



Educational Media: Potential impacts on tertiary students' mental health

Margaret Anne Carter & Donna Goldie, James Cook University¹

As the result of the rapid expansion of digital communications, university students worldwide are increasingly engaging with educational and social media during their studies. Challenges are reported in the literature associated with responsible digital citizenship; specifically communicating, connecting and engaging ethically with online media technologies. This creates a conundrum for staff and students working and learning in higher education. To explore one component of the complex role of the relationship between university students' and various media, this literature review examines the following research question: *What are the potential impacts of educational and social media on the mental health and wellness of students in higher education?* Projects and initiatives demonstrate how educational media is designed and enacted to promote, support and sustain mental health in higher education.

Keywords: mental health, higher education, university students, cyber bullying



Introduction

Currently, there are over three billion Internet users internationally, with approximately forty per cent of the world's population with an internet connection ([Internet Live Stats, 2015](#)). In a distribution of Internet users worldwide over the age of fifteen, the Asia-Pacific region accounted for forty-four per cent with internet access ([Internet Live Stats, 2015](#)). It is estimated that around fifty per cent of the Australian population use social media sites such as Facebook ([Queensland Government, 2014](#)) with students representing ninety per cent of this population ([Mansouri & Mrabet, 2013](#)). Therefore, to explore a component of the complex role of the relationship between university students and various media, this literature review discusses the following research question: *What are the potential impacts of educational and social media on the mental health and wellness of students in higher education?*

The review begins with a brief description of the literature on the affordances of educational and social media technologies with an emphasis on their potential in higher education. A discussion of the literature on the conundrum of social media follows; then an analysis of the literature on mental health difficulties experienced by students in higher education. Education responses to fostering a safe and ethical online environment are discussed and two specific projects are highlighted. The potential for future research is justified, focusing on integrating educational social media technologies, where appropriate, to promote and support mental health and wellness for students in higher education. This research is significant for students, teaching academics, counselling staff, mental health practitioners and educational designers as it has the potential to inform higher education policies, academic conventions, plans, curriculum, processes and practices.

The Internet and Higher Education

As a “means of communication, facilitating the expression and exchange of ideas between individuals” ([Westera, 2015, p. 20](#)), the Internet has had a profound impact on teaching and learning, enhancing connectivity, enabling more people to create and share a wide range of materials for a variety of purposes. The Internet has resulted in changes to the ways students' learning needs are met, educators' decisions about curriculum design are made, and how educational courses are facilitated ([Bokor, 2012](#); [Fernández, 2013](#); [Westera, 2015](#)).



Given the potential for Internet use anywhere and at any time, the advantages provided by education media have been recognised as providing opportunities to embed learning in authentic environments with the intention of enhancing student engagement and learning (Presnsky, 2001; Kirkwood & Price, 2005; Margaryan, Littlejohn, & Vojt, 2011; Voogt, Knezek, Cox, Knezek, & Brummelhus, 2011). Various educational media are used by academics through the design and delivery of their university courses, and these media form part of their pedagogic repertoire to, for example, support student collaboration, clarify concepts and enhance understandings. Students gain cognitive independence and conceptual mastery through engagement with educational media, a curriculum-driven tool or product, designed specifically with a pedagogical purpose (Calvert & Wilson, 2008). Pedagogically sound technology use can also enhance students' conceptual understanding (Mishra & Koehler, 2009). There is, however, evidence that does not fully support this position (Selwyn, 2008; Jones & Healing, 2010; Thompson, 2013).

Klopher and Squire (2008) refer to the integration of virtual and real world data as “real world context is dynamically overlaid with coherent location or context sensitive virtual information” (p. 205). In a hypertext environment, the user accesses computer-presented text through the use of links embedded within the text. The study conducted by Niederhauser, Reynolds, Salmen, and Skolmoski (2000) examined the cognitive load associated with hypertext based instructional material to “criss-cross the conceptual landscape” (p. 237). Their findings showed that while learning in a hypertext environment was associated with a highly intrinsic cognitive load, for some students the increased cognitive load required to navigate the hypertext hindered their learning, inhibiting their “ability to integrate new knowledge into existing knowledge structures” (p. 251). Within this context, it is important to consider the frequency of technology use of student users.

Building on data drawn from a 2006 survey of first year students' use of technology in the Australian Higher Education context (see Kennedy et al. 2006, 2009), the findings from Kennedy, Judd, Dalgarnot, and Walcott's (2010) cluster analysis study (n=2096 students aged between 17-26) from three Australian universities identified four distinct types of student technology users in higher education: basic users (45%), irregular users (14%), ordinary users (27%) and power users (14%) (see Table 1). The variability in these technology use patterns moves beyond the idealised digital native discourse that “young people's use of technologies as



being subjected continually to a service of complex interactions and negotiations with the social, economic, political, and cultural contexts into which they emerge” (Selwyn, 2009, p. 371).

Table 1: Types of student technology users

Power users	Students using a wide range of technologies, using significantly more frequently than others.
Ordinary users	Regular users of standard Web and mobile technologies.
Irregular users	Moderate users of the standard Web and mobile technologies; relatively low users of all technologies with exception of Web 2.0 publishing.
Basic users	Extremely infrequent use of new and emerging technologies; regular users of standard mobile users.

(Kennedy, Judd, Dalgarnot, & Waycott, 2010, p. 337)

Intertwined with educational media is social media, media for social communication, allowing for “the creation and exchange of user-generated content” (Kaplan & Haenlein, 2010, p. 61). Social media has become one of the world’s major sources of social interaction and is utilised in educational settings. Seeing unprecedented growth with Australia leading the world in online engagement recording the highest global average for time spent each month using these social media tools (Nielsen, 2010; Sensis, 2015), social media channels such as Facebook, Twitter and YouTube have developed into a network of connected human individuals (Web 2.0 technologies) (Westera, 2015). These media can be accessed anywhere and anytime, using a variety of devices, such as laptops/computers, mobile phones and tablets (Zhang, Land, & Dick, 2010).

Selwyn’s (2009) qualitative study analysing the use of Facebook with undergraduate students (n=909) in a United Kingdom university portrays a different scenario. This study reported student engagement was for social networking rather than deep or collaborative learning with peers. Five themes emerged with the author concluding the data portrayed Facebook “as being a highly significant but also unremarkable means of social networking and communication Used primarily for maintaining strong links between people already in relatively tight-knit, emotionally close offline relationships” (p. 170).



Hrastinski and Aghaee's (2012) exploratory research with 20 students (10 graduate and 10 undergraduate) reported the frequency of social media use to support their studies. Five participants reported frequently using social media to support their studies compared with 15 using it for social connectedness with friends, family and acquaintances. Rather than Facebook, email and instant messaging was the most popular media with email the primary means of student-academic communication. Similar to Selwyn (2009), few examples were provided of the use of social media for collaborative learning, rather the exchange of practical and academic information as well as social support.

Purportedly educational possibilities are made richer by opportunities to share and create subject content through social media, enabling both individual and collaborative learning inclusive of the needs of diverse students (Pinnegar & Rice, 2015). How digital technologies are used for social and academic purposes was further researched by Echenique, Marqués Molías, and Bullen, (2015) with students (n=20) at Rivira I Virgili University in Tarragona. Findings from the analysis of the semi-structured interviews reported the Internet tool most widely used by students is Facebook (25%), followed by Twitter (20%). Most students used these technologies for both social and academic purposes. Facebook and What's App on mobile phones was reported as facilitating collaborations due to the spontaneity of communication with peers in working groups. This finding aligns with Wang, Woo, Quek, Yang, and Liu's (2012) exploratory study (n=31) with findings showing certain pedagogical, social and technical affordances of using the Facebook group as a learning management system (LMS) held a great deal of potential for teaching and learning. Using the Facebook group as a LMS also has limitations including it not being perceived as a safe space.

