Evidence Based Library and Information Practice

Delivering Information Literacy via Facebook: Here Comes the Spinach!

A. F. Tyson, Anton Angelo, Brian McElwaine and Kiera Tauro

Volume 14, Number 2, 2019

URI: https://id.erudit.org/iderudit/1102267ar
DOI: https://doi.org/10.18438/eblip29532

See table of contents

Publisher(s)

University of Alberta Library

ISSN

1715-720X (digital)

Explore this journal

Cite this article

Tyson, A., Angelo, A., McElwaine, B. & Tauro, K. (2019). Delivering Information Literacy via Facebook: Here Comes the Spinach! *Evidence Based Library and Information Practice*, *14*(2), 33–50. https://doi.org/10.18438/eblip29532

Article abstract

Objective – Information literacy (IL) skills are critical to undergraduate student success and yet not all students receive equal amounts of curriculum-integrated IL instruction. This study investigated whether Facebook could be employed by libraries as an additional method of delivering IL content to students. To test whether students would engage with IL content provided via a library Facebook page, this study compared the engagement (measured by Facebook's reach and engagement metrics) with IL content to the library's normal marketing content.

Methods – We ran a two-part intervention using the University of Canterbury Library's Facebook page. We created content to help students find, interpret, and reference resources, and measured their reception using Facebook's metrics. Our first intervention focused on specific courses and mentioned courses by name through hashtagging, while our second intervention targeted peak assessment times during the semester. Statistics on each post's reach and engagement were collected from Facebook's analytics.

Results – Students chose to engage with posts on the library Facebook page that contain IL content more than the normal library marketing-related content. Including course-specific identifiers (hashtags) and tagging student clubs and societies in the post further increased engagement. Reach was increased when student clubs and societies shared our content with their followers.

Conclusion – This intervention found that students engaged more with IL content than with general library posts on Facebook. Course-targeted interventions were more successful in engaging students than generic IL content, with timeliness, specificity, and community being important factors in building student engagement. This demonstrates that academic libraries can use Facebook for more than just promotional purposes and offers a potential new channel for delivering IL content.

Evidence Based Library and Information Practice

Research Article

Delivering Information Literacy via Facebook: Here Comes the Spinach!

A. F. Tyson
Subject Librarian, Learning Teaching & Research
University of Canterbury
Christchurch, Canterbury, New Zealand
Email: fiona.tyson@canterbury.ac.nz

Anton Angelo
Research Data Coordinator, Learning Teaching & Research
University of Canterbury
Christchurch, Canterbury, New Zealand
Email: anton.angelo@canterbury.ac.nz

Brian McElwaine
Resource Discovery Manager, Access and Collections
University of Canterbury
Christchurch, Canterbury, New Zealand
Email: brian.mcelwaine@canterbury.ac.nz

Kiera Tauro
Subject Librarian, Learning Teaching & Research
University of Canterbury
Christchurch, Canterbury, New Zealand
Email: kiera.tauro@canterbury.ac.nz

Received: 20 Nov. 2018 **Accepted**: 18 Apr. 2019

DOI: 10.18438/eblip29532

Abstract

Objective – Information literacy (IL) skills are critical to undergraduate student success and yet not all students receive equal amounts of curriculum-integrated IL instruction. This study investigated whether Facebook could be employed by libraries as an additional method of delivering IL content to students. To test whether students would engage with IL content provided via a library Facebook page, this study compared the engagement (measured by Facebook's reach and engagement metrics) with IL content to the library's normal marketing content.

Methods – We ran a two-part intervention using the University of Canterbury Library's Facebook page. We created content to help students find, interpret, and reference resources, and measured their reception using Facebook's metrics. Our first intervention focused on specific courses and mentioned courses by name through hashtagging, while our second intervention targeted peak assessment times during the semester. Statistics on each post's reach and engagement were collected from Facebook's analytics.

Results – Students chose to engage with posts on the library Facebook page that contain IL content more than the normal library marketing-related content. Including course-specific identifiers (hashtags) and tagging student clubs and societies in the post further increased engagement. Reach was increased when student clubs and societies shared our content with their followers.

Conclusion – This intervention found that students engaged more with IL content than with general library posts on Facebook. Course-targeted interventions were more successful in engaging students than generic IL content, with timeliness, specificity, and community being important factors in building student engagement. This demonstrates that academic libraries can use Facebook for more than just promotional purposes and offers a potential new channel for delivering IL content.

Introduction

Students are increasingly using social media to communicate, disseminate information, and learn about the world around them. They tailor their online experience so that the information they are interested in comes to them with no searching required. At the University of Canterbury in New Zealand, the Library wanted to see if it was possible to leverage a social media platform to deliver information literacy (IL) content in a way that was convenient and useful to undergraduate students.

Undergraduate student success is positively associated with library use and the development of IL skills (Catalano & Phillips, 2016; Soria, Fransen, & Nackerud, 2014, 2017). This project sought to determine to what extent students would engage with IL content from a library Facebook page. Rather than making students come to us, we would go to them and give them tools they could use to successfully complete assignments. Prior to the intervention, the library had a Facebook page with 1921 followers, and this, along with the knowledge that Facebook worked well for the format of the content we intended to post, gave us a place to start.

We separated our approach into two distinct parts to identify the factors that influenced

engagement. In Semester One of 2017 we targeted specific large undergraduate courses, and using the course syllabi, posted relevant IL content timed to correspond to important assessments in each course. We also engaged with relevant student societies and other University Facebook groups by tagging them in our posts. In Semester Two, we were less specific with our approach and posted general IL content without targeting specific cohorts.

Literature Review

Much has been written about the potential uses of Facebook by academic libraries, but a scan of the literature suggests that libraries are still conservative in their use of social media. The literature is still largely instructional, providing information on how to use Facebook and suggesting best practice guidelines for developing an institutional page (Burkhardt, 2010; Mack, Behler, Roberts, & Rimland, 2007; Solomon, 2013; Wright Joe, 2015). Perhaps not surprisingly, recent content analyses of Facebook in academic libraries have found a focus on collection promotion and building connections between students and the library (Al-Daihani & Abrahams, 2018; Harrison, Burress, Velasquez, & Schreiner, 2017; Palmer, 2014; Phillips, 2011; Zhu, 2016). A 2017 analysis of six American academic library social media pages found three main themes: "making community connections", "creating an inviting environment", and "providing content" (Harrison et al., 2017, p. 254), with "content" defined as posts relating to archives, collections, and exhibits. While two early studies indicate potential for offering reference services via Facebook (Click & Petit, 2010; Mack et al., 2007), academic libraries continue to make "quite limited use" of Facebook with the platform used as a marketing tool or loudspeaker rather than for interaction or service provision (Aharony, 2012, p. 369).

