerging new jobs. With globotics, intern marketing students have an opportunity to take on tasks well beyond previous entry-level roles and take on responsibility between the graduate role and Chief Marketing Officer thanks to the capacity AI and globotics.

References

- Baldwin, R. (2019), *The Globotics Upheaval*, Weidenfeld & Nicholson, London
- Bayerlein, L. & Timpson, M. (2017), Do accredit undergraduate accounting programmes in Australia meet the needs and expectations of the accounting profession? *Education + Training*, 59:3, 305-322 [Crossref](#)
- Beven, D., (2016), Mind the e-commerce skills gap, CASTUK, 22 March, Retrieved from <https://blog.castuk.com/2016/03/22/mind-the-ecommerce-skills-gap/>
- Brinker, S. (2019), “What is martech? The marketing technology landscape, explained”, April 2018, Retrieved from <https://martechtoday.com/library/what-is-martech>
- Carroll, S., (2018), Grow Your E-commerce Skills Fast, 18 April, Retrieved from https://unctad.org/meetings/en/Presentation/dtl_eWeek2018p34_SarahCarroll_en.pdf
- Chiu, K. (2018), Origin Story Alibaba, 2 October, abacus, Retrieved from <https://www.abacusnews.com/whois-what/rise-alibaba/article/2130349>
- Delen, D., Zolbanin (2018), The analytics paradigm in business research, *Journal of Business Research*, Vol. 90 (2018), 186-195 [Crossref](#)
- Deloitte Access Economics (2017), Soft skills for business success, May, Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-deakin-soft-skills-business-success-170517.pdf>
- Denzin NK, Lincoln YS, editors, (1994), *Handbook of qualitative research*. Thousand Oaks, CA: Sage
- Dewey, J. (1938), *Experience and Education*. New York: Macmillan Company.
- Durst A. (2010), John Dewey and the Beginnings of the Laboratory School. In: *Women Educators in the Progressive Era*. Palgrave Macmillan, New York [Crossref](#)

- Farveen, F., (2018), Skills shortage a major issue for SG employers in the e-commerce era, 27 July, Marketing, Retrieved from <https://www.marketing-interactive.com/skills-shortage-a-major-issue-for-sg-employers-in-e-commerce-era/>
- FIAL (Food Innovation Australia Ltd; 2017), Size of the Prize An overview of 16 global opportunities for Australian food and agribusinesses, November, Retrieved from <https://fial.com.au/size-of-the-prize-report>
- Gerber, R., (2018), As FAANG Stocks Get Old, The Next Technology Wave Is Called TAND, Forbes, 7 Nov., Retrieved from <https://www.forbes.com/sites/greatspeculations/2018/11/07/as-faang-stocks-get-old-the-next-technology-wave-is-called-tand/#4562da1b4508>
- Goldman, S., Nagel, R., Preiss, K. (1995), Agile competitors and virtual organizations: strategies for enriching the customer, Van Nostrand, Reinhold, New York
- Google Trends (2019), Google Trends, <https://www.google.com/trends>
- Google (2019), Google Trends for social media university, social commerce university, digital marketing university, e-commerce university - Worldwide, 2004 – present - Retrieved from <https://trends.google.com/trends/explore/TIMESERIES/1567725600?hl=en-US&tz=-600&date=all&q=social++media+university,social+commerce+university,digital+marketing+university,e-commerce+university&sni=3>
- Haselton, T. (2019), Apple’s smart glasses will arrive in the first half of 2020, top analyst says, 9 October, CNBC, Retrieved from <https://www.cnbc.com/2019/10/09/apple-augmented-reality-glasses-to-launch-in-2020-kuo.html>
- Korn Ferry (2016), The e-commerce talent gap, Retrieved from https://www.kornferry.com/media/sidebar_downloads/Executive_Summary_Ecommerce_talent_gap.pdf
- Manyika, J., Chui, M., Brown, B., Bughin, J., Dobbs, R., Roxburgh, C. and Byers A., (2011), Big data: The next frontier for innovation, competition, and productivity, McKinsey Global Institute, May, Retrieved from https://www.mckinsey.com/~media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/Big%20data%20The%20next%20frontier%20for%20innovation/MGI_big_data_exec_summary.ashx
- Microsoft, (2019), HoloLens 2 pricing and options, Retrieved from <https://www.microsoft.com/en-au/hololens/buy>
- Hong’e, M. (2016), 75% of e-commerce companies suffer from talent shortages, ECNS Wire, 13 April, Retrieved from <http://www.ecns.cn/cns-wire/2016/04-13/206547.shtml>
- Knowledge@Wharton (2019), How Globalization and Robotics Speed Up Job Losses [Podcast], Mar 13, 2019. Retrieved from <https://knowledge.wharton.upenn.edu/article/globotics-upheaval/>
- Lamberton, C. and Stephen A. (2016), A Thematic Exploration of Digital, Social Media, and Mobile Marketing: Research Evolution from 2000 to 2015 and an Agenda for Future Inquiry, Journal of Marketing: AMA/MSI Special Issue, November, vol 80, pp. 146-172 [Crossref](#)
- Lei, L. (2012), “E-Commerce Undergraduate Training Mode” In Z. Zhong (ed.), Proceedings of the International Conference on Information Engineering and Applications (IEA) 2012: Vol 1, pp.37-45, Springer-Verlag London 2013 [Crossref](#)
- Lu, X. and Zhang, S. (2017), Analysis on the Strategy of Cross-border E-commerce Talents Based on the analysis of policy content, 4th International Conference on Management Science and Management Innovation (MSMI 2017), Retrieved from <https://download.atlantispress.com/article/25881489/pdf> [Crossref](#)
- McCready, R., (2019), “Marketing Skills 2019: Are You Qualified to Be Hired?”, 8 April, Retrieved from <https://venngage.com/blog/marketing-skills-2016/>
- Mitchell, V. (2019), “Report: Marketing skills gap just getting bigger”, CMO from IDG, 17 January, Retrieved from <https://www.cmo.com.au/article/656333/report-marketing-skills-gap-just-getting-bigger/>
- Moore Stephens and WARC (2018), “Martech: 2019 and beyond Insights into the global martech market”, September 2018
- Moore, S. (2018), “Top 10 Trends in Digital Commerce”, Gartner, 12 October, Retrieved from <https://www.gartner.com/smarterwithgartner/top-10-trends-in-digital-commerce/>
- North, (2019), “Focals Smart Glasses: Buy them anywhere, wear them everywhere”, Retrieved from <https://www.bynorth.com/>
- NTUC (2018), “Global E-Commerce Insights and the Future of E-Commerce”, Retrieved from <https://courses.ntuclearninghub.com/browse/e-commerce/programs/global-e-commerce-insights-and-the-future-of-e-commerce>