In a more recent study, Gkioulos, Wangen, Katsikas, Kavallieratos, and Kotzanikolaou (2017) surveyed multinational university students (308 Greek and 35 Norwegian) identifying common usage patterns, user confidence, levels of security competence and educational background. Findings from this research highlighted divergences in user behaviours. Participants extremely confident in the use of mobile devices presented with "negligent behavior towards actions with potentially security related impact" (p. 141). Most participants born between 1987-1997, a generation often termed as the 'net generation' or 'digital natives', were willing to accept security risks, adopting a more constrained stance when security threats become directly visible. Many



were unaware of some countermeasures at their disposal to enhance security; some were less constrained in terms of security when using laptops compared to smartphones and tablets.

As students increasingly spend time online, Woodley and Silvestri (2014) claim that universities “need to adopt a combination of approaches to address the changings norms of the blogosphere and guide students to act in ways that are professional, collegial and respectful” (p. 233). Furthermore, in alignment with course knowledge and skills, digital identity development warrants explicit inclusion in the curriculum (Ahlquist, 2016; Woodley & Silvestri 2013). A digital identity is the presentation of a person in all online contexts (personally and professionally) and is composed of both user- and others-generated content that can be searched using online tools, for example, Google (Ahlquist, 2016). Using these online tools to search digital identities are key stakeholders, such as university staff and potential employers as students spend more and more time engaged in educational and social media (Woodley & Silvestri, 2013).

In the advent of Internet technologies, students are required to develop personally and professionally various literacies for successful participation in global environments. These various literacies are described by Burgess (2006) and include: a) critical literacy – deep knowledge and understandings of the socio-contextualised internet; b) creative literacy – knowledge and skills in the use of the internet to experiment with, learn and create information, and; c) network literacy – the skills and knowhow to operate effectively and ethically within the plethora of connected networks (Web 2.0 technologies), to create and share knowledge in socio-constructivist ways. It is predicted that these literacies will evolve and change as educational media do, however, Livingstone and Brake (2010) advise that social media products need built-in safety protection rather than the full responsibility for safety being on the user’s literacy skills. Universities, therefore, are being challenged to re-think and reconsider ways of providing support to their increasingly diverse student cohorts (Woo Kyeong, 2013) to successfully achieve course outcomes as well as graduate attributes in the navigation of various media both during and post-university (Junco, 2014).

In the digital world, ethical behaviour is directed toward ensuring a positive digital footprint. A digital footprint is a trail of a person’s activities online, such as: photographs, emails, text messages, webpage content, chats, ‘likes’, ‘shares’, and other social networking site pages (Katz, 2012). Encouraging individuals to reflect on what they are about to post online before they do



can assist people in considering the impact of what they share online on themselves and others (Woods, 2014) including future careers. This is of major significance due to the permanent nature of online content that exists online (Mansouri & Mrabet, 2013) and the ease with which information and materials can be saved and shared. More employers are now reading online profiles and making decisions on recruitment based on digital reputation and footprints (Wankel & Wankel, 2012).

The opportunity afforded by new technologies and the universities' adoption of technology for teaching and learning brings with it a social responsibility for each member of the university community modelling appropriate behaviour in an encouraging and amicable environment with equity for all. Universities are increasingly focused on their role in influencing students' online behaviours, both on- and off-campus (Woodley & Silvestri, 2013). It is noted that while universities have Student Charters, Information Communication Technologies policies – often with a social media section - Woodley and Silvestri (2013) argue that these are insufficient. In addition, Wankel and Wankel (2015), advise that supporting students in maintaining their digital integrity requires a multi-stakeholder approach. Consequences of inappropriate online behaviours, such as cyberbullying are now being experienced in higher education institutions (Wankel & Wankel, 2015).

With cyberbullying being an insidious, often covert form of behaviour, ethics are signposts that guide decision making about appropriate and professional behaviour with others. With underlying ethical principles (e.g., autonomy, nonmalficence, beneficence, justice, fidelity) providing guidance about social norms, it is the responsibility of each person “to voluntarily comply and behave ethically because it is the right thing to do, although sanctions for noncompliance may occur” (Erford, 2007, p. 69).



Cyberbullying

The cyber-world is integrated into everyday life and bullying that occurs online has consequences offline as well as on. Acknowledging that differing definitions of cyberbullying exist in the literature, the authors have identified cyberbullying as an act of aggression intended through electronic communication technologies to cause harm carried out by an individual or group, often anonymously, repetitive in nature, intended to inflict humiliation or harm another person or persons and cause distress to others (Carter, M'Balla-Ndi, van Luyn, & Goldie, 2017; Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Landstedt & Pesson, 2014; Patchin & Hinduja, 2012; Calvete, Orue, Estévez, Villardón, & Padilla, 2010; Cowie & Colliety, 2010; Hinduja & Patchin, 2009; Smith, Mahdavi, Carvalho, & Tippett, 2006). Cyberbullying occurs on a range of electronic platforms, including social media, such as Facebook, YouTube, email, instant messaging and Short Message Systems (SMS or texting) (Carter, Kanakis, van Luyn, M'Balla-Ndi, & McArdle, 2015) and the “ability to anonymously place content directed against a person, that can be shared almost endlessly, carries an enormous amount of potential to do harm” (Wankel & Wankel, 2015, p. 3). Willard (2007) and Chisholm (2014) categorise eleven modalities of cyberbullying across these platforms (see Table 2). Cyberbullying encompasses power differentials within the social group, including how bystanders relate to both parties (Salmivalli, 2010; Carter, Van Luyn, & M'Balla-Ndi, 2016).



Table 2. Modalities of cyberbullying (Chisholm, 2014; Willard, 2007)

Flaming	Electronic messages with fuming and discourteous language (Willard, 2007, pp. 1-2).
Harassment	Continually sending offensive and rude messages online (Willard, 2007, pp. 1-2).
Denigration	Spreading rumours online to harm reputations or relationships (Willard, 2007, pp. 1-2).
Impersonation	Masquerading as someone else and breaking into someone's account; impersonating a person and posting inflammatory material as that person to damage their status or relationships (Willard, 2007, pp. 1-2).
Outing/ Trickery	Convincing someone into declaring confidences, and circulating online (Willard, 2007, pp. 1-2).
Exclusion	Maliciously excluding someone online (Willard (2007, pp. 1-2).
Cyberstalking	Habitual online harassment and defamation (Willard, 2007, pp. 1-2).
Ratting	Remote controlling computer/webcam without person's knowledge or consent and controlling the operations of their computer (Chisholm, 2014, p. 79).
Catfishing	Deceiving people into emotional relationships by devising fictitious online identities (Chisholm, 2014, p. 79).
Malicious Sexting	Distributing humiliating and/or sexually suggestive pictures online without consent (Chisholm, 2014, p. 79) Albury and Crawford (2012, p. 464) suggest that the concept of consent is important to take into account when considering young people's agency.
Shock Trolling	Spiteful and aggressive messages intended to aggravate or degrade someone in order to incite a reaction (Chisholm, 2014, p. 79).

