

Exploring the Limitations Involved in Students' Academic Use of Facebook



Abdulsalam K. Alhazmi, Fatima Al-Hammadi, Ezzadeen Kaed, and Athar Imtiaz

Abstract Amongst students in higher education, Facebook is the most popular and preferred of all Social Networking Sites (SNSs). Facebook is free, interactive, easy to use, and well-designed. It provides a number of possibilities in terms of supporting communication among students. However, this study has shown that despite the potentially effective communication features of Facebook, and the widespread usage among students, the majority of students and lecturers only use Facebook for social purposes. Additionally, those who use Facebook for academic purposes do so infrequently, or for very small amounts of time, compared to their use of Facebook for social purposes. As a result, further investigation into the limited academic use of Facebook was conducted using case study research with several qualitative methods including semi-structured interviews, focus group discussions, and Facebook group discussions. The results of the content analysis revealed that the main reasons for the limited educational use of Facebook are related to the following five main factors: technology, distraction, content, lack of teacher support, and security and privacy.

Keywords Academic use of Facebook · Facebook in higher education · Social networking sites (SNS) · E-Learning · Social learning · Management system (LMS)

1 Introduction

SNSs are applicable for a wide range of educational endeavours due to various characteristics, for instance their ease of use, cost-effectiveness, ease of communication and interaction between members, reliance on the concept of social learning, and many more factors [1, 2]. Facebook is reported to be the leading social networking

A. K. Alhazmi (✉) · F. Al-Hammadi
University of Science and Technology, Aden, Yemen

F. Al-Hammadi · E. Kaed
Interactive Language Centre, Kuala Lumpur, Malaysia

A. Imtiaz
Massey University, Palmerston North, New Zealand

site in terms of its user base and reputation [3]. It therefore makes sense to propose that Facebook can be used as a higher education learning tool [4–6].

The potential advantages of SNS with regards to supporting education can be summarised into the usability of SNS features and tools, access to a variety of resources, communication, and interaction with peers and teachers, content creation and sharing, obtaining instant feedback on learning problems, and supporting informal and constructive learning [7, 8]. While alternative e-learning tools (i.e., LMS) are available, SNSs seem to be much better suited to student-oriented higher education, largely due to their dynamic qualities. Moreover, SNSs encourage students to join common interest communities, help each other with their academic studies, build bonds with their classmates, and promote supplementary interactions between themselves and their instructors [9]. As in [10] the main areas in which SNSs can aid learning and teaching: connectivity and social support; collaborative information discovery and sharing; content creation; knowledge and information aggregation; and content modification.

Since the number of students using Facebook is continually increasing, it is necessary to investigate how to best integrate the use of Facebook into education [11–14]. The hope is that students will eventually use Facebook just as much for studying as they do for social networking [15]. Higher education establishments must become knowledgeable regarding the best ways in which to implement SNSs into educational activities whilst making the most of the opportunities provided by sites such as Facebook, especially since Facebook offers vast potential in terms of facilitating the teaching and learning process, and the majority of students already extensively use it.

Despite the high rate of usage among higher education students, many studies have stated that social interaction and communication remains the most common reason for use, while the use of SNSs for academic purposes is still very much in the infancy stage [1, 13, 15–17].

In general, researchers who have investigated the educational use of Facebook have found that its academic use remains limited despite the popularity of the site among many students [18]. Therefore, in order to reach our research objectives, a qualitative case study is used to gain a better understanding of why the educational use of Facebook remains so limited. As a result, this study takes an inductive approach to investigating the problem, and will identify the current challenges of utilising this technology and its features to promote effective academic use and to support pedagogically-sound activities.

2 Review

2.1 Facebook Use in Higher Education

SNSs vary greatly, and therefore they can be used for a large number of different activities and purposes. However, many research studies have shown that Facebook is the most popular among university students [19–22]. According to a study conducted by ECAR, 90% of students reported that they used Facebook on a daily basis [23]. In another survey administered to 6,498 Malaysian university students, the results revealed that 80.8% of students held an SNS account, and the large majority used Facebook daily [24].