Other disciplines have begun to explore more innovative uses of Facebook, including Facebook-based instruction. After finding that students already use social media networks such as Facebook to converse with their classmates regarding courses and assessment (Donlan, 2014; Towner & Lego Muñoz, 2011), researchers investigated the use of Facebook for formal learning, including language learning (Annamalai, 2016; Leier, 2017; Omar, Embi, & Yunus, 2012), tourism education (Chen, 2018), and sport coaching (Donlan, 2014). They found that formally assessed Facebook activities were not well-received by students, who struggled to maintain the formal strictures of educational assessment, such as appropriate language and deadlines, on an informal platform (González-Ramírez, Gascó, & Taverner, 2015; Leier, 2017). In addition, students may not wish to engage with their lecturers on Facebook (González-Ramírez et al., 2015), or only passively interacted with the Facebook page/group in question (Chugh & Ruhi, 2018). However, students reported appreciating being able to access academic material via Facebook (González-Ramírez et al., 2015), being able to access the resources and support posted on Facebook groups (Chen, 2018), and being able to use Facebook to access and post links (Donlan, 2014). The dominant finding in the literature is that Facebook is a useful platform for "enhancing learning, increasing participation and engagement, content dissemination, improving pedagogy and information sharing" (Chugh & Ruhi, 2018, p. 613).

The finding that using Facebook for informal learning, rather than formal learning, is better received by students raises the question of how to measure impact. While the use of formal assessment allows for student feedback or grade analysis from an identifiable student cohort, informal learning requires different metrics. Some studies of formal learning have used Facebook metrics to analyse student behaviour on the Facebook page, in addition to qualitative measures (Donlan, 2014; Leier, 2017). Core Facebook metrics for each post on a Facebook page include the number of likes ("comparable to a non-committal smile or a nod at something you like or that you were interested in", Mauda

& Kalman, 2016, p. 3527), shares ("where the user is suggesting to his or her own circle of friends to engage with a certain message", p. 3527), and comments ("comparable to expressing an opinion about a brand or an organization, or about their message", p. 3527). Other less visible engagement measures are the number of times visitors clicked on links within posts or viewed images/videos (Mauda & Kalman, 2016). Donlan (2014), in particular, noted that Facebook metrics are the best proxy for student use when participation is optional and cannot be systematically tested in any other way.

Thus far, library use of Facebook as a platform for developing students' IL skills has not been reported. Yet there is a strong body of literature on using Facebook as a pedagogical tool within traditional IL instruction settings. For example, the use of keywords and controlled vocabularies in databases has been compared to social practices such as tagging on Facebook; in addition, information-seeking behaviours fostered on the platform can be analogized to database searching (Bobish, 2011; Click & Petit, 2010; Godwin, 2009; Witek & Grettano, 2012). Teaching IL with reference to Facebook conventions indicates an awareness on the part of academic librarians that most students use Facebook (Akcaoglu & Bowman, 2016; Chugh & Ruhi, 2018). The popularity of Facebook in New Zealand is no different, with Facebook the dominant social media platform and 75% of New Zealanders visiting Facebook at least monthly (Nielsen, 2016, pp. 30-31).

While an early study found that students felt hesitant about communicating with library staff on Facebook (Chu & Meulemans, 2008), a more recent study found that students ranked Facebook as their preferred social media platform for communications from the library (Winn, Groenendyk, & Rivosecchi, 2015). This is indicative of how Facebook has become a default platform for everyday communication. Furthermore, students increasingly use social media for information seeking. A review of seven studies of secondary and tertiary students' use of social media found that social media "assist[ed] users in their request for information in combination with powerful search engines", with convenience being a major contributor to the use of social media (Hyldegård, 2014, p. 113). The research indicates that the role of Facebook in students' lives has been evolving, but academic libraries' use of Facebook has not, raising the question of how academic libraries can use Facebook to better engage with students and share educational content.

Aims

The aim of this project was to determine to what extent students will choose to engage with IL content from a library Facebook page. We sought to address the practical problem of how to reach students outside of traditional library services and identified Facebook as a potential platform for doing so. In particular, we wanted to provide undergraduate students with IL tools that would help them succeed at tertiary level study, while also building their awareness of the role the library plays in supporting their study.

Methods

Preparation

Facebook was chosen as the social media platform for delivering targeted content to students for the following reasons:

1. Our library already had a modest established audience of 1921 Facebook followers. Based on Facebook demographics, the majority of our audience was aged 18-34, and a large percentage had a location of Christchurch, leading to the assumption that a sizeable proportion of our followers were current University of Canterbury students.
2. Some platforms were discounted as impractical. For example, Snapchat

was not suitable because of the ephemeral nature of posts on that platform, and Twitter was considered too brief and too removed from our target undergraduate audience.

3. Facebook facilitated posting content in an appropriate format more easily than other platforms.
4. The literature indicated that more students would have a Facebook account than any other social media account (Nielsen, 2016).
5. Some groups that we hoped to work with, such as University of Canterbury's student engineering society, maintained a presence on Facebook.

Having determined that we wanted to deliver IL content via Facebook, we developed the following working definition of the term:

> Content that helps students search for, locate, evaluate and correctly reference information for their assignments.

Adapted from *The Australian and New Zealand Information Literacy Framework: Principles, Standards and Practice* (Bundy, 2004), this definition captures the specific information literacy skills we could reasonably deliver on this particular platform.

Located in Christchurch, New Zealand, the University of Canterbury is a research and teaching university, with 11 subjects ranked in the top 200 QS World University Rankings (University of Canterbury, n.d.). Undergraduate students are the dominant student group at the University of Canterbury, with 8810 undergraduate students (55% of the student population) in 2017 (Education Counts, 2017, tab ENR.30). It was hypothesized that by targeting large undergraduate classes in Semester One, we could reach the maximum number of students with each message (and avoid alienating other users with posts targeted at small cohorts). These large classes typically were in students' first year of study, as new students were the most likely to benefit from the bite-sized IL content we could provide via Facebook.

Prior to the start of the semester, we reached out to subject librarians and asked if they knew of any large-scale first year classes in their areas that were suited to having IL instruction delivered via Facebook. After choosing five classes that seemed suitable, the subject librarians contacted lecturers to ensure that they would be happy to direct their students to the library Facebook page. We were then given the syllabus for the course, and we planned our posts based on the individual course schedules so they included information that was known to be specifically useful for a forthcoming assessment. There was no further contact with lecturers past the initial green light for posting the content on Facebook, but many were supportive of our pilot program and promoted our Facebook page to their students, either in class or by sharing posts on Facebook.