Cyberbullying among university students

Research confirms that cyberbullying occurs between students, and between students and staff (Dickerson, 2005; Faucher, Jackson, & Cassidy, 2014; Minor, Smith, & Brashen, 2013; Smith & Yoon, 2013). Prevalence rates reported across studies are inconstant depending on how cyberbullying is defined, attributes of bullying, the time parameters used to measure cyberbullying, age of participants, country in which the data are collected. Most studies report prevalence rates from 10%-40% (see, Whittaker & Kowalski, 2015; Kowalski et al., 2014; Menesini, Nocentini, & Calussi, 2011; Tokunaga, 2010; Hinduja & Patchin, 2013; Cassidy, Jackson, & Brown, 2009). When self-labelling is not required, the prevalence of cyberbullying nationally and globally may be higher than these estimates.



Adams and Lawrence (2011), Young-Jones, Fursa, Byrket, and Sly (2015) and others identified that students bullied (traditional and cyber bullying) in higher education have a history of victimization in primary and secondary schooling. This is in contrast to researchers who maintain the developmental transition from secondary school to post-secondary brings along with it a new set of assumptions, expectations, and adaptations. This transition represents “a range of academic, social and developmental challenges and has been characterised as a ‘developmental disturbance’ whereby young adults must navigate several tasks, often without high school support networks” (LaBrie, Huchting, Pedersen, Hummer, Shelesky, & Tawalbeh, 2007, p. 344).

The National Union of Students (NUS, 2008) Student Experience Report – focused on reporting higher education student experience across the United Kingdom. Findings from an online questionnaire (n= 3135 students from 146 higher education institutions) indicated of the 7% of students who reported experiencing bullying, 79% stated this involved a fellow student, 21% identified a staff member as the bully, and that bullying events were not reported to their institution. MacDonald and Roberts-Pittman’s (2010) study with 439 undergraduate students at a Midwestern university in America, reported 38% knew victims; 21.9% were victims; 8.6% reported cyber bullying events to someone else.

In an online environment, the scale of disseminating information is almost unstoppable, often irretrievable, with the number of observers after the fact, infinite (Kowalski & Limber 2007; Ozdamli, Hursen, & Ercag 2011). This rise in use of digital communications has increased the potential damage that can be done to an individual’s reputation, career prospects and sense of self-worth (Pelletier, 2009). Encouraging individuals to reflect on what they are about to post online before they do can assist people to consider how what they share online can impact themselves and others (Woods, 2014). Social networking interactions (positive and negative) will shape people’s perceptions of others, both now and in the future.

People may say or do things anonymously that they will not do directly to someone’s face (Kowalski et al., 2014). Thus, perceived anonymity might be a factor favourable to cyberbullying (Whittaker & Kowalski, 2015), coupled with material that can potentially be shared endlessly, has an enormous potential to do harm (Wankel & Wankel, 2015). “The lack of social censure that cyberbullying enables through the absence of face-to-face interaction means that many of the



social restraints associated with traditional direct bullying are not in play for cyberbullying” (Bussey, Fitzpatrick, & Raman, 2015, p. 31). Feelings of guilt by the perpetrator may occur when the initial statement was intended as a joke, was misinterpreted spiralling out of control. Even if the perpetrator planned some harm, the degree of harm incurred is often not predicted. For females, cyber victimization is related to depression with the self-focus on an imaginary audience being aware of their humiliation. Young-Jones et al., (2015) invited undergraduate psychology students (n=130) from a Midwestern university in America to reflect retrospectively on bullying events, females reported a decrease (37%) in self-reported victimization, males reported a less significant reduction in victimization (30%) transitioning from secondary to postsecondary contexts. These researchers categorized 49% of behaviours re-counted by participants as victimization compared with 12% characterized by the participants themselves.

A survey of cyber bullying conducted with students 18-30 years (n=579) attending three Istanbul universities (Turan, Polat, Karapirli, Uysal & Turan, 2011) conveyed that 59.8% of the participants (n= 346) had been intimidated on electronic media. More than half (54.4%) reported emotional effects of the cyberbullying: “80.6% (n = 254) stated that they were angry, 20% (n = 63) scared, 12.7 (n = 40) excited, 8.9% (n = 28) embarrassed 6.3% (n = 20) hurt and 3.5% (n = 11) blamed themselves” (p. 23). Of the 799 college students Schenk and Fremouw (2012) surveyed using a standardised assessment of psychological symptoms among college victims, 69 (8.6%) were victims of cyberbullying, 50 females (8.7%) and 19 males (8.4%). Victims were elevated on psychological subscales of depression, anxiety, phobic anxiety, paranoia. They frequently felt distressed, frustrated, sad, hurt, angry and experienced difficulty concentrating on studies. Consistent with and expanding on the work of Hinduja and Patchin’s (2010), victims were more likely to experience suicidal thinking and more frequent suicidal ideations than control participants.

Rospenda, Richman, Wolff, and Burke’s (2013) research found that 43% of freshman (n= 2118) in Midwestern United States experienced bullying events during their time at university/college. Work and university/college bullying were highly positively correlated with 33% of students reporting bullying at work, meaning bullying in the workplace often co-occurred with bullying in university/college. Bullying in both contexts was consistently associated with higher levels of alcohol consumption with 85.1% of students bullied at work and 83.9% bullied at school reporting binge drinking; 84.5% (work) and 83.6% (university/college) of participants who were



bullied reported drinking to intoxication compared with 76.1% and 75.3% who were not bullied at work or university. While Faucher et al., (2014) survey (n=1925 students) from four Canadian Universities reported 24.1% of students experienced cyberbullying in the 12 months prior to the study with over a third reporting a variety of emotion impacts affecting “their ability to do their assignments; it affected their relationships outside university; they experienced mental health issues; and/or felt their emotional security or their physical safety was threatened” (p. 5).

Feelings of annoyance, loneliness, distress, frustration, hurt, sadness, anger, embarrassment, anxiety, hopelessness, depression and lower self-esteem are most associated with cyberbullying events (Patchin & Hinduja, 2010; Schenk & Fremouw, 2012; Campbell, Slee, Spears, Butler, & Kift, 2013; Landstedt & Persson, 2014). Viewed through a social-ecological lens (Rose, Nickerson, & Stermont, 2015; Swearer & Hymel, 2015) the complexity of cyberbullying can be understood by examined in terms of gender, the type of cyberbullying and the context within which the event happens (Hinduja & Patchin, 2009; Carter, Kanakis, Van Luyn, M’Bella-Ndi, & McArdle, 2015). Referencing stress-coping theory, Lazarus and Folkman (1984) argue that a stressor such as bullying, while harmful, will not negatively impact persons’ mental health if they have positive adaptive coping mechanisms (e.g., problem solving and focusing on positive aspects of life, changing negative thinking to positive thinking). Bullying acts as a stressor, triggering “the onset of conditions a person is predisposed to” (Townsend, Powers, & Loxton, 2017, p. 57).

Mental Health

Mental health refers to one’s ability to release their potential, achieve to their abilities, cope with the dis-stresses of living, work effectively and successfully, and participate usefully in their community (World Health Organisation, 2014). People experience mental health difficulties, independent of receiving a diagnosis of mental illness, due to their ineffectiveness in coping with stressful life events and challenges, making it difficult for them to function effectively and productively. One in five Australians in the general population experience a mental illness within a 12-month period and almost half (45%) of Australians aged 16-85 years’ experience mental illness at some stage in their lives (National Survey of Mental Health and Wellbeing, 2007). With 75% of mental health disorders manifest prior to the age of 25, concern for university students’ mental health is gaining more attention in recent years (Kessler, Amminger, Aguilar-Gaxiola,



Alonso, Lee, & Ustun, 2007; Veness, 2016; Orygen, 2017). Veness (2016) explains that “among Australian youth, anxiety disorders are the most common, followed by substance use disorders and then affective disorders” (p. 10).