Up to the present time, there has been an underwhelming degree of research into student engagement with social networking, especially in relation to Facebook. [25] was critical of recent studies that did take place, noting that they were restricted by both their assessment of Facebook usage and their criteria for quantifying engagement. Previous studies into the relationship between student engagement and social network services have focused on academic activities. More recent research into the subject has concentrated on social activities. It has been established that SNSs are beneficial in encouraging student engagement, and thus increasing knowledge. However, it is apparent that this topic requires further research.

2.2 Facebook's Educational Potential

While the primary goal of SNSs is generally known to be for social networking activities, the results of some studies have indicated that using SNS features and tools in relevant educational ways could support student engagement and learning. Bowers-Campbell [26] demonstrates the ways in which education professionals could use Facebook to aid their teaching practices by broadcasting messages of support to their learners. This study suggested that because Facebook can serve to improve interactivity between classmates and tutors, its use in education may help to increase the prevalence of self-regulated learning and self-efficacy.

Another study examined the relationship between Facebook use and students' academic performance [25]; finding that students' GPA increased when studying for longer periods and when Facebook was used (relevantly) more often. However, students' GPA decreased in line with students increasing their social endeavours. As such, it was suggested that students' GPA and the hours spent studying have a negative correlation to the hours spent on Facebook for social purposes. Furthermore, another research study conducted by [27], showed that Facebook has been used by university students to enhance their English skills. Therefore, the literature suggests that students' learning is influenced by the use of SNSs, for better or worse [22, 28].

Essentially, if students engage in meaningful educational activities via Facebook, their academic performance may improve. On the other hand, students' academic performance may decline if time spent on SNSs is not education-oriented.

3 Research Methodology

3.1 Research Design

This research uses a single case study with the application of mixed methods [29]. The main reason for selecting the case study method is that the study of social networking is highly dependent upon the kind of contextual information which can be assessed through the case study [16, 30]. In mixed methods research "is more in line with methodology combination, which essentially requires multiple worldviews (i.e., the combination of qualitative and quantitative research methods)" [31].

The first method applied in this case study was an exploratory survey. Research shows that surveys can be used effectively in the initial phase of a study to explore the relationships and patterns in research where no assumptions or models are assumed [32]. Following the survey, qualitative methods were used: semi-structured interviews, which are extremely popular in qualitative studies [33] focus group discussions which allow researchers to gather information and gain an understanding of a certain phenomenon via the spoken opinions of a group of participants [34].

The reason that a qualitative research design was adopted is that the educational use of SNSs is a relatively new phenomenon. Typically, exploratory research is expanded via additional exploratory research or by conclusive studies [35]. Qualitative data collection approaches tend to be applied to exploratory research in order to gain greater insight into a topic and to produce new theories in the field of social science and IS studies [31, 36, 37].

3.2 Sampling

Data was collected using multiple methods. To begin with, 105 students were given an exploratory questionnaire that was designed to investigate some of the features of the educational use of SNSs. The respondents were classified as follows: male and female, undergraduate and postgraduate, and local and international students. The majority of students (97.2%) reported that they held Facebook accounts, and very few students (2.8%) stated that they did not use Facebook at all. The sample consisted of 62 (59.6%) local students and 42 (40.4%) international students. The distribution of students across genders was 56 (54.4%) male students and 47 (45.6%) female students. The distribution of students across the level of study was 61 (58.7%) undergraduate students and 43 (41.3%) postgraduate students.

