Article

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INTRODUCTION: SOCIAL MEDIA AND HIGHER EDUCATION

Social media has been a growing phenomenon since the early 2000s, and is now ubiquitous in everyday life, for personal communication (such as photo-sharing, managing events, requesting and offering feedback/review) and for business and government organisations (direct marketing and communication) (Skold & Feldman, 2014). In academia, such affordances allow researchers access to potential participants, as well as audiences, at a level previously unthought of. However, just because we can use social media, should this always be our first option? This article argues that we are academics first, and must be scrupulous in our critique of both the efficacies and the pitfalls of over-reliance on online communities.

Social media certainly offers tremendous advantages. As an example of user reach, Facebook – the world's largest 'active' social media platform – had 2.910 billion monthly active users in October 2021, and increased by roughly 15 million (+0.5 percent) in the three months leading up to October 2021. These latest figures indicate that roughly 36.8 percent of all the people on Earth use Facebook today (Datareportal, February 2022). While the Social Media Research Group (2016) notes that there are many definitions of what social media is and is not, it offers the simple definition of social media as "web-based platforms that enable and facilitate users to generate and share content, allowing subsequent online interactions with other users."

Social media applications can be grouped into distinct categories such as blogs (which includes Twitter), content communities (such as YouTube and Flickr), social networking sites (for example Facebook, WhatsApp, WeChat and LinkedIn), collaborative projects (wikis and social bookmarking, like Instagram, Pinterest and TikTok) and virtual game and social worlds (Skold & Feldman, 2014).

The use of social media as a communication tool by higher education providers is therefore no anomaly, but rather a logical extension of such digital affordances. Faculties and cohort groups may have Facebook pages, as do many alumni associations. Lecturers and administrators use messaging, tweets and posts to communicate with students, marketing and event coordinators create stories to build an Instagram following – and so it goes (Fraser et al., 2017).

Interestingly, and directly applicable to the subject matter of this article, is a growing body of scholarship which questions and critiques the assumption that the affordances of social media improve faculty–student relationships. Forbes and Gedera (2019), for example, discuss the "potential divide between teachers' intentions and students' experiences, and between teachers' and students' expectations of learning and support" (p. 2). The same authors also observed an additional issue in online communication regarding 'voice,' where students said that they preferred free-flowing, spontaneous vernacular language, but teaching staff and learning facilitators often preferred to model academic discourse, with specialist terminology, and crafted composition. A third field of inquiry related to the use of social media in higher education relates to non-verbal language, such as digital

pictograms, or emojis. A previous study by one of the authors of this paper (Crombie, 2020) revisited some of Evans's (2017) conclusions about 'text-speak' as a way to incorporate non-verbal cues in online communications. It turned out that assumptions, variable user fluency, evolving usage and layers of meaning led to considerable ambiguity. Yet despite such precautions raised by a handful of commentators, conversing and connecting in teaching and learning support via social media is clearly here to stay.

USING SOCIAL MEDIA IN RESEARCH

Academic researchers – staff and students – have also turned to online social media platforms to facilitate participant recruitment and data gathering through surveys and conversations, making use of the extensive range of platforms available. While there was initial doubt cast on the validity of social media data harvested (in the main) by social science researchers – the 'pointless babble' and self-centred messaging loosely associated with issues of public or governmental importance – the various platforms are now perceived to provide promising sources for understanding social and cultural discourses (Shah et al., 2015, as cited in Chen et al., 2021; van Dijck, 2013). Learning and language support staff may themselves draw on social media when evaluating use of their services or resources. It is also increasingly likely that the role of advising others will lead to encounters with digital methodologies – even more so as the impact of the COVID-19 pandemic reinforces the trend to work and study from home (Kara et al., 2020).

Social media research tools can be used in a variety of ways to gather publicly available web data. Audience intelligence company Pulsar Platform (n.d.) lists a variety of options for online research tools. For example, Twitter, Instagram and Facebook analytics offer the opportunity to search keywords, over specific time periods and locations, with YouTube providing a variety of metrics designed to provide information on viewer watch times and traffic. Each of these platforms includes both textual and photographic data, the latter offering a direct and globally understood 'language' which transcends the spoken word. Further, this dynamic 'in-the-moment' view leaves the observer pondering what has gone before and after the image capture; and, crucially, the question of *why* this particular image has been posted, presenting opportunities for observation by the researcher (Chen et al., 2021).

