



A MURKY BUSINESS: THE ETHICS OF CONDUCTING EDUCATIONAL RESEARCH IN FACEBOOK GROUPS

Leigh-Anne Perryman, Tony Coughlan, The Open University, United Kingdom

Introduction

Facebook is undoubtedly the face of online social networking and remains ubiquitous. A 2011 study by Harvard University (2011) reported that 90% of four-year undergraduate college students had Facebook accounts at that time and of late there has been an upsurge in academic arguments for the more purposeful use of social media, especially Facebook, as an educational tool (Tess, 2013). Tess (2013), in his comprehensive literature review on the role of social media in higher education, asserts that ‘the ubiquity of social media is no more apparent than at the university where the technology is transforming the ways students communicate, collaborate, and learn’ but also points out that ‘empirical evidence ... has lagged in supporting the claim’.

Of the studies which do offer empirical evidence, several stand out. Tess (2013) lists many in his literature review, while Pander et al. (2014) offer a similarly valuable, more recent literature review that. Several notable studies are worth mentioning. For example, Meisher-Tal et al. (2012) provide a systematic account of the use of Facebook groups as LMS while O’Bannon et al. (2013) examine the effectiveness of using Facebook groups to increase pre-service teachers’ knowledge of core technology topics. Bruneel et al. (2013) look at the educational use of Facebook with a focus on privacy issues, de Villiers and Pretorius (2013) conduct an heuristic evaluation of collaborative learning in Facebook and the ways in which Facebook groups can foster relationships between formerly isolated distance learners, while Bosch (2009) compares student activity in Facebook groups with that in official institutional sites.

Several studies focus on the use of Facebook in particular educational disciplines. For example, Lieberman (2013) researches the use of Facebook as a learning environment by political studies students while Whittaker focuses on Facebook’s use to create an online learning community in an undergraduate science class. McCarthy (2010) steps beyond disciplinary boundaries to offer broader research into Facebook’s use with first year undergraduates as a tool for developing preliminary relationships between them and Donlan (2012) explores students’ views on the use of Facebook groups in university teaching and learning, with a focus on student autonomy and control. Wang et al.’s (2013) study has been particularly influential, concluding that Facebook use in educational contexts assists students

in achieving better grades, higher engagement, and greater satisfaction with the university learning experience.

This paper both builds and expands on the body of research looking at the use of Facebook in educational settings by taking as its focus the ethical challenges of researching within Facebook – a topic that receives little attention in other research studies, but which recently sparked a great media furore when scientists conducting a psychological experiment including approximately 700,000 Facebook users manipulated news feeds to examine the effects of positive and negative posts (see Broaddus, 2014). Indeed, some recent Facebook-related educational research, including some of the studies mentioned above, employ practices that may be deemed ethically questionable. We argue here that while Facebook groups appear to offer rich pickings for the researcher, especially in domains labelled as ‘public’ or ‘open’, which offer a tempting wealth of off-the-peg data in the form of members’ posts and interactions, a variety of ethical dilemmas confront the researcher who is prepared to interrogate their own practice, to consider the true nature of openness and privacy, and to critically engage with the impact of researching in a social media context. The demands of negotiating these challenges must, therefore, be weighed against the likely value of any research findings.

Background and methods

This paper is informed by our own reflexive research on the behaviour of formal and informal learners both in online forums and in Facebook groups. Since 2011 we have been working with online learner communities outside formal education when developing and piloting the ‘public open scholar’ role (Coughlan & Perryman, 2012), aiming to increase awareness of open educational resources (OER) and to disseminate information about the resource needs of people outside academia. The public open scholar role involves open academics working with online communities beyond formal education who might benefit from OER, identifying members’ expressed needs and then sourcing OER to meet those needs. As such, the role builds on Weller’s ‘digital scholar’ persona – ‘someone who employs digital, networked and open approaches to demonstrate specialism in a field’ (Weller, 2011, Chapter 1). We piloted the public open scholar role in 2011 within UK voluntary sector online welfare communities who were using online forums for information sharing and peer support (see Coughlan & Perryman, 2012) and in 2013 we took the public open scholar into Facebook (Perryman and Coughlan, 2013) to reach an international audience of autism-focused Facebook groups in India, Africa and Malaysia, with a combined membership of over 5000 people.