A 2010 systematic review of 11 articles on students attending university identified anxiety, depression, eating disorders, self-harm, obsessive compulsive disorder, and psychotic disorders as the most common mental health difficulties affecting this population (Storrie, Ahern, & Tuckett, 2010). With three in five university students aged between 18-25 (59%) (Australian Bureau of Statistics, 2013), national health prevalence data estimates one in four university students aged between 18 and 25 years will experience mental ill-health in any one year (Australian Bureau of Statistics, 2008; Orygen, 2017). Among this population, significantly higher levels of psychological dis-stress and mental ill-health have been found than among non-students (Walter, 2015). Findings from the KPMG Department of Education and Training Evaluation of Disability Support Program: Final Report (2015) signposts that more students are presenting to support services with mental health disorders (e.g., depression, anxiety and schizophrenia) and that students rarely present with one disability. Noting these students take “up approximately two-thirds of appointments” (p. 16), “the bulk of funding under the program is still supporting students with hearing and visual impairments, and other physical disabilities” (p. 7).

Counselling services in universities need to be funded at levels which reflect the increasing mental health demand and complexities of student presentations (e.g., international students’, Aboriginal and Torres Strait Islander students). With the best practice guidelines for counselling services in post-secondary education being one counsellor per 1000 students (ANZSSA, 2011) being unrealistic in today’s university environments, consideration needs to be given to a range of available, appropriate, accessible and free of charge mental health support services (see, ways forward section).

For some university students, mental health risk factors include: relocation, lack of sleep, poor diet (Knowlden & Sharma, 2014), drugs and alcohol use (Hussain et al., 2013), financial management (Cleary, Walter, & Jackson, 2011), balancing work-study-family commitments, autonomy, loneliness, pressure of performance expectations (Palmer & Puri, 2006), academic stress (Kruisselbrink Flatt, 2013) can exacerbate mental-ill-health among university students. It is “a combination of risk factors which can result in, or exacerbate, mental ill-health among



university students” (Orygen, 2017, p. 6). Students from low socio-economic backgrounds, rural areas (Mulder & Cashin, 2015), international students (Khawaja & Dempsey, 2007; Forbes-Mewett & Nyland, 2008), students with physical and psychological disabilities (Dryer, Henning, Tyson, & Shaw, 2014) and Aboriginal and Torres Strait Islander backgrounds (Dudgeon, 2017) appear to be at greater risk. Dudgeon pinpoints the intricacies for Aboriginal and Torres Strait Islander persons symbolised by the ‘access gap’ to mental health services “with 34.5% of Indigenous peoples who reported high or very high levels of psychological distress also experiencing access problems to health services” (Dudgeon, 2017 p. 11). Championing the mental health challenges of Aboriginal and Torres Strait Islander persons in universities, Dudgeon (2017) specifies a range of interconnected factors contributing to heightened risk for self-harm and suicidal behaviours including:

pervasive racism and discrimination at individual, institutional and system levels; ongoing exposure to socio-economic disadvantage and multiple psychological stressors; transgenerational trauma, grief and loss associated with the ongoing impact of dislocation and the effects of forced removal of children and mistreatment (Dudgeon, 2017, p. 11)

Many university students with an experience of mental health difficulties are “unable to realize their academic and ultimately their career potential not only because of the mental health problems they are experiencing, but also because of the social and cultural climate of which they are a part” (Kirsh, Friedland, Cho, Gopalsuntharanayhan, Orfus, Salkovitch, Snider, & Webber, 2014, p. 334). These are the students more likely to exit or consider exiting their course early. These are the students most in need of culturally informed, respectful and appropriate supports. The conundrum is many students conceal their mental ill-health as they are fearful, embarrassed and worried about being stigmatised and negative repercussions for future career prospects.

McLafferty, Mallett, and McCauley’s (2012) research identifies resilience as a significant predictor of coping at university. Resilience is a person’s ability to maintain successful adaptation despite significant adversity, temporary failure, threatening circumstances or sources of stress (Luthar, Cicchetti, & Becker, 2000; Riley & Masten, 2005). A positive attitude, supportive relationships, the ability to learn and recover from one’s challenges, capacity to adapt flexibly to change and adversity, contributes to resilience. Academic (also referred to as educational) resilience reflects a person’s “capacity to overcome acute and/or chronic adversity that is seen as a major threat to a



student's educational development" (Martin, 2013, p. 488). It is characterised by the capacity of some students notwithstanding challenging circumstances, manage to turn around their misfortune and thrive despite their adversity (Martin & Marsh, 2006). The research of Dweck and Leggett (1998) and Muller and Dewck (1998) specific to growth mind-set may have application here. These researchers specify persons with growth mind-sets concentrate on improving their abilities, "perceiving the identical challenge or setback in an entirely different light, as an opportunity to learn" (Dweck, Walton, & Cohen, 2014, p. 5).

University students advocate for more education in fostering safer online learning and social environments as their time is increasingly spent engaging in online spaces (Zalaquett & Chatters, 2014). When someone is involved in a cyberbullying or bullying event in university, there needs to be a clear path to where/who they need to go to for support and/or report, what evidence is needed, what the support / report entails etc. Although the impact of cyberbullying is difficult to quantify, the potential impacts on the universities and their students and staff needs to be addressed. "Universities as communities also have an important part to play in strengthening students' conceptions of right and wrong and in challenging behaviour that is oppressive and unjust" (Myers & Cowie, 2013, p. 263). Raising the profile of appropriate mindful online codes of engagement for staff and students is imperative, with students being introduced to and taught these codes prior to enrolment, during orientation, and throughout the duration of their studies.

Ways Forward

The issues of mental ill-health and cyberbullying require increased visibility within institutions, starting from institutional heads placing mental health and wellness on the higher education policy agenda. This call for action echoes a mandate by Veness' (2016) that: "there must be a 'tone from the top' that genuinely commits a university to improving its students' mental health and wellbeing" (p. 8). This requires proactivity and responsiveness, intentionality and collaboration, encompassing cross-institutional enablers (policies, processes and practices), closely associated with communities at the local, regional and national levels. Veness (2017) and the authors of this paper upload that universities need an updated mantra – promoting every student's success from the day they enrol through to graduation (p. 13).

Two existing projects warrant mention: (1) Prevent cyber bullying in higher education website <http://www.preventcyberbullyingicu.com.au/> site (see, Carter et al., 2015; Carter et al., 2017); (2)



Enhancing student wellbeing framework and online professional development resources <http://melbourne-cshe.unimelb.edu.au/research/research-projects/experience/enhancing-student-wellbeing> (Baik et al., 2017). The <http://www.preventcyberbullyingjcu.com.au/> site is a novel resource developed collaboratively with James Cook University students, designed to build capacity of university staff and students in the areas of critical literacy, creative literacy and network literacy (Burgess, 2006) in the online world through the provision of targeted cyber safety and mental health and wellness resources. The authentic engagement of students, staff and community in the design and development of the site makes it highly likely that the content will resonate with and engage the target audience (Carter et al., 2016). On a broader scale, the Enhancing Student Wellbeing project aims to assist teaching academics by providing research informed concepts and ideas for intentionally designing and delivering higher education environments, curriculum and resources supportive of student mental health (Baik et al., 2017). An evidence based curriculum design framework for supporting student is scrutinised and best practice examples of curriculum redesign to more effectively respond to student mental wellness are showcased (e.g., Capstone Practicum, Queensland University of Technology; 3rd year Music Theatre, Bachelor of Fine Arts, Victoria College of the Arts; First year Biology, Bachelor of Science, University of Melbourne).