Understanding social trends around specific topics can be achieved through manual 'desktop research' of forums, providing insight into interest around themes and topics (Kara et al., 2020). Online reviews, such as those used in the travel advice forum Tripadvisor, list material which can be themed by researchers; or, because they are often rated against traveller experiences, can provide quantitative data for analysis. Blogs and news platforms provide opinions, with Google Trends providing a free service to track volumes of user searches over time. A plethora of online marketing businesses such as Pulsar offer bespoke tools to aggregate analytics from social media channels, allowing the comparison of data, metrics and trends from competitor accounts. While these are tools used mainly for marketing insights, academic researchers can use the data to discuss research trends and interests within their area of discipline or research enquiry (Moreno et al., 2013).

Advocates of the potential of social media as a way of understanding our social milieu (for example, Beninger et al., 2014; Social Media Research Group, 2016) cite additional benefits such as:

- Offers access to a population with a particular shared interest
- May offer insights into the nature and topics of their conversation, concerns or interactions in a more 'natural' setting than results from traditional online research methods (for example, online surveys, online interviewing or focus groups)
- Offers access to a population not limited by traditional geographic boundaries
- Can provide contemporary, subjective perspectives or experiences
- Time and cost-efficient: allows interaction without the need to meet in person.

Accompanying these many advantages of using social media in academic research, there are also obstacles, challenges and risks (Kara et al., 2020). One ongoing concern for a tertiary institute's research office is ensuring that researchers always represent the institution in a professional, ethical manner. Adhering to a rigorous research process to facilitate this is key to ensuring that both student and staff researchers, participants and the institution are safe. Ensuring that online data cannot be connected to an individual, establishing that there are no issues of intellectual property, commercial sensitivity or competitive advantage that will be transgressed by your analysis, and dissemination of collated material are essential (da Mota & Pickering, 2020). Further challenges noted in the literature (Hennell et al., 2019; Ruths & Jurgen, 2014; Social Media Research Group, 2016) include:

- A Western, Eurocentric worldview predominates which cannot be extrapolated as representative of a wider population;
- Credibility – likely to contain bias and contributions weighted more to one side of an argument than the other (The 'me too' momentum);
- Veracity – participants have little accountability, can hide behind false online identities; and
- Potential for unsubstantiated vilification or adulation of individuals, organisations, products and services (hidden political, economic and social agendas).

SOME EXAMPLES OF SOCIAL MEDIA USE IN RESEARCH

It is likely that most colleagues tasked with supporting staff and students in writing research proposals and, eventually, reports and academic papers, will find that a significant proportion of topics are drawn from the domain of applied research: the application of theory to practice to solve or investigate some aspect of everyday life (Townsend & Wallace, 2016). The following are examples of research projects proposed by Master's students at the authors' institute in 2021 that drew on social media platforms to do just that. It should be noted that this year saw a surge in the use of social media as a key research tool, given that COVID-related controls meant site visits, interviews and focus groups were often off-the-table.

- *Exploring customer service quality perceptions of New Zealand's telecommunications firms*

This was an exploratory study which used content analysis to analyse user-generated content posted from review platforms such as Trustpilot.com and other social media review platforms utilised by Vodafone, Spark and 2degrees (all Aotearoa New Zealand telecommunications providers) such as Facebook. The student analysed 1,000 reviews from 2018–2020 using R Studio and Leximancer software to determine consumer satisfaction and dissatisfaction influences.

- *Factors influencing customer satisfaction of Air New Zealand*

This study used secondary data publicly available online from airlineratings.com, airlinequality.com and tripadvisor. co.nz. and analysed customers' comments and reviews. The sample included about 1,500 entries related to inflight products and safety in order to identify the factors that contributed to high levels of customer satisfaction. This student used Excel spreadsheets to collate and sort data for subsequent thematic coding and analysis.

- *Exploring job satisfaction among accounting employees in New Zealand*

Similar to the above projects, this research collected 4,000 online reviews from previous and current accounting employees in Aotearoa New Zealand, submitted to the Glassdoor website.