Once suitable cohorts were identified, we used the University of Canterbury Students' Association website to identify appropriate student clubs to tag in our posts. With these pieces in place, a posting schedule was produced, detailing what would be written, by whom and when, and who we would tag in our posts to maximize the number of students reached. Posts were also hashtagged with the appropriate course code so students could readily identify them.[1]

Semester Two posts were targeted at the general student population. They still contained IL content but were not aimed at a particular cohort or discipline. It was decided that we would create content based on the general assessment schedule for the university. While this was not a written schedule, we know based on experience that many courses have assignments, midterms, and exams at similar points throughout the semester, and that

students all have similar needs at these times. For example, we know that at the beginning of the semester, students need to know how to find their textbooks in the library, whereas just before the midterm break lots of essays are due and APA referencing resources are useful. We wanted to determine whether our posts generated engagement because the content was generally useful, or because the content was well targeted. Since we were not targeting specific cohorts, we did not tag student clubs and other University pages in the posts or contact course coordinators. A posting schedule was also created for Semester Two, but it only detailed what would be written, by whom and when. We also tagged all our posts with the hashtag #DeadlinesAreComing, a riff on the popular "Winter is Coming" tagline from the Game of Thrones TV and book series. This hashtag could be clicked on, or searched by students so that all our IL posts for that semester would be viewable.

Posting

We focused on delivering bite-sized chunks of information that could be easily conveyed through short posts or infographics. Content included advertising just-in-time drop-in sessions focused on particular assignments, demonstrating specific IL skills (such as searching a web-scale discovery tool; see Figure 1 for an example), and promoting specific resources. Due to the relatively ephemeral nature of Facebook posts, we did not spend a lot of time on the creation of these posts, choosing instead to prioritize content over style.

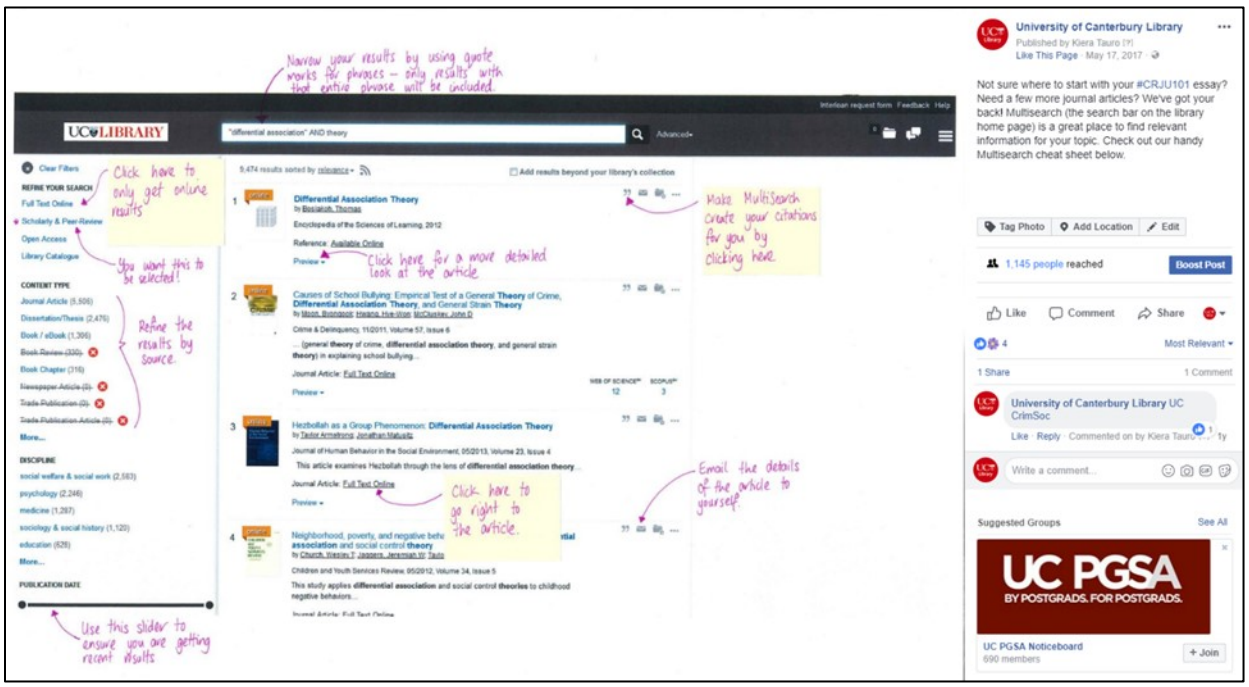

Figure 1
Example of an intervention post regarding how to use the library's web-scale discovery tool.

Intervention Posts and Non-Intervention Posts

All posts that were designed as part of this project are referred to as "intervention posts." During the current study, University of Canterbury library staff continued to create posts about opening hours, events, and other promotional material. These posts were distinct from those that contained IL content, and the statistics from these posts formed the "control group" against which the success of our IL posts would be judged. We divided our total population of Facebook posts over the study's time period into intervention posts and non-intervention posts.

- *Intervention Posts:* These posts to Facebook represent those developed as part of the study. They contained IL content developed by the research team. In Semester One, there were 38 intervention posts, 11 of which tagged student groups. In Semester Two, there were 30 intervention posts, all without tagging. A post was "tagged" when the intervention included an internal Facebook link to that group. It alerted the group's members that content relevant to them had been posted, and provided an opportunity for that group to share the post to their own followers.
- *Non-Intervention Posts*: All library posts that were not developed by the research team for the purpose of delivering IL material are considered to be non-intervention posts. In Semester One, there were 404 non-intervention posts, and in Semester Two there were 280.

All four authors crafted posts, so it was important to develop a consistent style and use of images and video. We wanted to have a generally informal style sprinkled with pop culture references and memes, in part to be consistent with students' expectations of the platform, and partly because we believed that students would respond better to this than to a more formal approach. Our most social media-savvy team members vetted and edited our posts, which served to ensure consistency and to mitigate the risks of using inappropriate memes or images. This was typically just a quick glance over the posts to ensure that tone and content were appropriate for both the platform and the audience. There is a genuine risk attached to using cultural references and memes without fully understanding them, and it is important to be aware of the nuances of how specific memes are used before posting to help manage risk.

Metrics

The final work in the preparation stage of the project was to consider the tools we would use to assess the impact of the IL posts. This requires a few definitions surrounding the metrics available on Facebook, which are not always transparent.

- *Reach*: The number of people who had any content from a page or post, or about the page or post, enter their newsfeed ("What's the difference between page views, reach and impressions?" n.d.). It can be seen as a measure of how widely a message has been disseminated.
- *Engagement*: The number of actions whereby users "engaged" with the content of a post or page ("Post engagement," n.d.). Watching a video, clicking a link, liking, commenting, sharing, etc., all constitute engagement. It can be seen as a measure of how interesting or useful the content is to the user, since most users are not motivated to "engage" with content that does not have value to them.
- *Paid vs. Organic*: For most of Facebook's metrics, a distinction is made between paid and organic numbers. Paid numbers have arisen from financial

> investment in advertising with Facebook. Organic numbers are those that have arisen without being paid for ("What's the difference between organic, paid and post reach?" 2018). As there was no budget for this project, all numbers presented in this study are organic.