Beyond these projects, universities need to engage in partnerships with primary health and community mental health care services to ensure sufficient available and accessible services. Staff need training in early intervention and presentation. To date, programs such as Mental Health First-Aid (MHFA) and Question Persuade and Refer (QPR) have generated positive results with staff attitudinal alterations but no research has materialised with student beneficiaries (Lipson, Speer, Brunwasser, Hahn, & Eisenberg, 2014). Optimising the use of digital mental health services, online supports could be dispensed through the Australian Government's 2016 Digital Mental Health Gateway. Support could include a 24-hour-a-day, 365 days a year helpline and access to a range of online secure portals such as: The Desk (developed by University of Queensland Australia and Beyond Blue); The Uni Virtual clinic (developed by Australian National University through the Young and Well Cooperative Research Centre); The FRIDGE.Self-Serve Self-Management (developed by University of New South Wales Australia and the Australian Government Office for Learning and Teaching, 2015).



Mental Health Champions (developed by Monash University) and MATES @UWS (developed by University of Western Sydney) are peer support programs delivered in partnership with university mental health services. Batyr@unipartnerships, founded in 2011 by Sebastian Robertson, is beginning to gain traction in Australian universities (e.g., University of New England; The University of South Australia), removing the stigma associated with mental ill-health. The Jed Foundations- Active Minds (US) and the Jack Project (Canada) are two peer-led and peer-support national programs available across institutions.

Conclusion

It is apparent from this literature review that educational media has some potential drawbacks in higher education. There is, however, growing evidence to suggest that educational media can support wellbeing and personal and professional development in universities (Ahlquist, 2016, Henry, 2012; Junco, 2014). In a recent study, Loos (2017) reviewed the design and implementation of a digital wellness workshop supporting physical and psychological health and learning outcomes for university students. Although only consisting of small numbers of students ($n = 11$), Loos (2017) details a process whereby student affairs professionals are working to understand where and how social and educational technologies can be used in beneficial ways. This perspective is supported in the literature (e.g., Ahlquist, 2016; Junco, 2014) and can be attributed to the relationship between social media use and academic and psychosocial outcomes. Henry's (2012) research identified students who engaged in social ways using technology (e.g., Facebook) scored more positively on measures of psychosocial wellbeing compared with colleagues engaging in solitary technologies (e.g., individual online gaming). DeAndrea, Ellison, LaRose, Steinfield, and Fiore, (2012), used a social media site to support first year students ($n= 265$) transition into university. Their goal was to "increase connections among incoming college students with the goal of augmenting their feelings of connectedness to the university, increasing perceptions of preparedness and efficacy regarding their future success at college, and providing a peer-driven forum for students to ask and answer questions" (p. 15). Findings confirmed the site provided peer-to-peer support and information exchange, enabling prospective students' opportunities to network with other students, staff and informational resources prior to their time at university. Junco (2014) contends that findings such as these demonstrate how educational social media is positively related with student engagement, involvement in academic and recreational activities and student transitions into university life.



International Journal of Innovation, Creativity and Change. www.ijicc.net
Volume 3, Issue 3, Special Edition: Mental Health, December, 2017

The extent to which mental health and antisocial behaviour mediated by cyber bullying are features of modern day higher education student experience is gaining attention in the research. Due to the large percentage of learners utilising current technological affordances our findings suggest that universities are well placed to implement interventions to support students' positive educational and social media experiences. Perhaps the larger question this literature review raises, is one of direction. The challenge for universities is to consider the purposeful integration of such technologies in supporting and enabling students' mental health and wellness. As this is an emerging space and "little has been done to assess how official institutional social media use impacts student engagement, wellbeing, social and academic integration and academic success" (Junco, 2014, p. 208), the authors' intention is to research the effective integration of educational social media technologies promoting cyber safety and digital wellness to promote mental health and wellness of students in higher education. The purpose of this research is to build the capacity of teaching academics to better design, develop and lead-manage inclusive and sustainable online teaching and learning environments conducive to students' digital identity, mental health and wellness.



References

- Adams, F.D., & Lawrence, G.J. (2011). Bullying victims: The effects last into college. *American Secondary Education, 40*(1), 4-13.
- Ahlquist, J. (2016). The digital identity of student affairs professionals. *New Directions for Student Services, 2016*(155), 29-46. doi:10.1002/ss.20181
- Andrews, A. (2016). ANZSSA Heads of Counselling Services Benchmarking Survey 2013 Summary Report. *Journal of the Australian & New Zealand Student Services Association, 47*. 96-104. <http://static1.1.sqspcdn.com/static/f/1209240/27017819/1462856580353/JANZSSA+April+2016+April+6.pdf?token=YEVd3gXg2FFjxbppAR7Ux0J8W4A%3D>
- Ariu, D., Bosco, F., Ferraris, V., Perri, P., Stirparo, P., & Vaciago, G. (2014). Security of the Digital Natives. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2442037
- Australian Bureau of Statistics. (2007). *National Survey of Mental Health and Wellbeing: Summary of results* (No. 4326.0) [Online]
[http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/6AE6DA447F985FC2CA2574EA00122BD6/\\$File/43260_2007.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/6AE6DA447F985FC2CA2574EA00122BD6/$File/43260_2007.pdf)
- Australian Bureau of Statistics. (2008). *National Survey of Mental Health and Wellbeing: Summary of results* (No. 4326.0) [Online]. Available:
<http://www.abs.gov.au/ausstats/abs@.nsf/mf/4326.0>
- Australian Bureau of Statistics. (2013). *Hitting the books: characteristics of higher education students* (No: 4102.0) [Online]. Available: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features20July+2013>
- Baik, C., Larcombe, W., Brooker, A., Wyn, J., Allen, L., Brett, M., Field, R., & James, R. (2017). *Enhancing Student Mental Wellbeing: A Handbook for Academic Educators*. <http://melbourne-cshe.unimelb.edu.au/research/research-projects/experience/enhancing-student-wellbeing>
- Bokor, J. (2012). University of the future: A thousand year old industry on the cusp of profound change. Australia: Ernst & Young.
- Burgess, J. (2006). Blogging to learn, learning to blog. In A. Bruns & J. Jacobs (Eds.), *Uses of blogs*. New York: Peter Lang.
- Bussey, K., Fitzpatrick, S., & Raman, A. (2015). The role of moral disengagement and self-efficacy in cyberbullying. *Journal of School Violence, 14*(1), 30-46. doi:10.1080/15388220.2014.954045
- Calvert, S.L., & Wilson, B.J. (Eds.). (2008). *The Blackwell handbook of children, media, and development*. Boston, MA: Wiley-Blackwell.
- Calvete, E., Orue, I., Estévez, A., Villardón, L., & Padilla, P. (2010). Cyberbullying in adolescents: Modalities and aggressors' profile. *Computers in Human Behavior, 26*(5), 1128-1135. doi: 10.1016/j.chb.2010.03.017