- *Perceptions of New Zealand by users of Tourism New Zealand's (@purenewzealand) Instagram page*

Instagram posts generate a high number of users' responses (comments and likes) and have been found to affect viewers' perceptions of tourist destinations, as well as their travel intentions and discretionary spending. This project focused on marketing and branding, "to better understand and enhance interactive features of the Instagram application."

Other projects looked at customer reviews of hospitality services, such as accommodation providers and restaurants, responses to YouTube video clips of manuals and company promotions, and employee turnover and leaving intentions in specified industry sectors, among other topics.

KEY ISSUES FOR RESEARCHERS, AND TEACHERS OF RESEARCH, TO BEAR IN MIND

Once the above pros and cons have been assessed against the planned research project, there are a number of procedural issues for researchers to consider when writing their proposal.

1. Familiarity

There is an old adage that familiarity breeds contempt. Certainly, many of us, and especially our digital youth, have been socialising in virtual environments for the last decade and more, and can tend to use these media almost unconsciously – and too often, uncritically and unquestioningly. It can be temptingly easy to leverage membership of the various 'rooms,' pages, message boards and other platforms that social media offers, to recruit participants, launch surveys or download data and discussion excerpts. The practical and ethical concerns about these sources, however, need to be considered as carefully as with any other data collection instruments (Townsend & Wallace, 2016). Researchers – both staff and students – must therefore be prompted to consider the fundamental issues of representation, credibility, validity and responsibility to stakeholders as part of their research and ethics proposal.

2. Legislation

In addition to the abovementioned tenets of good research practice (likely outlined in an institute's own research ethics policy documents), there are a number of agencies and rulings (New Zealand Ministry of Justice, 2020) which social media researchers will need to adhere to:

- The Harmful Digital Communications Act 2015 outlines and explains processes to address harassment or bullying through texts, emails, websites, apps or social media posts.

- NetSafe is the government agency charged with internet safety and control of objectionable or harmful material posted online (Netsafe, 2021).

- The Privacy Act 2020 (replaces the Privacy Act 1993) promotes and protects individual privacy by providing a framework to protect an individual's right to privacy of personal information; and recognising international standards, including the OECD Guidelines and the International Covenant on Civil and Political Rights. It promotes early intervention and risk management by agencies (the name used for any organisation or person that handles personal information) and enhances the role of the privacy commissioner.

- The Unsolicited Electronic Messages Act 2007, also known as the anti-spam law, makes it illegal to send spam with an Aotearoa New Zealand link and use software to send unsolicited electronic messages – for example, emails and text messages. This Act promotes a safer and more secure environment for use of personal information, prohibits address-harvesting software and deters inappropriate use of communication technologies.

Researchers using social media are generally accessing publicly available sites and downloading, rather than creating or uploading new material. However, the above legislation needs to be kept in mind when the researcher is filtering sizeable dumps of data, such as the reviews identified in the examples above. The internet is largely unregulated, and researchers need to ensure that their data is 'cleansed' of objectionable material and inappropriate 'outlier' comments which might not only skew results, but potentially perpetuate the offence. There are also occasions when the researcher has access through a particular membership to online content which is closed to the public. In this case, attention to the requirements of the Privacy Act, and the general ethics of good practice in social science research discussed below, come into play (Townsend & Wallace, 2016).

3. Surveys

With the correct protocols in place, social medial platforms offer a useful avenue to share survey information and links. This can be a faster way of collecting data from respondents compared to more traditional face-to-face and paper-and-pencil methods; has minimal, if any, costs; may offer automation in data input and increase response rates; and can provide flexibility of design for the survey type/format (Sincero, 2012). But with sharing online comes the issue of who the survey will be shared to and how widely it may be shared in order to reflect a diverse participant group; and in the absence of the physical interviewer, rich data may not be as easily gathered.

Most social media platforms will not allow surveys to be shared unless through a private group or channel, which of course immediately reduces the reach. To override this limitation it is tempting for researchers to use the non-probability sampling technique of snowballing (Browne, 2005), whereby existing study subjects (in this case the researcher's social media 'friends') recruit future subjects from among their acquaintances. Naturally, any such sampling technique which relies on interpersonal relations and connections between people will necessarily include and exclude individuals, with implications which may or may not have a bearing on the conclusions which can be drawn (Browne, 2005).