In 2014 we broadened our study of Facebook to include researching formal learners participating in 10 public Facebook groups about specific courses from our employer the UK Open University (OU), with a combined membership of approximately 3000. The bulk of these members are undergraduate students, but some groups also include alumni or prospective students interested in finding out about a particular course. We chose OU groups because we are familiar with our own institution’s organisation, structure and terminology.

Our research findings from this study of OU Facebook groups are yet to be reported in detail. However, our key conclusions are set to make a significant contribution to understanding the use of social media in the context of formal education. For example, our research showed that Facebook groups can be a valuable form of open practice, with university students making a big contribution to their education by self-organising Facebook groups. As such, this evidence has the potential to shift the focus of the open education movement from researching students as co-producers of objects to exploring the ways in which students co-develop educational processes. On the basis of our findings we recommend that universities could usefully review the role of VLE forums (e.g. Moodle) within undergraduate tuition strategies and consider the extent to which Facebook groups might sit comfortably alongside the remainder of the learning experience.

For this paper, however, we move from considering the educational practices of learners within Facebook to an examination of the practices of the researcher, and their ethical implications, asking the overall research question ‘what are the challenges of researching social network activity in an educational context?’. This is an under-researched and complex area, covering such questions as:

What ethical obligations do researchers have to protect the privacy of subjects engaging in activities in “public” Internet spaces? How is confidentiality or anonymity assured online? How is and should informed consent be obtained online? ... Is deception (pretending to be someone you are not, withholding identifiable information, etc) online a norm or a harm? (Buchanan & Zimmer, 2012)

Findings and implications

We have divided our discussion to cover ethical considerations arising in three phases of the research process: beforehand, during and afterwards. In interrogating the ethical challenges connected with researching in Facebook we began by consulting The Open University’s research ethics policies (Open University, 2006) in addition to the ethical guidelines for educational research produced by the British Educational Research Association (BERA, 2011) and the American Educational Research Association (AERA, 2011), following Zimmer’s (2010, p.324) assertion that ‘concerns over consent, privacy and anonymity do not disappear simply because subjects participate in online social networks; rather, they become even more important’ and that ‘it is our responsibility as scholars to ensure our research methods and processes remain rooted in long-standing ethical practices’. We then cross-referenced these guidelines with the growing body of literature dedicated solely to the ethics of researching online (e.g. Buchanan & Zimmer, 2012; Convery & Cox, 2012; Markham & Buchanan, 2012).

Beforehand

Based on our own experiences of researching with Facebook groups, we argue that the researcher needs to carefully consider the potential ethical challenges of performing educational research in a social media context well before embarking on the process, anticipating possible findings and how to deal with them.

Informed consent

Informed consent is frequently stated as a vital component of ethical educational research. The BERA Ethical Guidelines (2011, p.5) state that ‘researchers must take the steps necessary to ensure that all participants in the research understand the process in which they are to be engaged, including why their participation is necessary, how it will be used and how and to whom it will be reported’. The BERA Guidelines do concede that ‘social networking and other online activities...present challenges for consideration of consent issues’ but maintain that ‘the participants must be clearly informed that their participation and interactions are being monitored and analysed for research’.

Public and private

Related to the topic of informed consent, the distinction between public and private research settings appears pertinent to researching Facebook groups, of which three categories exist – public, closed and secret. Our current research is only examining Facebook Groups, which are one of the three main facilities within Facebook. The other two are Pages, which are always public, and individual accounts, which provide users with a range of customisable privacy settings. There are at least five million Groups within Facebook.

Convery and Cox (2012, p.51) state that ‘one of the central issues with [Internet Based Research] is what constitutes ‘public’ and ‘private’ spaces, with corresponding implications for whether or not informed consent is required’. The BERA (2011) Guidelines do not cover this distinction between public and private. However, Zimmer’s (2010) widely-cited study of the ethics of researching in Facebook, which focuses on the controversial ‘T3’ study of Harvard students’ Facebook use, is more helpful. Zimmer suggests that while the use of data that is solely available from public Facebook pages (e.g. students’ profiles) may be seen as ethically defensible, a different picture emerges where this data is then cross-referenced with institutional data accessible only to people within that institution, and that the public Facebook data then becomes semi-private and, in turn, should be subject to more rigorous ethical treatment.