Raw data was extracted from Facebook at the end of each semester: June 12, 2017 and November 9, 2017, via Facebook's "Insights" function. It has been reported that Facebook posts attract the majority of their engagement within 24 hours of posting, a phenomenon we also observed in the course of this study (Ayres, n.d.). Therefore, the timing of data collection will not have impacted the measures of engagement.

Analysis of Results

We used reach and engagement as a proxy measure for success of the intervention and as an indication of the value students were placing on the content, as we could not directly measure the effectiveness of instruction. We hypothesized that students would engage more with content that was useful to them and that reach may also correlate with topics of potential interest. We decided to compare intervention posts with the general posts produced by the library, believing that our best chance of demonstrating value lay in comparing reach and engagement between non-intervention and intervention posts.

Results

Targeting individual courses and tagging relevant student clubs and University groups in posts resulted in greater median engagement and reach than other posts on our page.

Table 1 shows the reach that the University of Canterbury library Facebook page posts had during Semester One and Semester Two in 2017. Semester One intervention posts reached a median of 1012 and a mean of 1106 people, compared to a median of 464 and mean of 613 people reached with the non-intervention posts during the same period. Posts that were part of the intervention in Semester Two were less successful and reached a median of 530 and a mean of 531 people, compared to a median reach of 521 and a mean of 668 for non-intervention posts. Overall, when looking at the median numbers, intervention posts in Semester One reached 118% more people than non-intervention posts, which is significantly higher than in Semester Two, when intervention posts reached only 2% more people.

Figure 2 shows a comparison between Semester One intervention posts and Semester One non-intervention posts. There was greater variance among non-intervention posts, and Semester One intervention posts reached a considerably greater readership than non-intervention posts.

Figure 3 shows reach figures for all posts, intervention and non-intervention, for both semesters. In Semester Two, where specific groups were not targeted, there was little difference between the reach of intervention and non-intervention posts. Viewing the data this way shows that the Semester One targeted posts performed above all other groups.

Table 2 shows the median and mean engagements per post. Intervention posts in Semester One had a greater mean and median rate of engagement than non-intervention posts from both semesters, as well as intervention posts in Semester Two. In Semester One, intervention posts had a 136% higher median engagement rate than non-intervention posts, while in Semester Two there was only a 67% increase in engagement between intervention and non-intervention posts.

Table 1
Comparison of Reach between Intervention and Non-Intervention Posts in Semesters One and Two

	Semester One			**Semester Two**		
	Intervention Posts (n = 38)	**Non-Intervention Posts (n = 404)**	**Percent Change**	**Intervention Posts (n = 30)**	**Non-Intervention Posts (n = 280)**	**Percent Change**
Median	1012	464	+118%	530	521	+2%
Mean	1106	613	+66%	531	668	-21%

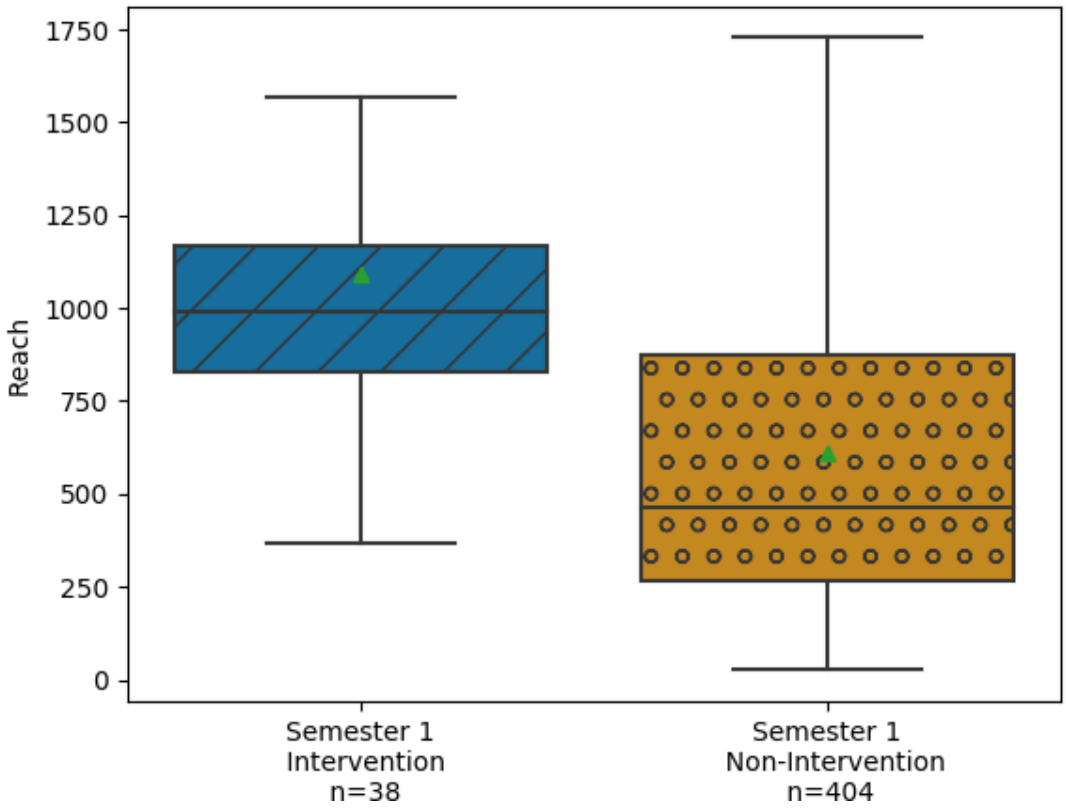

Figure 2
Semester One Reach: intervention posts vs. non-intervention posts. Outliers have been removed to improve the readability of the figure.