Central to any successful research project involving human participants is the quality of the relationship between the researcher(s) and their participants (Kara et al., 2020). Online research using social media channels can remove the personal aspect of face-to-face or telephone interviews, so when choosing to use social media in research, alternative steps must be taken to ensure an informed decision to contribute has been made by participants. Sharing surveys online, for example, can diffuse the immediacy of the connection between participant and researcher (Lee, 2017) and also promote a lack of trust from the perspective of the participant, who may become unsure for whom they are answering questions. In her paper on the ethical pros and cons of using 'friends' in a study recruiting participants via a social media platform, Lee (2017) suggests that with this uncertainty participant engagement could likely be affected, or even terminated. This concern is highly relevant to some of our international student researchers who may be unfamiliar with local organisations and have few established networks. The default then becomes their fellow international students, who may not have the breadth of experience or perspectives being sought. This, therefore, becomes an issue that staff supporting the development and drafting of a proposal are well-placed to raise, and perhaps suggest mitigation strategies.

4. Recruitment

As researchers increasingly turn to using social media to both retrieve available data and recruit participants, there is an ongoing need to keep pace with the ethical implications of both the institution's research expectations and the social media channel utilised (Bode et al., 2020). In Bode et al.'s discussion of study designs in social science research using social media, the authors clearly outline potential areas of compromised data:

> there are restrictions … in various institutions on what type of social media can be accessed. Thus, the data that are available from social media are more akin to a sample of the data than representing the full potential of the data. This sample … may contain a bias with regard to the type of information available for the researcher to make inferences to the population to which they would like to generalise. (p. 17)

With this in mind, the collection of additional data through means *other than* social media channels may need to be carried out to address potential biases. There may be challenges around validity and reliability when using social media as a research tool (see the earlier point about snowball sampling); careful research design, clear research aims and an appropriate selection of analytical tools must therefore override simple expediency.

5. Public or private?

Because social media sites may be both intimate and public (Lee, 2017), gaining participant consent and ensuring privacy and anonymity can be difficult. Social media users often unwittingly sign up to various platforms without reading the fine print, unaware that the act of creating a password and login implies consent. Academic researchers must be both aware and respectful of this. While it may be tempting to access 'big data' from public sites, simply 'lifting' detailed, personal information, opinions and other large sets of data must still be done ethically. Sites where you need to use a password, be registered or be a current member of an organisation are clearly 'private,' and data should not be used without permission – by the social media site owner and/or the individual(s) who provided it (Browne, 2005; Lee, 2017).

Experienced academic researchers are likely aware of the possible traps of using unconsented data, though novice researchers may not be. In general, if data can be accessed without site membership or registration, such data can be considered as public domain. If a social media platform is copyrighted, meaning the proprietors legally own the data, consent will be required to use this for research purposes – but this issue is often addressed in the 'small print' clauses that people agree to when they create a login to the site, including information about how membership might apply to an intended use of content (Golder et al., 2017).

6. Participant privacy and anonymity

Because the researcher and participant are distanced by the complexities of cyberspace, it is difficult to know whether social media users see online spaces as 'private' or 'public,' or whether these potential participants would be happy with their input being used for research purposes. Researchers using online data are not usually privy to this information, so that even when users have been happy for their comments to be identified by name and/or profile, it is good practice to keep individual identities private. When using social media for harvesting data, it is important to realise that the privacy setting controls available on many social networking platforms may in fact be affecting the data being retrieved. These settings allow users to limit who can access their profile and the information visitors can see, as well as limiting the option to engage with an 'outside source' such as a survey link (Di Minin et al., 2021). Any research which draws on private data requires explicit informed consent from the user, as well as the site owner; however, if the information is available on open profiles on the likes of Facebook, TripAdvisor and LinkedIn, it can be freely accessed and treated as any other open-source information found online (Skold & Feldman, 2014). Nonetheless, without informed consent, most commentators advocate strongly that individual contributions, especially as examples, cases and direct quotations, are anonymised and/or aggregated (Stevens et al., 2015).