The AERA Ethical Guidelines (AERA, 2011, p.151) make explicit reference to the ethical treatment of public data, stating that ‘education researchers may conduct research in public places or use publicly available information about individuals (e.g., naturalistic observations in public places, analysis of public records, or archival research) without obtaining consent’. To some, online social networking in the public sphere can easily appear as a ‘snoop’s dream’ (Marks, 2006) in which participants’ contributions to online discussions are exploited for

A Murky Business: The Ethics of Conducting Educational Research in Facebook Groups

Leigh-Anne Perryman, Tony Coughlan

other' gain, be it commercial, financial or even criminal. However, we argue that the responsible, reflexive researcher can conduct ethically defensible research in such spaces as long as they look closely at what might constitute public and private communication in itself, irrespective of the extent to which the context in which such communication takes place is public or private.

Our own research has featured two distinct approaches. When researching a combination of public and closed Commonwealth Facebook groups on autism we gained informed consent from participants by joining each group and then contacting the group moderator to ask them to raise the matter with group members on a collective basis whereby members were invited to raise an objection if they did not wish the group to be the topic of research (none objected). We used the same approach across all groups, irrespective of whether they were public or closed. After conducting the research, we published the findings under an open licence and made them accessible from one author's own Facebook page (<https://www.facebook.com/freeCYPmedia>) and blog site (<http://cyp-media.org>) so that group members could read what we had found, in line with BERA and AERA guidelines that research reports should be shared with participants.

Latterly, when investigating solely public (previously known as 'open') OU Facebook groups, we have not negotiated group consent, as allowed by the AERA Ethical Guidelines above. We are anonymising our findings and are again openly publishing them and making them easily accessible from the author's Facebook page and blog site. By saving the time involved in negotiating consent public/open groups are easier to research than closed or secret groups, although we estimate that public/open groups represent less than 10% of the total number of active OU-related Facebook groups, the remainder being either closed or secret. (Closed groups are discoverable by searches; the viewer can see who the members are, but cannot see the content without joining. Secret groups are not discoverable, so it is difficult to know how many exist.) These closed/secret groups potentially offer rich research data that could help to extend the validity and generalisability of our research findings, and its overall value to stakeholders such as learners, educators and The Open University as an institution. However, negotiating consent with closed and secret groups dramatically increases the time and effort involved in researching, which one has to be confident that the outcomes will warrant. A complexity is raised by the fact that groups' status as public/open can change. Indeed this is quite common in the life-cycle of a group; they are often set to 'public' initially to help students discover them, then closed once all the cohort that wish to have joined.

Disclosure and risk to participants

When researching within one's own institution the researcher needs to be clear about the responsibilities and obligations connected with their employment, in advance of conducting research in social media setting. The Facebook environment has been reported as particularly conducive to 'confessional' activity and 'online disinhibition' (Joinson, 1998; Suler, 2004), displaying the six factors that Suler (2004) identifies as prompting people to self-disclose online more frequently or intensely than they would in person: dissociative anonymity,

invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. Consequently, the researcher may encounter evidence of plagiarism, disclosure of other types of poor academic practice, or indeed anti-social behaviour on the part of formal university students (e.g. complaints about named individual tutors). While it may be tempting to adopt the position of a detached observer, institutional guidelines may require the researcher to report such practice. Indeed, the BERA Ethical Guidelines (2011, p.8) state that:

“Researchers who judge that the effect of the agreements they have made with participants, on confidentiality and anonymity, will allow the continuation of illegal behaviour, which has come to light in the course of the research, must carefully consider making disclosure to the appropriate authorities. If the behaviour is likely to be harmful to the participants or to others, the researchers must also consider disclosure.”

During

A key challenge during the research process was managing ethical considerations around whether to join the Facebook groups that we researched, and whether to disclose our status as researchers and the fact that we were researching specific groups. Again, the distinction between public and private research spaces becomes relevant here.