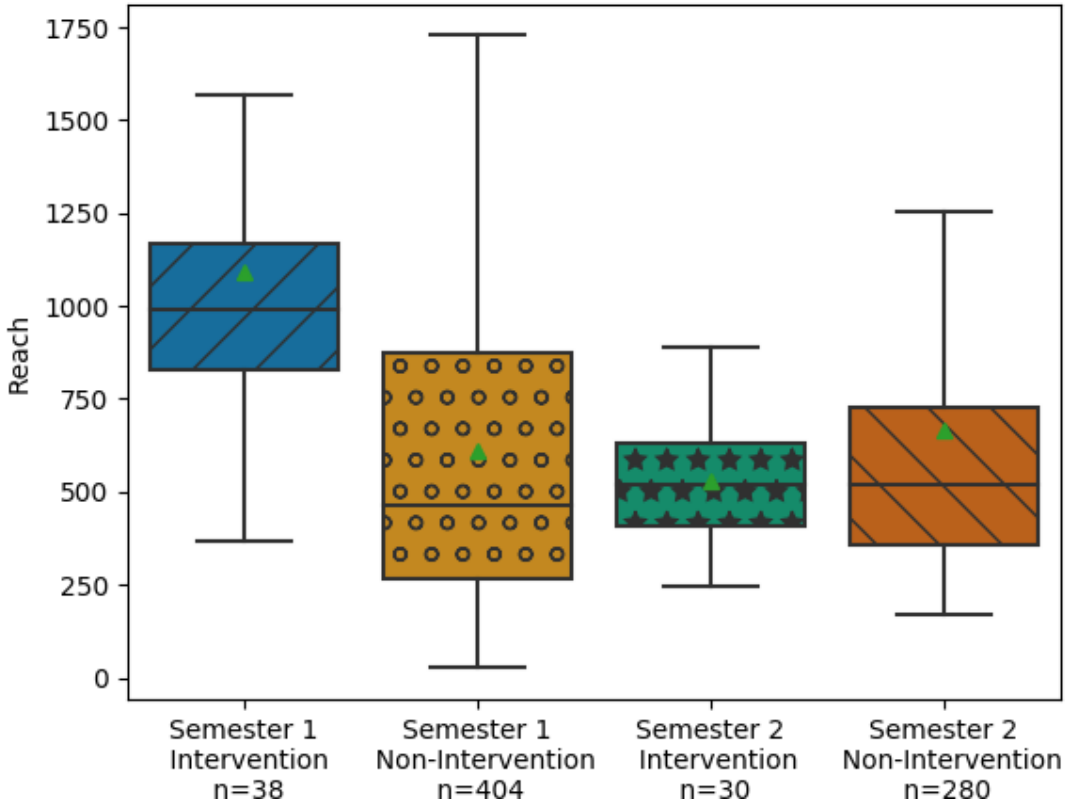

Figure 3
Semester One and Semester Two Reach comparison. Outliers have been removed to improve the readability of the figure.

Table 2
Comparison of Engagement between Intervention and Non-Intervention Posts in Semesters One and Two

	Semester One			**Semester Two**		
	Intervention Posts (n = 38)	**Non-Intervention Posts (n = 404)**	**Percent Change**	**Intervention Posts (n = 30)**	**Non-Intervention Posts (n = 280)**	**Percent Change**
Median	26	11	+136%	15	9	+67%
Mean	42	20	+110%	19	24	−21%

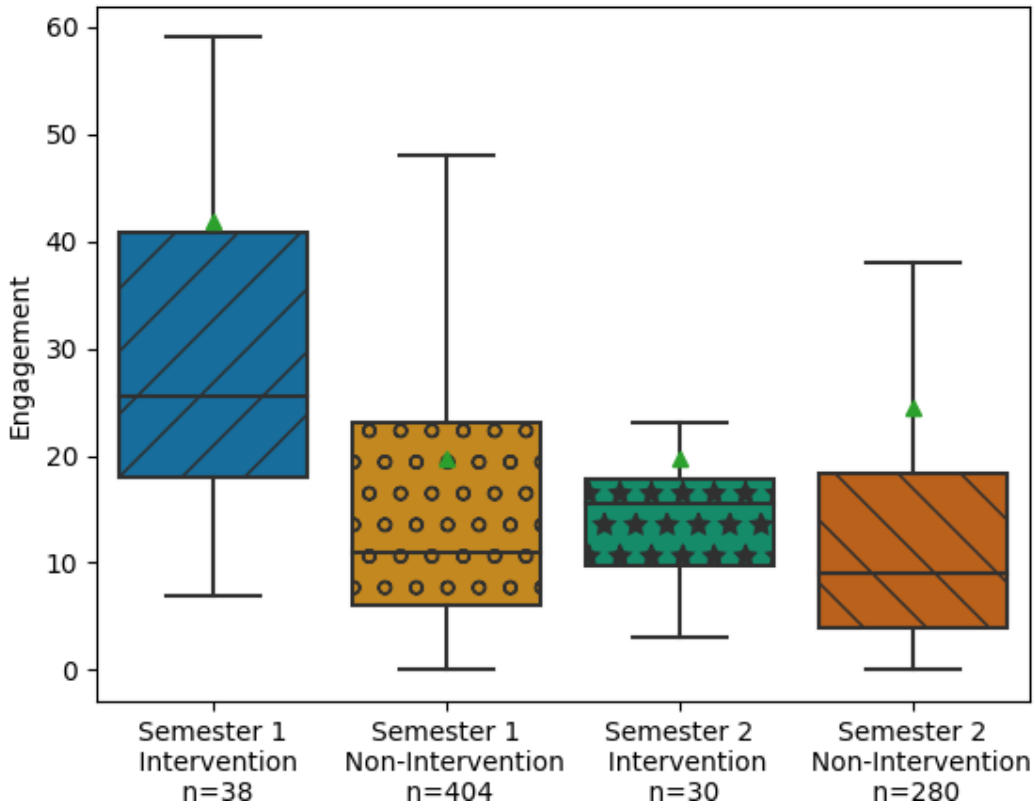

Figure 4
Semester One and Semester Two engagement: intervention posts vs. non-intervention posts. Outliers have been removed to improve the readability of the figure.

Figure 4 shows a comparison of intervention posts and non-intervention posts across both semesters. Semester One intervention posts received greater engagement than other post types, with Semester Two intervention posts performing similarly to non-intervention posts in terms of engagement.

Table 3 indicates posts that tagged student clubs showed higher reach and engagement. Intervention posts where a club was tagged reached a median of 1262 people, compared to a median of 1012 for all intervention posts. The mean reach for the tagged intervention posts was 1803, a substantial increase from the 1106 people reached for all intervention posts. Engagement on posts where we tagged student groups was also greater; the median engagement for intervention posts with clubs tagged was 46, and only 26 for all intervention posts.

There was one IL post that had such large reach and engagement that it needed to be looked at more closely. Figure 5 shows the median level of engagement a typical project post received, compared to that of this outlier post. During Semester One, stage one engineering students are required to complete an assignment that requires use of library resources. The engineering Subject Librarians created a LibGuide that contained information and materials that could help students complete their assignment. The week before the due date, this guide was promoted on the University of Canterbury Library Facebook page. Relevant student clubs and departments were tagged in the post, and it was shared by the Engineering

Table 3
Comparison of Reach and Engagement between Intervention Posts and Intervention Posts that Tagged Clubs

REACH	**Intervention Posts - Clubs Tagged (n =11)**	**Intervention Posts (n = 38)**
Median	1262	1012
Mean	1803	1106
ENGAGEMENT	**Intervention Posts - Clubs Tagged (n =11)**	**Intervention Posts (n =38)**
Median	46	26
Mean	88	42