- Campbell, M. A., Slee, P. T., Spears, B., Butler, D., & Kift, S. (2013). Do cyberbullies suffer too? cyberbullies' perceptions of the harm they cause to others and to their own mental health. *School Psychology International*, 34(6), 613-629. doi:10.1177/0143034313479698
- Carter, M.A, Kanakis, K, Van Luyn, A, M'Balla-Ndi, M., & AcArdie, J. (2015, 29-30 June). *Taking a stand in higher education: becoming informed about reducing cyber bullying*. Paper presented at the 3rd Australasian and New Zealand No2Bullying Conference, Gold Coast, Qld, Australia.
- Carter, M.A, Van Luyn, A, M'Balla-Ndi, M., & Kanakis, K. (2015, 15-16 October). *Becoming informed about reducing cyber bullying ... taking a stand in higher education: a pilot study*. Paper presented at the SAC 2015: Singapore Association for Counselling Symposium: evidence informed practice: towards a greater state of well-being, Singapore.
- Carter, M. A., Van Luyn, A., & M'Balla-Ndi, M. (2016). Using student videos in the prevention of cyberbullying in higher education settings. *Journal of Applied Youth Studies*, 1 (2). pp. 23-40.
- Carter, M.A, M'Balla-Ndi, M., Van Luyn, A, & Goldie, D. (2017). Taking a stand against cyberbullying in higher education. In O. Dreon & D. Polly (Eds.), *Teacher Education for Ethical Professional Practice in the 21st Century* (pp. 197-235). Hershey, PA, USA: IGI Global.
- Cassidy, S. (2016). The academic resilience scale (ARS-30): A new multidimensional construct measure. *Frontiers in Psychology*, 7. doi:10.3389/fpsyg.2016.01787
- Cassidy, W., Jackson, M., & Brown, K. N. (2009). Sticks and stones can break my bones, but how can pixels hurt me?: Students' experiences with cyber-bullying. *School Psychology International*, 30(4), 383-402. doi:10.1177/0143034309106948
- Chisholm, J.F. (2014). Review of the status of cyberbullying and cyberbullying prevention. *Journal of Information Systems Education*, 25(1), 77-87.
- Cleary, M., Walter, G., & Jackson, D. (2011). "Not Always Smooth Sailing": Mental Health Issues Associated with the Transition from High School to College. *Issues in Mental Health Nursing*, 32, 250-254.
- Cowie, H., & Colliety, P. (2010). Cyberbullying: Sanctions or sensitivity? *Pastoral Care in Education*, 28(4), 261-268. doi:10.1080/02643944.2010.528017
- DeAndrea, D. C., Ellison, N. B., Larose, R., Steinfield, C., & Fiore, A. (2012). Serious social media: On the use of social media for improving students' adjustment to college. *Internet and Higher Education*, 15(1), 15-23. doi:10.1016/j.iheduc.2011.05.009
- Dickerson, D. (2005). Cyberbullies on Campus. *University of Toledo Law Review*, 37(1), 52-74.
- Dryer, R., Henning, M. A., Tyson, G. A., & Shaw, R. (2016). Academic achievement performance of university students with disability: Exploring the influence of non-academic factors. *International Journal of Disability, Development and Education*, 63(4), 419-430. doi:10.1080/1034912X.2015.1130217



- Dudgeon, P. (2017, 30 June-1 July). *Aboriginal and Torres Strait Islander Mental Health. Implications for Universities*. PowerPoint presented at the Inaugural Australasian Mental Health and Higher Education Conference Townsville, Qld, Australia. Retrieved from https://www.jcu.edu.au/data/assets/pdf_file/0003/517710/Professor-Patricia-Dudgeon.pdf
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256-273. doi:10.1037/0033-295X.95.2.256
- Dweck, C., Walton, G., & Cohen, G. (2014). *Academic Tenacity: Mindsets and Skills that Promote Long-Term Learning*. Bill & Melinda Gates Foundation.
- Erford, B. (2007). *Assessment for Counselors*. Boston, MA: Houghton Mifflin Company
- Fernández, J.T. (2013). Professionalisation of teaching in universities: Implications from a training perspective. *Universities and Knowledge Society Journal*, 10(1), 345-358.
- Faucher, C., Jackson, M., & Cassidy, W. (2014). Cyberbullying among university students: Gendered experiences, impacts, and perspectives. *Education Research International*, 2014, 1-10. doi: 10.1155/2014/698545
- Forbes-Mewett, H., & Nyland, C. (2008). Cultural diversity, relocation and the security of international students at an internationalized university. *Journal of Studies in International Education*, 12, 181-203.
- Gallardo Echenique, E., Marqués Molías, L., & Bullen, M. (2015). Students in higher education: Social and academic uses of digital technology. *International Journal of Educational Technology in Higher Education*, 12(1), 25-37. doi:10.7238/rusc.v12i1.2078
- Gkioulos, V., Wangen, G., Katsikas, S. K., Kavallieratos, G., & Kotzanikolaou, P. (2017). Security Awareness of the Digital Natives. *Information*, 8(2), 42.
- Henry, S. K. (2012). On social connection in university life. *About Campus*, 16(6), 18-24. doi:10.1002/abc.20083
- Hinduja, S., & Patchin, J. W. (2012). *School climate 2.0: Preventing cyberbullying and sexting one classroom at a time*. Thousand Oaks, Calif: Corwin.
- Hinduja, S., & Patchin, J. W. (2013). Social influences on cyberbullying behaviors among middle and high school students. *Journal of Youth and Adolescence*, 42(5), 711-722. doi:10.1007/s10964-012-9902-4
- Hinduja, S., & Patchin, J. W. (2010). Bullying, cyberbullying, and suicide. *Archives of Suicide Research*, 14(3), 206-221. doi:10.1080/13811118.2010.494133
- Hinduja, S., & Patchin, J. W. (2009). *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*. Thousand Oaks, Calif: Corwin Press.
- Hrastinski, S., Aghaee, N. M., Skolan för datavetenskap och kommunikation (CSC), KTH, & Medieteknik och interaktionsdesign, M. (2012). How are campus students using social media to support their studies? an explorative interview study. *Education and Information Technologies*, 17(4), 451-464. doi:10.1007/s10639-011-9169-5



- Hussain, R., Guppy, M., Robertson, S., & Temple, E. (2013). Physical and mental health perspectives of first year undergraduate rural university students. *BMC Public Health*, 13(1), 848. doi:10.1186/1471-2458-13-848 Internet Live Stats. (2015). Internet Live Stats. 2015, from <http://www.Internetlivestats.com>
- Jones, C., & Healing, G. (2010). Net generation students: Agency and choice and the new technologies. *Journal of Computer Assisted Learning*, 26(5), 344-356. doi:10.1111/j.1365-2729.2010.00370.x
- Junco, R. (2014). *Engaging students through social media: Evidence based practices for use in student affairs* (1st ed.). San Francisco, CA: Jossey-Bass.
- Kaplan, A.M., & Haenlein, M. (2010), Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59-68.
- Katz, A. (2012). *Cyberbullying and E-safety: What Educators and Other Professionals Need to Know*. London: Jessica Kingsley Publishers.
- Kennedy, G., Judd, T., Dalgarno, B., & Waycott, J. (2010). Beyond natives and immigrants: Exploring types of net generation students. *Journal of Computer Assisted Learning*, 25(5), 332.
- Kennedy, G., Krause, K., Judd, T., Churchward, A., & Gray, K. (2006). *First year students' experiences with technology: Are they really digital natives?* Melbourne, Australia: University of Melbourne. Retrieved September 1, 2017, from http://www.bmu.unimelb.edu.au/research/munatives/natives_report2006.rtf
- Kennedy, G., Dalgarno, B., Bennett, S., Gray, K., Waycott, J., Judd, T., Bishop, A., Maton, K., Krause, K., & Chang, R. (2009). *Educating the Net Generation - A Handbook of Findings for Practice and Policy*. Strawberry Hills: Australian Learning and Teaching Council. Retrieved September 1, 2017, from http://www.altc.edu.au/system/files/resources/CG6-25_Melbourne_Kennedy_Handbook_July09.pdf
- Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Üstün, T. B. (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry*, 20(4), 359-364. doi:10.1097/YCO.0b013e32816ebc8c
- Khawaja, N. G., & Dempsey, J. (2007). Psychological distress in international university students: An Australian study. *Australian Journal of Guidance and Counselling*, 17(1), 13-27.
- Kirkwood, A., & Price, L. (2005). Learners and learning in the twenty-first century: What do we know about students' attitudes towards and experiences of information and communication technologies that will help us design courses? *Studies in Higher Education*, 30(3), 257-274. doi:10.1080/03075070500095689
- Kirsh, B., Friedland, J., Cho, S., Gopalsuntharanathan, N., Orfus, S., Salkovitch, M., Snider, K., Webber, C. (2014). Experiences of university students living with mental health problems: Interrelations between the self, the social, and the school. *Work-a Journal of Prevention Assessment & Rehabilitation*, 53(2), 325-335. doi:10.3233/WOR-152153