Following this, participants in the semi-structured interviews, focus group discussions, and online discussions were chosen through qualitative sampling methods. In order to ensure that the findings would be well-balanced and that the insight gained would be representative of a wide range of students, the sample chosen for participation in this study were a combination of undergraduate and postgraduate students of both genders. A total of 11 participants were initially contacted via Facebook, in order to request their participation in this study. The response rate was 81%, with 9 students responding to the invitation message and agreeing to become voluntary participants in this research. Following this, face-to-face interviews were held with each of the 9 participants. A total of three groups with 17 respondents were involved in the focus group discussions. The three focus groups were comprised of 13 male students and 4 female students, of whom 5 were postgraduate students and 12 were undergraduate students.

3.3 Data Analysis

Due to the descriptive nature of the survey, the data was analysed using the descriptive analysis. In the subsequent phases of conducting the individual interviews and focus group discussions, transcription of the data occurred along with data coding, in order to organise the information by category to aid interpretation. The responses given by the participants varied from a few words to multiple paragraphs, and these were used for analysis [33, 38]. The data was assigned codes using the auto-coding function in NVivo 10, and the key categories were determined using selective coding. NVivo's selective coding function is much like open coding. Here, the interview responses go through rigorous human checking in order to select the most relevant themes [39].

It is essential that qualitative data is checked for validity and reliability in order to guarantee that the study's findings are meaningful and come from trusted sources [40, 41, 42]. Furthermore, this will help to ensure that the research can be carried out again in the future [29].

In qualitative studies, validity represents the level of accuracy achieved by an instrument in terms of addressing the research problem or phenomenon that is being studied [43]. Scholars have explained that researchers must assess the validity of their research, since this ensures that the themes that have been proposed from the data are accurate [29, 44]. Therefore, that coders are assessed in terms of their level of accordance with one another regarding the themes identified in the data [43–45].

4 Results: Descriptive Statistics of Current Facebook Use

4.1 Purposes of Use

In order to measure the key motivations of the students for using Facebook, four categories were given: to keep in touch with friends, to share what is happening in one's life, to communicate with classmates about assignments, and to share news and other issues. As Table 1 illustrates, the results show that the majority of students (84%) use Facebook to keep in touch with friends, followed by sharing what is happening in one's life (47%), and then the communication of news (44%). Other purposes of use were also identified, such as marketing, and playing games (14%). A comparatively low percentage of use (36%) was recorded for academic purposes, which was categorised as communicating with classmates on assignments in this study. This number of students using Facebook for academic purposes (36%) reflects a higher percentage than that previously reported in other studies. For example, in a study by [19], only 10% of students reported that they used Facebook for the discussion of academic work with other students. In another study, just 19 (4.9%) out of 390 students stated that they were able to acquire knowledge using Facebook [46].

Although the frequency of using Facebook for academic reasons is higher than the frequency presented in previous literature, academic use is still the least popular reason for using Facebook in comparison with other purposes, such as maintaining relationships or sharing news.

4.2 Time Spent Engaging in Non-Academic Activities on Facebook

Students were asked to estimate the time they spent each day using Facebook for both academic and non-academic activities, based on four categorical responses: less than 1 h, 1–2 h, 2–3 h, and over 3 h. As Table 2 illustrates, around one third (33.7%) of the participants stated that they spend 1–2 h per day on Facebook. In fact, when we add up the number of students who spend over 1 h per day using Facebook,

Table 1. Purposes of Facebook use

Purpose	Frequency	Percent
Keeping in touch with friends	92	84%
Sharing what is happening in one's life	51	47%
Communicating with classmates about assignments	39	36%
News	47	44%
Other (marketing, entertainment, etc.)	14	14%

Table 2. Time spent on Facebook for non-academic purposes

Experience	Frequency	Percent%
Less than 1 h	22	21.1
1–2 h	35	33.7
2–3 h	32	30.8
More than 3 h	15	14.4
Total	104	100.0

we find that this group represents the largest majority of all students (78.9%). This indicates that the majority of students spend a high amount of time on Facebook each day. The study result of [47], revealed that students spend a mean average of 1 h and 41 min per day on Facebook. In another study by [46], the results revealed that the majority of students used Facebook only for social purposes, and that their daily Facebook time amounted to around 1 h. In this sense, the more time students spend on Facebook, the more likely it is that there will be a negative impact on their academic performance and learning outcomes.