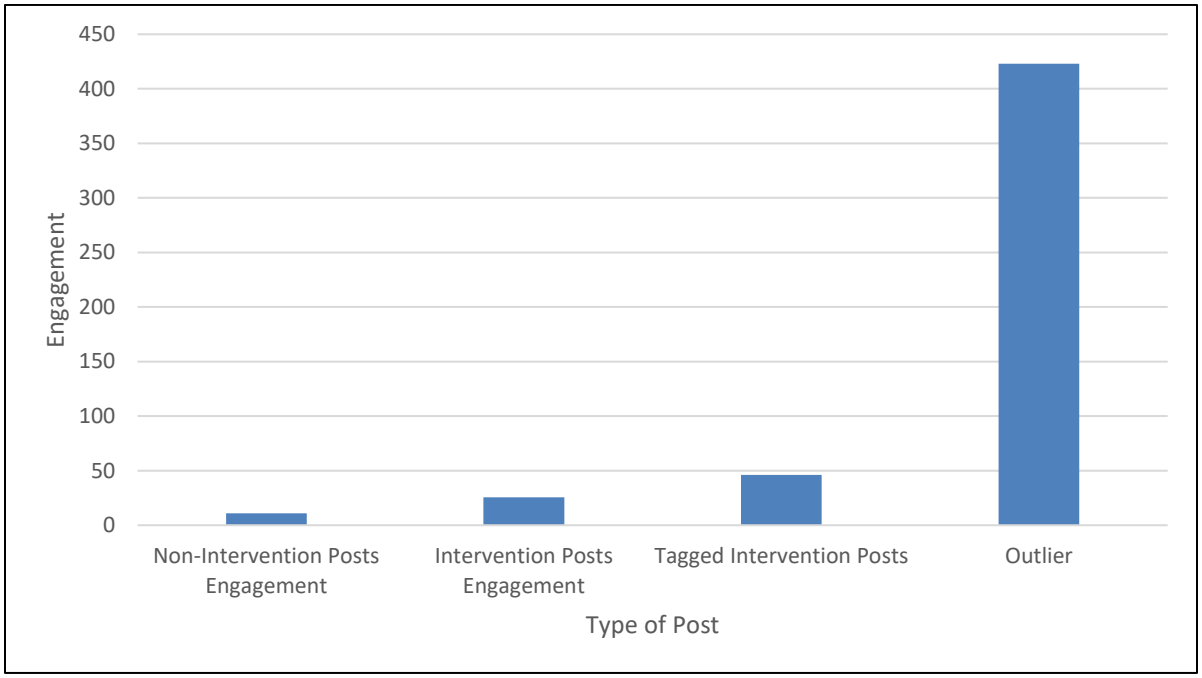

Figure 5
Engagement for outlier post compared with non-intervention, intervention, and tagged intervention posts in Semester One.

student society and the College of Engineering Facebook pages, eventually reaching 5159 people. There were 29 comments on the post, many of which were students tagging their friends to ensure they would see it. There were also instances of non-engineering students tagging friends or family members who were in the engineering course. Even if the post was not directly relevant to the individual, they were tagging someone for whom it would be useful to ensure that they would not miss it. One hundred thirty-one people clicked on the link to the subject guide, and Facebook recorded 456 "other clicks" (which are clicks not on the post content, but on the institutional page or a "see more" link). This post had 410% increased reach and 1538% increased engagement, compared to the median for all intervention posts.

Discussion

Our Facebook followers clicked on, liked, and shared posts we describe as "spinach"—content that is informative rather than exciting—more than the content we normally post to develop community, market our services, and entertain. We propose that two factors influence the extent to which students pay attention to posts with IL content: timeliness and specificity, and community.

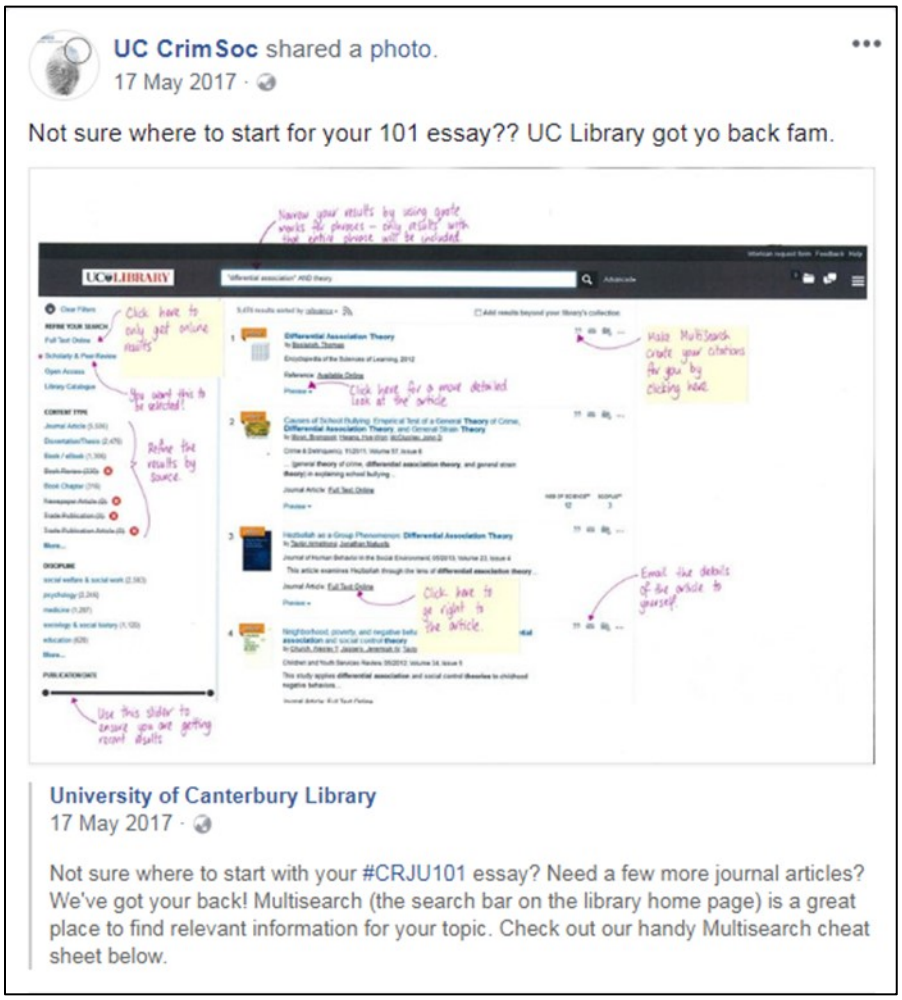

Figure 6
A student club sharing an intervention post on their Facebook page.