- Klopfer, E., & Squire, K. (2008). Environmental Detectives—The development of an augmented reality platform for environmental simulations. *Educational Technology Research and Development*, 56(2), 203-228. doi:10.1007/s11423-007-9037-6
- KPMG (2015). Department of Education and Training Evaluation of Disability Support program: Final Report. https://docs.education.gov.au/system/files/doc/other/dsp_evaluation_report_final_june_2015.pdf
- Knowlden, A. P., & Sharma, M. (2014). Health belief structural equation model predicting sleep behavior of employed college students. *Family & Community Health*, 37, 271-278.
- Kowalski, R., & Limber, S. (2007). Electronic bullying among middle school students. *The Journal of Adolescent Health*, 41(6), pp.822-30.
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin*, 140(4), 1073.
- Kruisselbrink Flatt, A. (2013). A Suffering Generation: Six factors contributing to the mental health crisis in North American higher education. *College Quarterly*, 16.
- LaBrie, J. W., Huchting, K., Pedersen, E. R., Hummer, J. F., Shelesky, K. & Tawalbeh, S. (2007). Female college drinking and the social learning theory: An examination of the developmental transition period from high school to college. *Journal of College Student Development*, 48(3), 344-356. doi:10.1353/csd.2007.0026
- Landstedt, E., Persson, S., Avdelningen för hälsovetenskap, Fakulteten för humanvetenskap, & Mittuniversitetet. (2014). Bullying, cyberbullying, and mental health in young people. *Scandinavian Journal of Public Health*, 42(4), 393-399. doi:10.1177/1403494814525004
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Pub. Co.
- Lipson, S., Speer, N., Brunwasser, S., Hahn, E., & Eisenberg, D. (2014). Gatekeeper training and access to mental health care at universities and colleges. *Journal of Adolescent Health*, 55(5), 612-619. doi:10.1016/j.jadohealth.2014.05.009
- Livingstone, S., & Brake, D. R. (2010). On the rapid rise of social networking sites: New findings and policy implications. *Children & Society*, 24, 75–83. doi:10.1111/j.1099-0860.2009.00243.x
- Loos, A. T. (2017). The role of librarians in promoting digital wellness: A case study. *Public Services Quarterly*, 13(1), 32-40. doi:10.1080/15228959.2016.1268943
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). Research on resilience: Response to commentaries. *Child Development*, 71(3), 573-575. doi:10.1111/1467-8624.00168
- MacDonald, C.D., & Roberts-Pittman, B. (2010). Cyberbullying among college students: Prevalence and demographic difference. *Procedia – Social and Behavioral Science*, 9, 2003-2009.
- Mansouri, Z., & Mrabet, Y. (2013). Moroccan university students' online reputation management. *International Journal of Education & Literacy Studies*, 1(1), 47-54.



- Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? university students' use of digital technologies. *Computers & Education*, 56(2), 429-440. doi:10.1016/j.compedu.2010.09.004
- Martin, A. J. (2013). Academic buoyancy and academic resilience: Exploring 'everyday' and 'classic' resilience in the face of academic adversity. *School Psychology International*, 34(5), 488-500. doi:10.1177/0143034312472759
- Martin, A. J., & Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools*, 43(3), 267-281. doi:10.1002/pits.20149
- McLafferty, M., Mallet, J., & McCauley, V. (2012). Coping at university: the role of resilience, emotional intelligence, age and gender. *Journal of Quantitative Psychological research*, 1, 1-6
- Menesini, E., Nocentini, A., & Calussi, P. (2011). The measurement of cyberbullying: Dimensional structure and relative item severity and discrimination. *Cyberpsychology, Behavior, and Social Networking*, 14(5), 267-274. doi:10.1089/cyber.2010.0002
- Minor, M.A., Smith, G.S., & Brashen, H. (2013). Cyberbullying in Higher Education. *Journal of Educational Research and Practice*, 3(1), 15-29.
- Mishra, P., & Koehler, M. (2009). Too cool for school? no way! using the TPACK framework: You can have your hot tools and teach with them, too. *Learning & Leading with Technology*, 36(7), 14.
- Mueller, C. M., & Dweck, C. S. (1998). Praise for intelligence can undermine children's motivation and performance. *Journal of Personality and Social Psychology*, 75(1), 33-52. doi:10.1037/0022-3514.75.1.33
- Mulder, A.M., & Cashin, A. (2015). Health and wellbeing in students with very high psychological distress from a regional Australian university. *Advances in Mental Health*, 13, 72-83.
- Myers, C., & Cowie, H. (2013). University students' views on bullying from the perspective of different participant roles. *Pastoral Care in Education*, 31(3), 251-267. doi:10.1080/02643944.2013.811696
- NUS Student Experience Report. (2008). https://www.nus.org.uk/PageFiles/4017/NUS_StudentExperienceReport.pdf (accessed September 2017).
- Niederhauser, D. S., Reynolds, R. E., Salmen, D. J., & Skolmoski, P. (2000). The influence of cognitive load on learning from hypertext. *Journal of Educational Computing Research*, 23(1), 237 – 255.
- Nielsen. (2010). Social Media Dominates Asia Pacific Internet Usage. from <http://www.nielsen.com/us/en/insights/news/2010/social-media-dominates-asia-pacific-Internet-usage.html>
- Orygen (2017). Under the radar. The mental health of Australian university students. Melbourne, Victoria: The National Centre of Excellence in Youth Mental Health