Joining groups and status disclosure

To conduct any research about Facebook groups, one needs an individual Facebook account. If desired, one can then join up to 6000 groups. One benefit of joining is that the researcher gains access to an enhanced layer of information about device/client use and members' locations. When conducting our Commonwealth Facebook autism group study we did join each of the groups that we researched and, indeed, disclosed our identity as researchers. However, we have not joined the 10 OU Facebook groups that we have been researching more recently as all of the data that we needed was available without joining the groups, neither did we disclose our status as researchers. Our position is that as we are conducting observation-only research on passive participants in the public sphere (participants who are not being interviewed, conducting surveys nor are the subject of interventions or AB testing), it is ethically defensible to neither join the groups we are researching, nor disclose our status as researchers.

Data protection

While researching, data protection and record-keeping also has to be considered. The BERA Guidelines (2011, p.8) state that ‘researchers must ensure that data is kept securely and that the form of any publication, including publication on the Internet, does not directly or indirectly lead to a breach of agreed confidentiality and anonymity.’ Returning to our own research context, it is not possible to download Facebook group activity wholesale, so accurate record-keeping is particularly important to ensure the research can be completed and verified

A Murky Business: The Ethics of Conducting Educational Research in Facebook Groups

Leigh-Anne Perryman, Tony Coughlan

if necessary. In our own research we have limited ourselves to counting and analysis of qualitative data; no names are attached to this and data is fully coded and anonymised (e.g. ‘group 1, member A’). A further reason for keeping accurate records is that Facebook can be quite a fluid and transitory medium – for example, whole groups can be deleted, which typically happens after the end of a course – and as a business, Facebook change their facilities and rules frequently for commercial reasons (e.g. withdrawal of email function & changed privacy settings).

Breaking Facebook’s rules

The existing research on the educational uses of Facebook raises a further ethical issue – that of creating duplicate, or ‘faux’ accounts as a researcher and of encouraging research participants to do the same. For example, while Facebook explicitly states that creating duplicate accounts is against its rules (Facebook, 2014), current figures for fake accounts estimate that 83 million such accounts (8.7% of Facebook’s active users) exist (US SEC, 2012). This is problematic in terms of mutual trust and member safety, and for the researcher is troublesome where research includes demographic comparisons (for example, an apparently middle-aged male Facebook member may actually be a young woman, and vice versa) or where the researcher is doing quantitative analysis of the number of posts made (for example, posts may be made by a single person using several fake accounts). Arguably, then, Lieberman’s (2013) suggestion that students might create a separate account for their scholarly work, and that she had done the same, raises questions both about the veracity of her research findings and about the ethics of encouraging (at worst) possible duplicity and/or the creation of duplicate accounts that might undermine the validity of the research findings. (It is worth noting though that Lieberman states that ‘not one of the students chose to set up a dedicated account for university business’ (p.27).)

Afterwards

Reporting the findings of a social-media located research study after it has ended raises a further set of ethical considerations regarding confidentiality and the potential impact on research participants, be they active or passive. Krotoski (2010) makes a distinction between protecting the individual and protecting the online community as a whole when researching in online communities such as Facebook groups.

Protecting the individual

Holmes (2009) suggests that in general, most online research involves minimal risks to individual participants, aside from breaches of confidentiality and when questions asked by the researcher provoke emotional reactions. While the latter is not relevant for research where participants are passive and no interventions are involved, the issue of confidentiality remains. The BERA (2011, p.7) Ethical Guidelines state that:

“The confidential and anonymous treatment of participants’ data is considered the norm for the conduct of research. Researchers must recognize

the participants' entitlement to privacy and must accord them their rights to confidentiality and anonymity, unless they or their guardians or responsible others, specifically and willingly waive that right".

As previously discussed, however, the public nature of many Facebook groups might suggest that different ethical considerations apply than when researching in private settings online. Again, the AERA (2011) Guidelines do make a distinction between ethical requirements of researching in public and in private contexts, stating that:

"Confidentiality is not required with respect to observations in public places, activities conducted in public, or other settings where no rules of privacy are provided by law or custom. Similarly, confidentiality is not required in the case of information from publicly available records."