- O*NET OnLine (2018a), Retrieved from <https://www.onetonline.org>
- O*NET OnLine (2018b), Bright Outlook Occupations, Retrieved from <https://www.onetonline.org/help/bright/>
- Pak, J. (2018), “Foreign infant milk formula still highly coveted in China 10 years after the melamine scandal”, 24 October, Retrieved from <https://www.marketplace.org/2018/10/24/world/foreign-infant-milk-formula-still-highly-coveted-china-10-years-after-melamine>
- Pan, Y. (2018), China’s Cross-Border E-commerce Market Soared to \$220B in 2017, Jing Daily, 31 June, Retrieved from <https://jingdaily.com/cross-border-e-commerce/>
- Pash, C. (2019), “Marketers say Australia has a 'lack of digital talent' ”, 6 August, Retrieved from <https://www.adnews.com.au/news/marketers-say-australia-has-a-lack-of-digital-talent>
- Pattinson, H. (2018), Western Sydney University Postgraduate Internship Program, Business Appreciation Cocktail Reception, 11 December, Janice Reid Pavilion, Parramatta South Campus
- PRC (2018), People Republic of China E-Commerce Law, 31 August, Retrieved from http://www.npc.gov.cn/npc/xinwen/2018-08/31/content_2060172.htm
- Rayport and Sviokla (1994), “Managing in the marketplace”, Harvard Business Review. Nov.-Dec. 1994, 141-150.
- Rayport and Sviokla (1995), “Exploiting the virtual value chain”, Harvard Business Review, Nov.-Dec. 1994, 75-85.
- Rossum, B. (2019), “5 Evolving Marketing Jobs That Will Be in High Demand in 2020 [Infographic]”, 18 September, Retrieved from <https://www.business2community.com/marketing/5-evolving-marketing-jobs-that-will-be-in-high-demand-in-2020-infographic-02241268>
- Seek (2019), Ecommerce & Digital Marketing, Retrieved from <https://www.seek.com.au/e-commerce-marketing-manager-jobs>
- Scorsone, G. (2017), “The 4 most in-demand e-commerce skills”, CIO, September 20, Retrieved from <https://www.cio.com/article/3226751/the-4-most-in-demand-e-commerce-skills.html>
- Sirajuddeen, M., (2018), E-commerce is dead, long live digital commerce, Marketing- Interactive.com, 30 August, Retrieved from <https://www.marketing-interactive.com/topics/marketing/>
- Smith, A. (2018), “Don't Worry – The Big Data Skills Gap Isn't So Bad”, Digitalist Magazine, 1 June, Retrieved from <https://www.digitalistmag.com/future-of-work/2018/06/01/dont-worry-big-data-skills-gap-isnt-so-bad-06171685>
- Staffing Industry Analysts, (2019), The gig economy and human cloud landscape: 2019 update, 3 September, Retrieved from <https://www2.staffingindustry.com/Research/Research-Reports/Americas/The-Human-Cloud-Landscape-2019-Update>
- Susskind R., and Susskind D. (2016), The Future of the Professions: How Technology Will Transform the Work of Human Experts, 1 January, Oxford University Press
- The Muse (2019), Digital Marketing and eCommerce Manager - Ice-Cream, Retrieved from <https://www.themuse.com/jobs/unilever/digital-marketing-and-e-commerce-manager-icecream>
- Varghese, P. (2018), An Indian Economic Strategy to 2035, 27 April, retrieved from <https://dfat.gov.au/geo/india/ies/pdf/dfat-an-india-economic-strategy-to-2035.pdf>
- Varon, L (2017), eCommerce Trends and Outlook For Asia Pacific
- Trends in Australia, China, India, Japan, South Korea From The Forrester Data: Online Retail Forecast, 2016 to 2021 (Asia Pacific), 28 June, Forrester, Retrieved from <https://www.forrester.com/report/eCommerce+Trends+And+Outlook+For+Asia+Pacific/-/E-RES131984>
- W3techs.com (2019), Usage of traffic analysis tools for websites, 12 May, Retrieved from https://w3techs.com/technologies/overview/traffic_analysis/all
- Weick, K., Sutcliffe, K. M., & Obstfeld, D. (2005), Organizing and the process of sensemaking. Organization Science, 16(4): 409–421. [Crossref](#)
- Wiliot (2019), Battery-Free Bluetooth Technology - Connecting People with Products, Retrieved from <https://www.wiliot.com>
- World Bank Group (2019), WDR 2019: The Changing Nature of Work, Retrieved from <http://documents.worldbank.org/curated/en/816281518818814423/2019-WDR-Report.pdf>
- World Economic Forum (2016), The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, Global Challenge Insight Report, January, http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf