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Harnessing Yik Yak for Good: a Study of Students' Anonymous Library Feedback

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Abstract:

This study explores academic libraries' potential uses of the mobile application Yik Yak, with particular focus on patrons' anonymous feedback about library services and spaces. Over a 232-day period, the authors observed the Yik Yak feed for their university and recorded all yaks related to the library. A content analysis of the 249 library-related yaks found six distinct purposes that these library-related yaks served, from the perspective of the patron, that are of interest to the library: asking questions about library services; reporting problems with library spaces; reprimanding violations of and encouraging adherence to library policies; sharing compliments about library services; demonstrating need for improved library services; and discussing and offering feedback about library programs. This study reveals several opportunities for academic libraries to engage with Yik Yak in order to serve their patrons better, including providing virtual reference services, monitoring problems within the building, developing proactive approaches to policy enforcement, gathering honest and continuous feedback about the library's strengths, and identifying opportunities to improve and expand services. Implications for practice are discussed.

Keywords:

Introduction

Yik Yak is a relatively young social media application that is widely popular on many college campuses. Users sign up and post anonymously, and these posts (hereafter "yaks") are visible to those within a limited location-based radius. *The Chronicle of Higher Education* frequently features articles/blog posts about Yik Yak, and most of these pieces are negative (Fabris 2015; Thomason 2015; Zamudio-Suaréz 2016). However, the authors of this study believe that there is value in this application; it allows users to discuss campus issues honestly and anonymously. After seeing frequent posts about the library on their campus's Yik Yak feed, the authors designed a longitudinal study to harvest those yaks over a period of seven and a half months to see if useful feedback could be culled from these anonymous posts.

The objectives of this study were to determine the following: what Valparaiso University users are saying about the library when they are speaking freely and anonymously; whether there are themes/recurring library issues being discussed; and whether any of this feedback can be used as actionable items to improve library services and spaces. [1]

Literature Review

Academic Libraries' Engagement with Social Media

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[1] This study reproduces verbatim many posts made by college students on Yik Yak. In order to capture the realities of how students use this social media app, the authors did not censor the explicit content of students' posts. Some of the language used in this study might be offensive to certain readers.

Academic libraries were early experimenters with social media. Early "Web 2.0" tools such as blogs, wikis, RSS feed aggregators, and social bookmarking tools offered academic libraries new means of connecting with their users, mostly for the purposes of event promotion and information sharing (Bordeaux and Boyd 2007; Clyde 2004; Rethlefsen et al. 2006) . With the development and popularity of social networking sites such as Facebook and Twitter, libraries' adoption of social media expanded exponentially in just a few years (Mahmood and Richardson Jr. 2013). More recently, academic libraries have expanded their social media presences into newer platforms, including Vine, Pinterest and Instagram (Burgert, Nann, and Sterling 2014; Morehart 2013; Ramsey and Vecchione 2014). The reasons why libraries use social media include: marketing events and services (Bosque, Leif, and Skarl 2012; Shulman, Yep, and Tomé 2015); answering reference questions (Young 2014; Youngkin 2014); developing learning networks by connecting researchers with resources (Hricko 2010); increasing library visibility (Mathews 2006); and general patron engagement (Abdullah et al. 2015).

Scholars have questioned whether librarians ought to use social media in an official capacity and, if so, how best to proceed. Dickson and Holley (2010) saw the benefit of using social media to reach students at their point of need, but they cautioned that user privacy must be respected, and that in order to be effective, such outreach efforts must keep students' perceptions in mind. Connell's findings supported this imperative to respect privacy; while the majority of first-year undergraduates surveyed reported being receptive to accepting a library's friend request on social media, a sizable minority (25.1 percent) would reject the library's invitation to connect. Many students also claimed that they would either ignore (36.6 percent) or ignore *and* resent (12.3 percent) any attempts by the library to contact them through social media (2009, 31). The

purposes for building a social media presence have also been examined. Jacobson's (2011) study of how library Facebook pages were actually being used found that such pages were much more useful as marketing and promotion tools than as forums for patron discussion or feedback.

The Gathering of Anonymous Feedback in Libraries

Despite the profusion of reasons as to why libraries use social media, one purpose that seems to be mostly overlooked in the literature is the gathering of patron feedback. One such perspective was provided by Bell (2012), who wrote about the value of Twitter as a "digital listening post" for academic libraries. He stressed the importance of monitoring Twitter in order to know what users are saying about the library. Twitter allows for "passive monitoring," without giving patrons the eerie feeling of being watched. Bell believed these tweets could be used to improve services and the overall library experience (220). Fernandez (2009) also recognized the potential for libraries to use social media to listen to users' input; he suggested that patrons could use social media to propose new services and resources. The potential for using social media to gather patron feedback about library services and spaces appears promising and is worth further consideration.

The intrigue of Yik Yak is not simply that it is a platform on which library users can share feedback but, more importantly, that this feedback is anonymous. Although libraries are constantly eliciting input from patrons about different aspects of public services, patrons do not always have the option to remain anonymous in their comments. It is likely that confidentiality would encourage patrons to be more open and honest than they might be otherwise. Thompson

(2010) observed that patrons are more likely to ask questions about sensitive topics at a virtual reference desk rather than in person. The author theorized that the anonymity of the virtual environment eliminates two factors that might normally discourage such sensitive questions: community perceptions and staff reaction (172). Despite librarians' commitment to neutrality, a patron still might worry what other community members within earshot would think. Grabarek Roper and Sobel (2012) investigated the transcripts of instant messaging reference transactions at an academic library and found that patrons disclosed very little of their own personally identifying information, such as gender or year of study. The authors concluded that the rampant anonymity in the virtual environment had no negative impact on the quality of the reference transaction and, in fact, might attract certain users who would avoid face-to-face reference (314). It is possible that the anonymity of Yik Yak could give our students the freedom to post comments that they would not normally share face-to-face with a library staff member or with another patron.