We tentatively argue that data in public Facebook groups falls into this category of public setting, though we do acknowledge the researcher's obligation to navigate the complexities of unintentional disclosure resulting from online disinhibition and to consider the possibility that passive research participants could be harmed when a researcher (especially one connected with the same institution attended by the passive participants) begins analysing and reporting research data that has been unintentionally disclosed. We suggest that while the public domain of the Facebook group does not in itself offer anonymity, researchers' reports should anonymise all data cited as evidence and that, with the exception of research where discourse analysis is integral to the research strategy, it could be helpful to paraphrase quotes where the topics discussed are potentially sensitive, to help prevent Internet searches that will lead back to the research participants.

A further complexity emerges when researching closed/secret groups, when the researcher must consider the extent to which it is ethically defensible to report evidence from these groups. We argue that when conducting research in such groups it is important to gain the informed consent of participants, whether active or passive, and that when such consent has been obtained reporting data gained from such groups is less problematic, subject to the same care exercised above.

Protecting the online community

Risks to the online community being researched may also result from both the research process itself and from disseminating research findings. Krotoski (2010, p.3) suggests that:

"Online communities are complex social negotiations between disproximate individuals who are engaged in what William Gibson described as a 'consensual hallucination' (1984). Distinct from non-community online interactions, members of these groups form interpersonal systems over time and through repeated [interaction] that result in stable governance and hierarchy, featuring rules, regulations and distinctive norms."

Arguably, reporting a close analysis of interaction within a Facebook group (whether closed, secret or public), when read by group members, could change the nature of relationships within an online community, with the potential to undermine its stability and effectiveness (although, admittedly, it is also possible that the reverse could occur, with the group being strengthened as a result of becoming aware of the research findings). Krotoski (2010, p.3) concurs that 'a breach in trust can destabilise the foundations upon which the online group rests', though he adds that 'social networking sites, like Facebook, may have a stronger sense of stability than social virtual worlds'.

A further consideration is that public groups may become exposed to advertising spam or other undesirable consequences such as trolling, when their profile is raised through research dissemination. As described above, after conducting our earlier research, we published the findings under an open licence and made them accessible from one author's own Facebook page and blog site so that group members could read what we had found. We are not aware of this having led to any undesirable consequences.

Conclusions

Our research thus far, both that related to the public open scholar project and our more recent study of OU Facebook groups, adds to the existing literature in giving clear evidence that Facebook groups can be of great educational and institutional value. For example, Facebook groups can help in developing relationships between new students; by attracting potential students who are able to see real student experience of a particular course, allowing them to make better informed choices about what and where to study; and by providing an environment that is conducive to developing peer-support and self-educating learner communities for existing students.

It follows that the practice of researching such groups has value for learners, educators and host institutions alike. For example learners can find out about the optimum strategies for self-organised support groups within Facebook; educators can gain information about new ways of using social media within a pedagogical strategy; and institutions can gain insight into student motivations and preferences in order to improve the learner experience for existing students and attract new students.

However, our research also identifies various ethical complexities and challenges connected with researching within Facebook and while we have reached an overall, provisional conclusion that ethical regulations and restrictions should be proportional to the scale and purpose of the research and that the ethical dimension should not prevent socially and educationally valuable research taking place, the complexities involved in researching ethically in social media contexts demand broader attention and debate from scholars.

Zimmer (2010) details areas for further exploration, arguing that:

“Future researchers must gain a better understanding of the contextual nature of privacy in these spheres...recognizing that just because personal information is made available in some fashion on a social network, does not mean it is fair game for capture and release to all ... Similarly, the notion of what constitutes ‘consent’ within the context of divulging personal information in social networking spaces must be further explored.”

It is our hope that other academics will contribute to an exploration of the ethics of researching in Facebook, in the interests of a greater understanding of the potential of this powerful tool.