4.3 Time Spent Engaging in Academic Activities on Facebook

Table 3 shows that the majority of students spend less time engaging in academic activities on Facebook than they spend engaging in non-academic activities on this platform. Almost all of the 39 students in this study reported that they engage in under an hour of educational activity on Facebook each day; with just 3 students stating otherwise. Students' academic use of Facebook is therefore low compared with their extensive use of Facebook for social activities, sharing and reading news, and for other purposes. Out of all of the student participants in this study, only three (7.7%) of the students reported that they usually spend over one hour per day using Facebook for educational purposes, regarding the second time category.

The overall results indicate that the use of Facebook for academic purposes is still limited in terms of both time and the activities engaged in. However, the following section of this paper presents the results of an inductive investigation of the reasons behind the limited academic use of Facebook among students, despite the opportunity existing for better academic communication and interaction through Facebook.

Table 3. Time spent on Facebook for academic activities

Time spent	Frequency	Percent%
Less than 1 h	36	92.3
1–2 h	3	7.7
Total	39	100

5 Results: The Reasons for Facebook's Limited Academic Use

The results of the qualitative data collection method assisted us in studying the reasons behind the limited use of Facebook, and to go beyond the statistical results reported in the previous part of this study and in the literature. As a result of data analysis and validation, the reasons for the low level of academic use was identified based on the data of the interviews and focus group discussions. In response to the question “Why is the use of Facebook for academic purposes limited?”, the results of this study reveal that the most significant factors involved in the limited academic use of Facebook are related to technology, distraction, management, privacy, content, and lack of teacher support.

5.1 Technology

During the data collection phase of the study, technological limitations such as content management and assessment, were provided as an explanation for why so few students spend a sufficient amount of time using SNSs for educational activities. Facebook offers a variety of features for communication, interaction, and information-sharing. However, if Facebook is to be used for academic purposes, users expect a number of additional supporting features, such as content management and assessment capabilities. It was reported that it is difficult for students' to keep track of specific content or activities on Facebook. In addition, it is difficult for students to retrieve specific shared content and activities. Therefore, it has been revealed that if SNS is to be used effectively for academic activities, additional features that will offer better support to academic purposes are still required.

5.2 Distraction

Distraction was another challenge which was reported by the respondents in this study. When the students were asked to provide reasons for spending less time engaging in academic activities through Facebook compared to engaging in social activities, the issue of distraction was mentioned.

The dynamic notification system is considered to be one of the most attractive features of Facebook in terms of socialising and keeping up-to-date with the activities of others. In relation to education, however, this makes it difficult for students to remain focused. The alert messages and dynamic notification settings can be used effectively for academic activities and can provide an effective course-related environment. However, the high number of students and lecturers using Facebook for

non-academic purposes creates a disturbance. Respondents suggested that Facebook may require some features or settings to assist students to focus; otherwise, they may be interrupted by numerous social activities and, consequently, their attention will be diverted to such activities.

5.3 Content

According to the data collected in this study, another reason for the low academic use of Facebook is content. In response to the question, "Do you spend much time on Facebook for social or academic purposes?", one respondent stated that they only use the platform for social purposes as there are an insufficient quantity of academic materials on Facebook. Another respondent explained that students spend less time on Facebook for academic purposes because for much of the time, there are a very limited number of Facebook page which offers relevant or useful content which is assistive to studying.

Furthermore, it appears that the low level of academic Facebook use can be attributed to the type of content, accuracy of the content, and the content relevancy. Although Facebook's features facilitate content-sharing, other challenges have been identified in terms of the content's relevancy and quality.

5.4 Lack of Teacher Support

According to the respondents in this study, the high level of Facebook use for non-academic activities among students and lecturers is one of the reasons for the low level of use for academic purposes. The overall results of the individual interviews and focus group discussions revealed that the level of lecturers' participation in Facebook for academic purposes was relatively limited. Students reported that their lecturers were not very active academically on Facebook. For example, during the focus group discussion, one respondent stated that they did not believe that lecturers access Facebook for the purposes of academic work. Another participant supported this point saying that they were aware of only one lecturer who implements Facebook for academic purposes.

The responses of the participants involved in this research project go a long way in helping us to gain insight into the reasons behind the lack of academic Facebook activity among students.

5.5 *Security and Privacy*

The fourth reason for the low academic use of Facebook relates to privacy concerns. These play a key role in the current low level of academic Facebook use among university students. The results of this research clearly emphasise that a number of students find Facebook's privacy settings to be confusing, ambiguous, or concerning. It is noted that some of these concerns stem from students' own inexperience with Facebook settings, while some of the concerns stem from Facebook's own limitations in terms of the privacy settings which are available to users. Some of Facebook's features are more suited to academic activities than others. However, students need to be educated on these features and shown how to use the settings which are available to them with regards to privacy. In such an open social system, privacy is still a major concern in environments where more manageable privacy settings are required.

6 **Conclusion and Recommendations**

Driven by the results of the exploratory survey of the investigation into the current state academic Facebook use, further investigations into the reasons for the low level of academic Facebook use were conducted using in-depth interviews, focus group discussions, and online discussions. The results revealed five main reasons behind the low level of Facebook use for academic purposes.

The first reason for the limited level of academic Facebook use relates to the technological features and tools provided by Facebook. It is required more manageable features to facilitate content organisation, content classification, content filtering, and content retrieval seems to be essential for the effective use of Facebook in an educational context. The second reason relates to the disturbance which might occur as a result of the current design nature of social networking technologies, as well as the current dominant non-academic use of Facebook. It is suggested that student learning might be disturbed by Facebook's integration of social and academic activities. The third reason for the limited academic use of Facebook relates to content. The lack of relevant and resourceful content on Facebook influences its use for academic purposes. Providing interactive, resourceful, and relevant content on Facebook and other SNSs will encourage student engagement and academic use of SNSs. The fourth reason for the low level of academic Facebook use relates the lack of teacher support. The results of this research reveal that the potential application of Facebook within the educational environment is still undervalued by lecturers, as they themselves are active on Facebook socially rather than academically. The fifth reason relates to the security and privacy concern of students in this open social environment, where more manageable privacy settings are required.

The qualitative approach used in this study was shown to be useful, and it contributed a great deal in terms of understanding the phenomenon and the current challenges which are associated with the use of Facebook for academic purposes.

Therefore, this research contributes to a better understanding of SNSs and their potential applications in education. Understanding the reasons behind the current limited educational use of Facebook provides direction for educators and higher education institutions towards more successful implementation. Finally, because this study used one case study, future researchers may benefit from conducting multiple case studies and comparing the results in order to overcome this limitation.

References

1. Abdulsalam AAR, Alhazmi K (2013) Facebook in higher education: Students' use and perceptions. *AISS Adv Inf Sci Serv Sci* 5(15):32–41, 2013
2. Alhazmi AK, Rahman AA (2014) A framework for student engagement in social networking sites
3. Steinfield C, Ellison NB, Lampe C (2008) Social capital, self-esteem, and use of online social network sites: a longitudinal analysis. *J Appl Dev Psychol* 29(6):434–445. <https://doi.org/10.1016/j.appdev.2008.07.002>
4. Teclehaimanot B, Hickman T (2011) What students find appropriate. *Tech Trends* 55(3):19–30
5. Heiberger G, Harper R (2008) Have you facebooked Astin lately? Using technology to increase student involvement. *New Dir Stud Serv* 2008(124):19–35. <https://doi.org/10.1002/ss.293>
6. Menzies R, Petrie K, Zarb M (2017) A case study of Facebook use: outlining a multi-layer strategy for higher education. *Educ Inf Technol* 22(1):39–53. <https://doi.org/10.1007/s10639-015-9436-y>
7. Alhazmi AK, Rahman AA, Zafar H (2015) Conceptual model for the academic use of social networking sites from student engagement perspective. In: *IC3e 2014–2014 IEEE conference on e-learning, e-Management and e-Services*. pp 1–6. <https://doi.org/10.1109/IC3e.2014.7081232>
8. Abdulsalam Kaed Alhazmi AAR (2013) Social networking sites in higher education: potential advantages for student learning. *Int J Res Educ Methodol* 4(2):493–499
9. Griffith S, Liyanage L (2008) An introduction to the potential of social networking sites in education. *Sites J 20Th Century Contemp French Stud* 18–21
10. McLoughlin C, Lee MJW (2007) Social software and participatory learning: pedagogical choices with technology affordances in the web 2.0 era. In: *ASCILITE 2007–Australas. Soc. Comput. Learn. Tert. Educ.* pp 664–675
11. Reid I (2015) An education in Facebook. *Inf Commun Soc* 18(12):1478–1480. <https://doi.org/10.1080/1369118x.2014.984744>
12. Ellefsen L (2015) An Investigation into perceptions of facebook-use in higher education. *Int J High Educ* 5(1):2. <https://doi.org/10.5430/ijhe.v5n1p160>
13. Niu L (2019) Using Facebook for academic purposes: current literature and directions for future research. *J Educ Comput Res* 56(8):1384–1406. <https://doi.org/10.1177/0735633117745161>
14. Abdulsalam Kaed Alhazmi AAR (2013) Facebook in higher education: social and academic purposes. *Int J Comput Technol* 12(3):3300–3305
15. Toker S, Baturay MH (2019) What foresees college students' tendency to use facebook for diverse educational purposes? *Int J Educ Technol High Educ* 16(1) <https://doi.org/10.1186/s41239-019-0139-0>
16. Hew KF (2011) Students' and teachers' use of Facebook. *Comput Hum Behav* 27(2):662–676. <https://doi.org/10.1016/j.chb.2010.11.020>
17. Bamansoor S, Kayode B, Alhazmi AK, Ahmad Saany SI (2018) The adoption of social learning systems in higher education: extended TAM. <https://doi.org/10.1109/ICSCEE.2018.8538371>
18. Arteaga Sánchez R, Cortijo V, Javed U (2014) Students' perceptions of Facebook for academic purposes. *Comput Educ* 70:138–149. <https://doi.org/10.1016/j.compedu.2013.08.012>