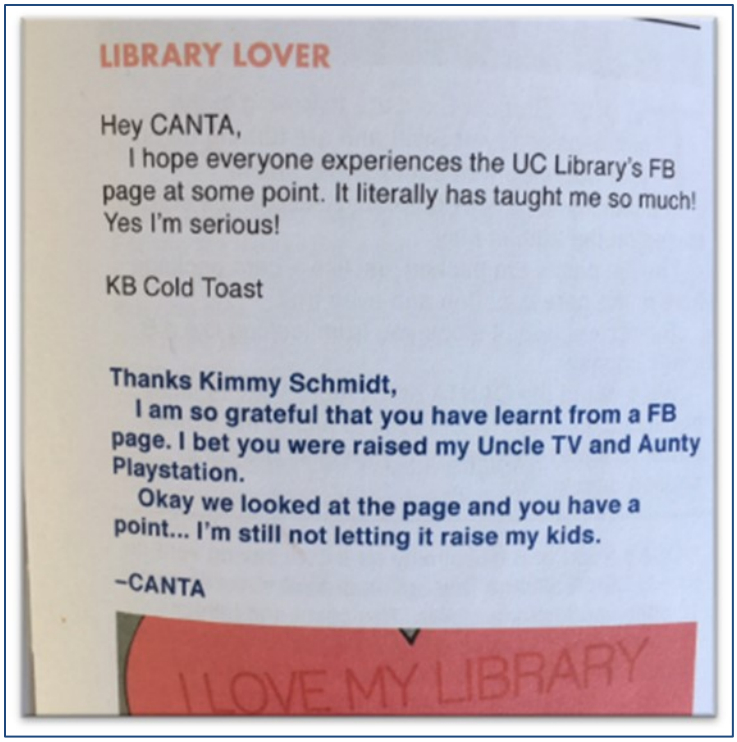

Figure 7
A complimentary letter regarding the library's Facebook page published in the student magazine.

Timeliness and Specificity

In Semester One, we targeted particular student courses with timely content; in Semester Two, we targeted our content at peak assessment times for undergraduate students as a whole. The reach of the Semester Two posts was comparable to non-intervention posts, while Semester One posts had a 118% higher median reach than non-intervention posts. The fact that Semester One posts had greater reach than Semester Two posts indicates that while timeliness is important, it cannot easily be disentangled from specificity. Providing IL content "just-in-time" while targeting cohorts' specific IL needs was the most effective way to improve reach to students. This is a more labour-intensive means of providing IL content via Facebook, but it provides increased reach.

Community

Positive community interaction with the intervention posts on Facebook took two forms. First, student clubs and societies shared our posts after they had been tagged. Second, broader communities of students' friends and colleagues shared posts on their personal Facebook timelines or tagged friends into our posts in comments. When clubs were tagged in posts, our median engagement increased by 77%.

We propose that tagging posts increased our reach beyond the newsfeed of followers of our institutional page. In addition, the peer recommendation implicit in a share adds authority to the content as the social capital of the tagger is added to the message. While it is difficult to quantify the effect of students tagging each other, it is not to be underestimated. For example, Figure 6 shows a student society sharing a post with their community with positive feedback.

An unanticipated benefit was building positive relationships between the library and student

clubs and societies. While we had some trepidation about how they would react to being tagged in posts, not only did they frequently re-share tagged posts, but we received feedback from clubs who appreciated our attention and the exposure the library provided. Positive feedback also came from unexpected places, such as a letter published in the University of Canterbury student magazine (Figure 7). While only representative of one student's opinion, it indicates that Facebook can be an effective platform for providing IL content.

Workload

In order for the project to have as little impact as possible on existing staff workload, the materials we developed were deliberately informal, making use of screenshots annotated with handwriting and post-it notes. Other options, such as creating professional infographics or high production standard videos were rejected on the grounds of cost and speed. We believe that students responded well to the informal content and that investing more time or resources would not guarantee a higher level of reach and engagement.

Limitations and Further Study

Our colleagues' support of the library's Facebook page may have artificially raised our reach and engagements when they liked and shared posts. We think the effect of this is minor in terms of evaluating the success of our intervention because their engagement was equally spread over intervention and non-intervention posts. Nonetheless, we would recommend that anyone replicating this research may want to set a policy for their own colleagues to not like or share their posts while they are testing the effect of their intervention. While we believe we have shown that students have an appetite for IL content on Facebook, we have not assessed whether students have improved IL skills as a result of this intervention. Future studies could test a sample of students before and after an intervention, or survey those that marked assignments to see if the students demonstrated improved IL skills.

Potential confounding factors for this study include ways students may have been drawn to our Facebook posts other than tagging. For example, a suggestion from a tutor or lecturer to check them out, or coverage in student media could have increased our reach.

Using Facebook to deliver a service could be seen as inequitable since not all students use it. However, none of the IL content delivered via Facebook was unique to this platform. The library offers numerous other portals where this content can be accessed by any student; providing IL via Facebook does not disadvantage any other users and in fact offers an opportunity to reach students who may not have been reached through traditional library channels.

Finally, consideration needs to be given to the Facebook algorithm which determines the content of an individual's feed; we have no control over it, and cannot say whether it benefited or hindered us. Furthermore, Facebook is constantly adjusting its algorithm with different goals than those of the library, so directly replicating this study would be difficult. While we believe Facebook is a valuable platform for providing IL content given the pre-eminence of social media in students' lives, it is important to acknowledge that libraries relinquish an element of control in using this platform.

Conclusion

Students responded positively to IL material delivered on Facebook, provided that it was timely for assessment and targeted at specific groups. Under circumstances where substantial, timely help is offered to a large cohort, this positive response was further amplified. We interpret these increases, particularly in engagement, to indicate that students perceived value in what was being provided and that

including the wider university social community amplified our message and helped to build relationships.

The effect was not apparent when specific student groups were not targeted. Under these circumstances, there was little deviation from the performance of non-intervention posts. Our results suggest that, given timely, relevant, and specific IL content, students will engage with IL content on Facebook.

References

Aharony, N. (2012). Facebook use in libraries: An exploratory analysis. *Aslib Proceedings, 64*(4), 358-372. https://doi.org/10.1108/00012531211244725

Akcaoglu, M., & Bowman, N. D. (2016). Using instructor-led Facebook groups to enhance students' perceptions of course content. *Computers in Human Behavior, 65*, 582-590. https://doi.org/10.1016/j.chb.2016.05.029

Al-Daihani, S. M., & Abrahams, A. (2018). Analysis of academic libraries' Facebook posts: Text and data analytics. *The Journal of Academic Librarianship 4*(2), 216-225. https://doi.org/10.1016/j.acalib.2018.02.004

Annamalai, N. (2016). Exploring the writing approaches in the Facebook environment. *Teaching English with Technology, 16*(1), 71-87. Retrieved from http://www.tewtjournal.org

Ayres, S. (n.d.). Shocking new data about the lifespan of your Facebook posts. Retrieved February 9, 2019, from https://www.postplanner.com/lifespan-of-facebook-posts/

Bobish, G. (2011). Participation and pedagogy: Connecting the social web to ACRL learning outcomes. *The Journal of Academic Librarianship, 37*(1), 54-63. https://doi.org/10.1016/j.acalib.2010.10.007