References

1. AERA (2011). *Code of Ethics*. Available from http://www.aera.net/Portals/38/docs/About_AERA/CodeOfEthics%281%29.pdf [Accessed 22 August 2014]
2. BERA (2011). *Ethical Guidelines for Educational Research*. Available from <http://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf> [Accessed 20 August 2014]
3. Bosch, T.E. (2009). Using online social networking for teaching and learning: Facebook use at the University of Cape Town. In *Communicatio*, 35(2), (pp. 185-200).
4. Broaddus, M. (2014). Issues of Research Ethics in the Facebook ‘Mood Manipulation’ Study: The Importance of Multiple Perspectives. Blog post on *Ethics and Society: Ethical analysis and news from the Fordham University Center for Ethics Education*. Available from <http://ethicsandsociety.org/2014/07/01/issues-of-research-ethics-in-the-facebook-mood-manipulation-study-the-importance-of-multiple-perspectives-full-text/> [Accessed 20 August 2014]
5. Bruneel, S.; De Wit, K.; Verhoeven, J. and Elen, J. (2013). Facebook – When Education Meets Privacy. In *Interdisciplinary Journal of E-Learning and Learning Objects*, 9, (pp. 125-148). Available from <http://www.ijello.org/Volume9/IJELLOv9p125-148Bruneel0828.pdf> [Accessed 25 August 2014]
6. Buchanan, E. and Zimmer, M. (2012). Internet Research Ethics. In E.N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2012 Edition). Available from <http://plato.stanford.edu/entries/ethics-internet-research/> [Accessed 20 August 2014]
7. Convery, I. and Cox, D. (2012). A review of research ethics in internet-based research. In *Practitioner Research in Higher Education*, 6(1), (pp. 50-57). Available from <http://194.81.189.19/ojs/index.php/prhe/article/viewFile/100/192> [Accessed 21 August 2014]

A Murky Business: The Ethics of Conducting Educational Research in Facebook Groups

Leigh-Anne Perryman, Tony Coughlan

8. Coughlan, T. and Perryman, L. (2012). Reaching out with OER: the new role of public-facing open scholar. In *eLearning Papers*, 31. Available from http://oro.open.ac.uk/35934/1/In-depth_31_1.pdf [Accessed 4 July 2014]
9. de Villiers, M. and Pretorius, M. (2013). Evaluation of a Collaborative Learning Environment on a Facebook Forum. In *Electronic Journal of Information Systems Evaluation*, 16(1), (pp. 58-72). Available from <http://uir.unisa.ac.za/bitstream/handle/10500/13168/ejise-de%20Villiers%20%26%20Pretorius%20Vol16-issue1-article863.pdf?sequence=1> [Accessed 21 August 2014]
10. Donlan, L. (2012). Exploring the views of students on the use of Facebook in university teaching and learning. In *Journal of Further and Higher Education*, 38(4), (pp. 572-588). Available from <http://dx.doi.org/10.1080/0309877X.2012.726973> [Accessed 24 August 2014]
11. Facebook (2014). *Statement of Rights and Responsibilities – Section 4: Registration and Account Security*. Available from <https://www.facebook.com/legal/terms> [Accessed 22 August 2014]
12. Harvard University (2011). *Institute of Politics – Spring 2011 survey*. Available from <http://www.iop.harvard.edu/spring-2011-survey> [Accessed 24 August 2014.]
13. Holmes, S. (2009). Methodological and ethical considerations in designing an internet study of quality of life. A discussion paper. In *International Journal of Nursing Studies*, 46, (pp. 394–405).
14. Joinson, A. (1998). Causes and implications of disinhibited behavior on the Internet. In J. Gackenbach (ed.), *Psychology and the Internet: intrapersonal, interpersonal, and transpersonal implications*, (pp. 43–60). San Diego: Academic Press.
15. Krotoski, A. (2010). Introduction to the Special Issue: Research ethics in online communities. In *International Journal of Internet Research Ethics*, 3, (pp. 1-5). Available from http://ijire.net/issue_3.1/1_krotoski.pdf [Accessed 26 August 2014]
16. Lieberman, S. (2013). Using Facebook as an Interactive Learning Environment in European Political Studies. In *European Political Science*, 13, (pp. 23-31).
17. Markham, A. and Buchanan, E. (2012). *Ethical Decision-Making and Internet Research: Recommendations from the AoIR Ethics Working Committee* (Version 2.0). Available from <http://aoir.org/reports/ethics2.pdf> [Accessed 22 August 2014]
18. Marks, P. (2006). Pentagon sets its sights on social networking websites. In *New Scientist*, 2555, (9 June 2006). Available from <http://www.newscientist.com/article/mg19025556.200> [Accessed 14 July 2014].