19. Madge C, Meek J, Wellens J, Hooley T (2009) Facebook, social integration and informal learning at university: 'It is more for socialising and talking to friends about work than for actually doing work.' *Learn Media Technol* 34(2):141–155. <https://doi.org/10.1080/17439880902923606>
20. Selwyn N (2009) Faceworking: exploring students' education-related use of Facebook. *Learn Media Technol* 34(2):157–174. <https://doi.org/10.1080/17439880902923622>
21. Manca S, Ranieri M (2016) Facebook and the others. Potentials and obstacles of social media for teaching in higher education. *Comput Educ* 95:216–230. <https://doi.org/10.1016/j.compedu.2016.01.012>
22. Manca S (2020) Snapping, pinning, liking or texting: investigating social media in higher education beyond Facebook. *Internet High Educ* 44:100707. <https://doi.org/10.1016/j.iheduc.2019.100707>
23. Smith SD, Borreson Caruso J (2010) The ECAR study of undergraduate students and information technology. *Educ Cent Appl Res* 1–13
24. Embi MA, Gabarre S, Gabarre C, Hamat A, Din R (2014) Evaluating the level of diffusion of social networking sites among Malaysian university students. *Asian Soc Sci* 10(3):99–111. <https://doi.org/10.5539/ass.v10n3p99>
25. Junco R (2012) Too much face and not enough books: the relationship between multiple indices of Facebook use and academic performance. *Comput Hum Behav* 28(1):187–198. <https://doi.org/10.1016/j.chb.2011.08.026>
26. Bowers-campbell J (2008) Joy Bowers-Campbell. *Reading* 74–87
27. Kabilan MK, Ahmad N, Abidin MJZ (2010) Facebook: an online environment for learning of English in institutions of higher education? *Internet High Educ* 13(4):179–187. <https://doi.org/10.1016/j.iheduc.2010.07.003>
28. Peruta A, Shields AB (2017) Social media in higher education: understanding how colleges and universities use Facebook. *J Mark High Educ* 27(1):131–143. <https://doi.org/10.1080/08841241.2016.1212451>
29. Yin RK (2009) *Case study research: design and methods*. SAGE Publications
30. Boyd DM, Ellison NB (2007) Social network sites: definition, history, and scholarship. *J Comput Commun* 13(1):210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
31. Venkatesh V, Brown SA (2013) Guidelines for conducting mixed methods research in information systems. *MIS Q* X(X):1–34
32. Cohen L, Manion L, Morrison K (2007) *Research methods in education*, 7th edn.
33. Campbell JL, Quincy C, Osserman J, Pedersen OK (2013) Coding in-depth semistructured interviews: problems of unitization and intercoder reliability and agreement. *Sociol Methods Res* 42(3):294–320. <https://doi.org/10.1177/0049124113500475>
34. Benson V, Morgan S, Tennakoon H (2013) Social networking in higher education: a knowledge convergence platform. *Commun Comput Inf Sci* 278:416–425. https://doi.org/10.1007/978-3-642-35879-1_50
35. Wisler AK (2009) 'Of, by, and for are not merely prepositions': teaching and learning conflict resolution for a democratic, global citizenry. *Intercult Educ* 20(2):127–133. <https://doi.org/10.1080/14675980902922143>
36. Benbasat I, Goldstein DK, Mead M (1987) The case research strategy in studies of information systems. *MIS Q Manag Inf Syst* 11(3):369–386. <https://doi.org/10.2307/248684>
37. Walsham G (2006) Doing interpretive research. *Eur J Inf Syst* 15(3):320–330. <https://doi.org/10.1057/palgrave.ejis.3000589>
38. Berg BL, Lune H (2012) *Qualitative research methods for the social sciences*. Pearson, Boston
39. Glaser BG, Strauss AL (2009) *The discovery of grounded theory: strategies for qualitative research*. Aldine Trans
40. Graneheim UH, Lundman B (2004) Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 24(2):105–112. <https://doi.org/10.1016/j.nedt.2003.10.001>
41. Krippendorff K (2004) Reliability in content analysis: some common misconceptions and recommendations. *Hum Commun Res* 30(3):411–433. <https://doi.org/10.1093/hcr/30.3.411>

42. Perry C (1998) Processes of a case study methodology for postgraduate research in marketing. *Eur J Mark* 32(9/10):785–802. <https://doi.org/10.1108/03090569810232237>
43. Neuendorf KA (2017) *The content analysis guidebook*. Thousand Oaks, California <https://doi.org/10.4135/9781071802878>
44. Ryan GW, Bernard HR (2003) Techniques to identify themes. *Field Methods* 15(1):85–109. <https://doi.org/10.1177/1525822X02239569>
45. Ellis L (1993) *Research methods in the social sciences*. Brown & Benchmark, Madison, WIS
46. Wise L, Skues J, Williams B (2011) Facebook in higher education promotes social but not academic engagement. In: *ASCILITE 2011–Australas. Soc. Comput. Learn. Tert. Educ.* pp 1332–1342
47. Roblyer MD, McDaniel M, Webb M, Herman J, Witty JV (2010) Findings on facebook in higher education: a comparison of college faculty and student uses and perceptions of social networking sites. *Internet High Educ* 13(3):134–140. <https://doi.org/10.1016/j.iheduc.2010.03.002>