Some take this position further, asking whether individuals who have posted messages to the internet can really be considered 'participants' in research; or rather, is the use of their comments more like the analysis of secondary data that already exists in the public domain? (Hennell et al., 2019). There are academic arguments in the literature to support each interpretation, but many professional authorities and universities require ethical approval – which will usually include evidence of informed consent.

7. Participant consent

The precept of informed consent requires that individuals have explicitly agreed to be participants in a research project and understand its purpose and scope, including their right to withdraw (Hennell et al., 2019). This also contributes to establishing trust between the researcher and the participant, as the participant will understand what their involvement will be, what the research is about, where and how it will be used and who will benefit. For research involving large datasets, individual informed consent is not practical. Researchers must therefore ensure that data use is in line with the terms and conditions of the social media platform they are using to gather data and, again, ensure that the identity of users is protected (Social Media Research Group, 2016).

As with face-to-face research, good practice usually involves producing a participant information sheet, which can be signed and returned, or a separate consent form – rather than relying on oral communication and assumed understandings. To ensure integrity and transparency of purpose, official affiliations such as the researcher's institution's name, web link, email and contact details of a manager or supervisor should be included. Being explicit about security and privacy terms is expected, as is explaining how the potential participant's contact was obtained (for example, via a search of TripAdvisor or Facebook for public profiles), and what demographic filters were used. A final recommendation is to include assurance that participants will have access to the research findings once the project has concluded, as well as how this will be achieved (Hennell et al., 2019).

Once consent has been given through approved methods, the academic researcher may then collect data online through individual interviews, or group discussions in dedicated chat rooms, using video conferencing software (for example, Skype, Zoom). Survey links can be posted on the platform or sent to email addresses. Researchers can also use 'naturally occurring' or organic real-time data (textual, photographic and video).

Figure 1 summarises key directives arising from the above discussions related to the use of data sourced from social media for research.

Informed consent is necessary	• Because it is morally and legally required
	• To promote trust between the researcher and the participant
	• To quote a username alongside a post
	• If a post is not recent, to confirm that the user has not changed their opinion since
	• To publish photos/images
	• If the post is considered sensitive/personal
	• To confirm if the user intended to post publicly
	• For users to determine the quality and purpose of the research
	• For participants to interact with the researcher
Anonymity is needed	• If informed consent cannot be gained
	• To avoid harm – for example, judgment, ridicule, singling out
	• To preserve and/or protect an individual's professional reputation
Consent and anonymity are deemed unnecessary	• If the online platform carries a clearly visible statement that responsibility for shared content lies with the user – they can choose where, what and how privately to post
	• If the site owners have made it very clear how public posts are, and who can see them.

Figure 1. The obligation to observe informed consent and anonymity (Adapted from Benninger et al., 2014, p. 25).

CONCLUSION

Social media research – any form of research using data derived from social media sources – clearly contains both advantages and potential pitfalls for academic researchers. Against the pluses of easy access to large datasets, researcher-convenience and substantive savings in time and resources, academic researchers must acknowledge concerns related to bias, credibility, validity and representation. Further, most, if not all the standard ethical imperatives of traditional research involving human participants apply equally to online methodologies (Townsend

& Wallace, 2016). Often, novice researchers, especially our students, may only know of such requirements from class, and fail to see the connection with their own use of data when they have not gathered these firsthand. This is where learning and research support staff have an important role, raising questions, prompting critical reflection and facilitating strategies and solutions.

This paper has attempted to provide an overview of crucial areas of interest in preparing a robust academic research application, whether one's own or one belonging to others whose learning we support. Researchers will need to be academics first and members of online communities second, and guard against assumptions and complacency due to familiarity with various social media platforms, resisting beguilement by the ease with which data can be extracted. They must comply with legal requirements – the national legislative framework and the site owners' terms and conditions. Individual identities must be protected, and when the site is being used to recruit participants specifically for a new project, the full gamut of informed consent requirements must be enacted.

Social media use is growing, as is the number of hours people spend online and the different platforms they can choose from; the work-from-home reality for large numbers of our population which arrived with COVID-19 has only hastened this spread. Academia is not, nor should it be, isolated from our digital world. As educators, we prepare our learners for the workplace of tomorrow. Smart, critical and informed use of social media for academic research is just another skillset that falls within our aegis.

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