19. McCarthy, J. (2010). Blended learning environments: Using social networking sites to enhance the first year experience. In *Australasian Journal of Educational Technology*, 26(6), (pp. 729–740). Available from <http://www.ascilite.org.au/ajet/ajet26/mccarthy.html> [Accessed 24 August 2014]
20. Meisher-Tal, H.; Kurtz, G. and Pieterse, E. (2012). Facebook groups as LMS: A case study. In *The International Review of Research in Open and Distance Learning (IRRODL)*, 13(4). Available from <http://www.irrodl.org/index.php/irrodl/article/view/1294/2295> [Accessed 22 August 2014]
21. O'Bannon, B.; Beard, J. and Britt, V. (2013). Using a Facebook Group as an Educational Tool: Effects on Student Achievement. In *Computers in the Schools: Interdisciplinary Journal of Practice, Theory, and Applied Research*, 30(3), (pp. 229-247). Available from <http://dx.doi.org/10.1080/07380569.2013.805972> [Accessed 24 August 2014]
22. Open University (2006). *Ethics Principles for Research Involving Human Participants*. Available from <http://www.open.ac.uk/research/ethics/docs/finaethicalprinciplesforresearchwebcopy2013.doc> [Accessed 2 February 2014]
23. Pander, T.; Pinilla, S.; Dimitriadis, K. and Fischer, M. (2014). The use of Facebook in medical education – A literature review. In *GMS Zeitschrift für Medizinische Ausbildung*, 31(3), Doc33. Available from <http://www.egms.de/en/journals/zma/2014-31/zma000925.shtml> [Accessed 28 August 2014]
24. Perryman, L. and Coughlan, T. (2013). The realities of ‘reaching out’: enacting the public-facing open scholar role with existing online communities. In *Journal of Interactive Media in Education, Nottingham OER 2013 special issue, article no. 21*. Available from <http://jime.open.ac.uk/jime/article/view/2013-21> [Accessed 20 August 2014]
25. Suler, J. (2004). The Online Disinhibition Effect. In *CyberPsychology & Behaviour*, 7(3), (pp. 321-326).
26. Tess, P. (2013). The role of social media in higher education classes (real and virtual) – A literature review. In *Computers in Human Behavior*, 29(5), (pp. A60-A68). Available from <http://www.sciencedirect.com/science/article/pii/S0747563212003743#b0030> [Accessed 20 August 2014]
27. United States Securities and Exchange Commission (2012). *Quarterly Report on Form 10-Q*. Available from http://www.sec.gov/Archives/edgar/data/1326801/000119312512325997/d371464d10q.htm#tx371464_14 [Accessed 25 August 2014]
28. Wang, J.; Lin, C.; Yu, W. and Wu, E. (2013). Meaningful Engagement in Facebook Learning Environments: Merging Social and Academic Lives. In *Turkish Online Journal of Distance Education – TOJDE*, 14(1). Available from https://tojde.anadolu.edu.tr/tojde50/articles/article_26.htm [Accessed 24 August 2014]

A Murky Business: The Ethics of Conducting Educational Research in Facebook Groups

Leigh-Anne Perryman, Tony Coughlan

29. Weller, M. (2011). *The Digital Scholar: How Technology Is Transforming Scholarly Practice*. Basingstoke, Bloomsbury Academic.
30. Zimmer, M. (2010). "But the data is already public": on the ethics of research in Facebook. In *Ethics and Information Technology*, 12(4), (pp 313-325). Available from <http://www.sfu.ca/~palys/Zimmer-2010-EthicsOfResearchFromFacebook.pdf> [Accessed 22 August 2014]

A Murky Business: The Ethics of Conducting Educational Research in Facebook Groups
Leigh-Anne Perryman, Tony Coughlan