Bundy, A. (2004). Australian and New Zealand information literacy framework: Principles, standards and practice. Retrieved from http://archive.caul.edu.au/info-literacy/InfoLiteracyFramework.pdf

Burkhardt, A. (2010). Social media: A guide for college and university libraries. *College & Research Library News, 71,* 10-12, 24. Retrieved from https://crln.acrl.org/index.php/crlnews/issue/archive

Catalano, A., & Phillips, S. (2016). Information literacy and retention: A case study of the value of the library. *Evidence Based Library and Information Practice, 11*(4), 2-13. https://doi.org/10.18438/B82K7W

Chen, M. M. (2018). Students' perceptions of the educational usage of a Facebook group. *Journal of Teaching in Travel & Tourism, 18*(4), 332-348. https://doi.org/10.1080/15313220.2018.1434448

Chu, M., & Meulemans, Y. N. (2008). The problems and potential of MySpace and Facebook usage in academic libraries. *Internet Reference Services Quarterly, 13*(1), 69-85. https://doi.org/10.1300/J136v13n01_04

Chugh, R., & Ruhi, U. (2018). Social media in higher education: A literature review of Facebook. *Education and Information Technologies, 23*(2), 605-616. https://doi.org/10.1007/s10639-017-9621-2

Click, A., & Petit, J. (2010). Social networking and Web 2.0 in information literacy. *International Information and Library*

Review, 42(2), 137-142. https://doi.org/10.1016/j.iilr.2010.04.007

Donlan, L. (2014). Exploring the views of students on the use of Facebook in university teaching and learning. *Journal of Further and Higher Education, 38*(4), 572-588. https://doi.org/10.1080/0309877X.2012.726973

Education Counts. (2017). *Provider-based enrolments* [Data set]. Retrieved from https://www.educationcounts.govt.nz/statistics/tertiary-education/participation

Godwin, P. (2009). Information literacy and Web 2.0: Is it just hype? *Program: Electronic Library and Information Systems, 43*(3), 264-274. https://doi.org/10.1108/00330330910978563

González-Ramírez, R., Gascó, J. L., & Taverner, J. L. (2015). Facebook in teaching: Strengths and weaknesses. *The International Journal of Information and Learning Technology, 32*(1), 65-78. https://doi.org/10.1108/IJILT-09-2014-0021

Harrison, A., Burress, R., Velasquez, S., & Schreiner, L. (2017). Social media use in academic libraries: A phenomenological study. *The Journal of Academic Librarianship, 43*(3), 248-256. https://doi.org/10.1016/j.acalib.2017.02.014

Hyldegård, J. (2014). Young learners' use of social media for information seeking: Exploring core LIS journals from 2010-2014. *LIBRES: Library and Information Science Research Electronic Journal, 24*(2), 108-117. Retrieved from https://www.libres-ejournal.info/1404/

Leier, V. M. (2017). Learning language through Facebook. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 7*(3), 40-57. https://doi.org/10.4018/IJCALLT.2017070103

Mack, D., Behler, A., Roberts, B., & Rimland, E. (2007). Reaching students with Facebook: data and best practices. *E-JASL: The Electronic Journal of Academic and Special Librarianship, 8*(2). Retrieved from http://southernlibrarianship.icaap.org/indexv8.html

Mauda, L., & Kalman, Y. M. (2016). *Characterizing quantitative measures of user engagement on organizational Facebook pages*. Paper presented at the 49th Hawaii International Conference on System Sciences, Koloa, HI https://doi.org/10.1109/HICSS.2016.442

Omar, H., Embi, M. A., & Yunus, M. M. (2012). ESL learners' interaction in an online discussion via Facebook. *Asian Social Science, 8*(11), 67-74. https://doi.org/10.5539/ass.v8n11p67

Nielsen. (2016). *Media trends 2016: How New Zealanders consume newspapers, magazines, TV, radio & digital content* Retrieved February 9, 2019, from http://www.nielsen.com/nz/en/insights/reports/2016/new-zealand-media-trends-2016.html

Palmer, S. (2014). Characterizing university library use of social media: A case study of Twitter and Facebook from Australia. *Journal of Academic Librarianship, 40*(6), 611-619. https://doi.org/10.1016/j.acalib.2014.08.007

Phillips, N. K. (2011). Academic library use of Facebook: Building relationships with students. *Journal of Academic Librarianship, 37*(6), 512-522. https://doi.org/10.1016/j.acalib.2011.07.008

"Post engagement" (n.d.). Retrieved February 9, 2019, from https://www.facebook.com/business/help/735720159834389

Solomon, L. (2013). *The librarian's nitty-gritty guide to social media* (4th ed.). Chicago, IL.: ALA Editions.

Soria, K. M., Fransen, J., & Nackerud, S. (2014). Stacks, serials, search engines, and student success: First-year undergraduate students library use, academic achievement, and retention. *Journal of Academic Librarianship, 40*(1), 84-91. https://doi.org/10.1016/j.acalib.2013.12.002

Soria, K. M., Fransen, J., & Nackerud, S. (2017). Beyond books: the extended academic benefits of library use for first-year college students. *College & Research Libraries, 78*(1), 8-22. https://doi.org/10.5860/crl.78.1.8

Towner, T. L., & Lego Muñoz, C. (2011). Facebook and education: A classroom connection? In C. Wankel (Ed.), *Educating educators with social media* (pp. 33-57). https://doi.org/doi:10.1108/S2044-9968(2011)0000001005

University of Canterbury. (n.d.). University ranking. Retrieved from https://www.canterbury.ac.nz/get-started/why-uc/prestigious/top-uni/university-ranking/

"What is tagging and how does it work?" (n.d.). Retrieved February 9, 2019, from https://www.facebook.com/help/124970597582337/

"What's the difference between organic, paid and post reach?" (2018). Retrieved February 9, 2019, from https://www.facebook.com/help/285625061456389?helpref=uf_permalink

"What's the difference between page views, reach and impressions?" (n.d.). Retrieved February 9, 2019, from https://www.facebook.com/help/274400362581037?helpref=uf_permalink

Winn, D., Groenendyk, M., & Rivosecchi, M. (2015). Like, comment, retweet: Identifying students' social media preferences for receiving library communications. *Partnership: the Canadian Journal of Library and Information Practice and Research, 10*(2), 1-14. https://doi.org/10.21083/partnership.v10i2.3449

Witek, D., & Grettano, T. (2012). Information literacy on Facebook: An analysis. *Reference Services Review, 40*(2), 242-257. https://doi.org/10.1108/00907321211228309

Wright Joe, J. (2015). Assessment of social media in the library: Guidelines for administrators. *Journal of Library Administration, 55*(8), 667-680. https://doi.org/10.1080/01930826.2015.1085251

Zhu, Q. (2016). The application of social media in outreach of academic libraries' resources and services. *Library Hi Tech, 34*(4), 615-624. https://doi.org/10.1108/LHT-05-2016-0055