- Ozdamli, F., Hursen, C. & Ercag, E. (2011). Is bullying changing shape?. *Procedia – Social and Behavioral Sciences*, 30, 2510-14. doi:10.1016/j.sbspro.2011.10.490
- Palmer, S. & Puri, A. (2006). *Coping with stress at University: A survival guide*. London: Sage.
- Patchin, J. W., & Hinduja, S. (2010). Cyberbullying and Self-Esteem. *Journal of School Health*, 80(12), 614-621. doi:10.1111/j.1746-1561.2010.00548.x
- Patchin, J.W., & Hinduja, S. (2012). *Cyberbullying Prevention and Response: Expert perspectives*. New York: Routledge. ISBN: 0415892376.
- Pelletier, R. (2009). Cyberbullying - the next wave? Implications for insurers. *Journal - Australian and New Zealand Institute of Insurance and Finance*, 32(3), 16.
- Pinnegar, S., & Rice, M. F. (2015). *Exploring pedagogies for diverse learners online*. Bingley: Emerald Group Publishing Limited.
- Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, 9(5), 1-6. doi:10.1108/10748120110424816
- Queensland Government. (2014). Who uses Facebook?, from <https://http://www.business.qld.gov.au/business/running/marketing/online-marketing/using-facebook-to-market-your-business/who-uses-facebook>
- Riley, J.R, & Masten, A.S. (2005). Resilience in context. In R. D. Peters, B. Leadbeater & R. McMahon (Eds.), *Resilience in Children, Families, and Communities: Linking context to practice and policy* (pp. 13-25). New York: Springer US.
- Rose, C. A., Nickerson, A. B., & Stormont, M. (2015). Advancing bullying research from a social-ecological lens: An introduction to the special issue. *School Psychology Review*, 44(4), 339.
- Rospenda, K., Richman, J., Wolff, J., & Burke, L. (2013). Bullying victimization among college students: Negative consequences for alcohol use. *Journal of Addictive Diseases*, 32(4), 325-342. doi:10.1080/10550887.2013.849971
- Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior*, 15(2), 112-120. doi:10.1016/j.avb.2009.08.007
- Schenk, A. M., & Fremouw, W. J. (2012). Prevalence, psychological impact, and coping of cyberbully victims among college students. *Journal of School Violence*, 11(1), 21-37. doi:10.1080/15388220.2011.630310
- Selwyn, N. (2008). An investigation of differences in undergraduates' academic use of the internet. *Active Learning in Higher Education*, 9(1), 11-22. doi:10.1177/1469787407086744
- Selwyn, N. (2009). Faceworking: Exploring students' education-related use of Facebook. *Learning, Media and Technology*, 34(2), 157-174. doi:10.1080/17439880902923622
- Sensis. (2015). Sensis Social Media Report May 2015: How Australian people and businesses are using social media.



- Smith, P.K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4), 376-385. doi: 10.1111/j.1469-7610.2007.01846.x
- Smith, J. A., & Yoon, J. (2013). Cyberbullying Presence, Extent, & Forms in a Midwestern Post-secondary Institution. *Information Systems Education Journal*, 11(3), 52-78.
- Storrie K, Ahern K, Tuckett A. (2010). A systematic review: Students with mental health problems, a growing problem. *International Journal Nursing Practice*, 16(1). 1-6.
- Swearer, S. M., & Hymel, S. (2015). Understanding the psychology of bullying: Moving toward social-ecological diathesis-stress model. *The American Psychologist*, 70(4), 344.
- Szeto, E., Cheng, A. Y., & Hong, J. (2016). Learning with social media: How do preservice teachers integrate YouTube and social media in teaching? *The Asia-Pacific Education Researcher*, 25(1), 35-44. doi:10.1007/s40299-015-0230-9Link
- Thompson, P. (2013). The digital natives as learners: Technology use patterns and approaches to learning. *Computers and Education*, 65, 12-33. doi:10.1016/j.compedu.2012.12.022
- Tokunaga, R. (2010). Following you home from school: A critical review and synthesis of research on cyber bullying, victimization. *Computers in Human Behaviour*, 26(3). 277-287.
- Townsend, N., Powers, J., & Loxton, D. (2017). Bullying among 18 to 23-year-old women in 2013. *Australian and New Zealand Journal of Public Health*, 41(4), 394-398. doi:10.1111/1753-6405.12671
- Turan, N., Polat, O., Karapirli, M., Uysal, C., & Turan, S. G. (2011). The new violence type of the era: Cyber bullying among university students. *Neurology, Psychiatry and Brain Research*, 17(1), 21-26. doi:10.1016/j.npbr.2011.02.005
- Veness, B. (2016). *The Wicked Problem of University Student Mental Health*. Report to the Winston Churchill Memorial Trust January 2016, Sydney, Australia https://www.churchilltrust.com.au/media/fellows/Veness_B_2013_The_wicked_problem_of_university_student_mental_health.pdf
- Veness, B (2017, 30 June – 1 July). *The Wicked Problem of University Student Mental Health*. PowerPoint presented at the Inaugural Australasian Mental Health and Higher Education Conference Townsville, Qld, Australia. Retrieved from https://www.jcu.edu.au/data/assets/pdf_file/0007/517633/Dr-Ben-Veness.pdf
- Voogt, J. M., Knezek, G., Cox, M., Knezek, D., & Brummelhuis, t., A.C.A. (2013). Under which conditions does ICT have a positive effect on teaching and learning? A call to action. *Journal of Computer Assisted Learning*, 29(1), 4-14. doi:10.1111/j.1365-2729.2011.00453.x
- Young-Jones, A., Fursa, S., Byrket, J., & Sly, J. (2015). Bullying affects more than feelings: The long-term implications of victimization on academic motivation in higher education. *Social Psychology of Education*, 18(1), 185-200. doi:10.1007/s11218-014-9287-1



- Walter, M. (2017). 'Going it alone' add to tertiary students' high mental health risk. Retrieved from The Conversation website: <https://theconversation.com/going-it-alone-adds-to-tertiary-students-high-mental-health-risk-41362>
- Wang, Q., Woo, H. L., Quek, C. L., Yang, Y., & Liu, M. (2012). Using the Facebook group as a learning management system: An exploratory study. *British Journal of Educational Technology*, 43(3), 428-438. doi:10.1111/j.1467-8535.2011.01195.x
- Wankel, L. A., & Wankel, C. (2012). *Misbehavior online in higher education*. Bingley: Emerald Group Publishing Limited.
- Westera, W. (2015). Reframing the role of educational media technologies. *Quarterly Review of Distance Education*, 16(2), 19.
- Whittaker, E., & Kowalski, R. M. (2015). Cyberbullying via social media. *Journal of School Violence*, 14(1), 11-29. doi:10.1080/15388220.2014.949377
- Willard, N. 2007, *An Educator's Guide to Cyberbullying and Cyberthreats*, retrieved from <https://education.ohio.gov/getattachment/Topics/Other-Resources/School-Safety/Safe-and-Supportive-Learning/Anti-Harassment-Intimidation-and-Bullying-Resource/Educator-s-Guide-Cyber-Safety.pdf.aspx>.
- Woodley, C., & Silvestri, M. (2014). The Internet is forever: student indiscretions reveal the need for effective social media policies in academia. *American Journal of Distance Education*, 28(2), 126-138. doi: 10.1080/08923647.2014.896587
- Woo Kyeong, L. (2013). Self-compassion as a moderator of the relationship between academic burn-out and psychological health in Korean cyber university students. *Personality and Individual Differences*, 54(8), 899-902. doi:10.1016/j.paid.2013.01.001
- Woods, D. (2014). Digital Literacy Resources. *The School Librarian*, 62(4), 211.
- World Health Organisation (2014). *Mental Health: A state of well-being*. http://www.who.int/features/factfiles/mental_health/en/ retrieved 12 September 2017
- Zalaquett, C., & Chatters, S. J. (2014). Cyberbullying in college. Frequency, characteristics, and practical implications. *SAGE Open* 4(1). doi: 10.1177/2158244014526721
- Zhang, A. T., Land, L. P. W., & Dick, G. (2010). Key influences of cyberbullying for university students. Paper presented at the PACIS 2010. Paper 83.



ⁱ Author Affiliation

Margaret Anne Carter

James Cook University Division of Tropical Environments and Societies
College of Arts, Society and Education

E: margaret.carter@jcu.edu.au

P: +61 419 035 181

ORCID - orcid.org/0000-0002-0145-9804

Donna Goldie

James Cook University Division of Tropical Environments and Societies
College of Arts, Society and Education

E: donna.goldie@jcu.edu.au

P: +617 4781 6096

ORCID - orcid.org/0000-0002-6258-8239

Correspondence to:

Margaret Anne Carter

James Cook University Division of Tropical Environments and Societies

E: margaret.carter@jcu.edu.au

P: +61 419 035 181