The Potential for Yik Yak as Anonymous Feedback Tool

Much of the national conversation surrounding Yik Yak has been negative. Its anonymity allows users to get away with expressing sentiments that would never be acceptable in face-to-face public forums, including misogynistic, racist, and threatening statements (Tyler 2015). In the most extreme example, a student at the University of Mary Washington was murdered in 2015, following a weeks-long saga in which she and other members of her feminist student organization received threats for raising concerns about misogyny on campus and on the university's Yik Yak feeds (Cohan 2016). Her murder, and other instances of Yik Yak-based

harassment on college campuses, led a coalition of advocacy groups to petition the US Department of Education Office of Civil Rights in 2015, asking that office to remind institutions of higher education of their responsibilities in situations where anonymous social media applications, such as Yik Yak, are used to harass or intimidate students based on sex or race (Volokh 2015). In fact, numerous universities have banned Yik Yak on their campuses' wireless internet networks in response to complaints about yaks that are bullying, harassing or threatening in nature (Rubbelke 2015; Zamudio-Suaréz 2016).

Despite the negative attention it has received, students are still using Yik Yak. Black, Mezzina, and Thompson (2016) examined three days' worth of Yik Yak posts from 42 different US college campuses in order to investigate the nature of students' yaks (n = 4,001). Their analysis found that, although yaks that included profanity (13.5 percent) or that were related to drugs and alcohol (6.6 percent) were frequent, the majority of yaks were seemingly benign. By and large, these yaks reflected what the authors considered normative and expected college behaviors (21). Their study did not find evidence of rampant racist or hate speech, and the authors encouraged further studies of the application to understand the effects of anonymous social media. This article seeks to fill a gap in the library science literature by exploring the potential uses of Yik Yak specifically by academic libraries, with particular focus on the application's utility as a venue for collecting patrons' anonymous feedback about library services and spaces.

Background

Yik Yak

Yik Yak was launched in 2013. Available only on mobile platforms, Yik Yak allows users to post anonymous messages that are visible to other users who are nearby, within a radius of 1.5 to 10 miles, depending on the volume of posts (Stoller 2015). Yakkers can also set up a "basecamp" for when they are away from campus so they can still post and engage with their campus community. Users can anonymously comment on others' yaks and can "upvote" or "downvote" yaks in a show of approval or disapproval, respectively. Once a yak receives a net 5 downvotes, it is removed from the feed (Yik Yak 2016). Yik Yak is thus subject to community self-regulation; users enforce the application's rules against bullying, spamming and revealing others' personal information by downvoting offending yaks.

In April 2015, shortly before this study began, Yik Yak created reply icons (Yik Yak 2015). If a post's author comments on his or her post, the author is given the OP icon (short for "original poster"). Other commenters are given unique icons for that post, but those icons do not follow them from post to post. These icons help provide context to conversations, allowing users to easily identify both the OP and repeat commenters. Often, people will direct their comments to specific individuals (e.g., red socks), allowing for directed conversations (see Figure 1).

[PLACE FIGURE 1 HERE]

During the period of this study, it was not possible to identify the size of the active community, known as the herd. After the study ended, Yik Yak enabled a feature to view local yakkers currently online, which allows an inelegant way to manually count the online population, but not the active population over a period of days.

Valparaiso University

Valparaiso University is a comprehensive, private, primarily undergraduate, master's degree granting institution located in northwest Indiana. Valpo has seven colleges, and as of fall 2015 had about 4,300 full time equivalent (FTE) students. There are two libraries serving campus. The law school has its own library, but the rest of campus is served by the Christopher Center for Library and Information Resources (CCLIR).

The CCLIR was built in 2004 and consists of four floors. The building houses several departments that do not fall under the library administratively. In addition to the primary occupant, Library Services, CCLIR houses the Academic Success Center (tutoring), Information Technology's (IT's) public service desk, Disability Support Services, the Writing Center, and Grinders Coffee Shop. All of these services are housed on the first floor. At the time of this study, the Christopher Center also housed the office that manages both the OneCard (campus ID services) and Parking and Transportation services; this office has since moved to the Union.

Noise levels in the building vary by floor. The first and second floors are noisier, while the third and fourth floors are the library's designated quiet floors. The upper two floors contain 18 group study rooms (nine per floor) of varying sizes. Talking at a reasonable volume within the rooms with the doors shut is permitted and expected, as long as the voices do not carry beyond the rooms. Group room policy states, "Individuals occupying group study areas may be asked to

vacate them if the area is needed for group use." Students often self-police both the noise and occupancy policies, but occasionally ask circulation managers to assist with enforcement. Library Services solicits feedback and suggestions in multiple ways: formal and informal, and anonymous and identifiable. Specific feedback mechanisms include: LibQUAL+® surveys, white-board questions, an "Ask or Tell Us!" link on the library services web site, and through social media.

Methodology

Data collection began as soon as the research study received approval from Valparaiso University's Institutional Review Board, May 1, 2015, and continued through December 18, 2015. This time period captured the end of the spring 2015 semester (including finals week), two summer sessions, and the full fall 2015 semester, providing a longitudinal observation of student posts during both the busy and slow times of year. During the 232-day duration of the study, 478 observations were made, for a daily average of slightly more than two observations. Of those observations, 249 yielded library-related yaks.

Because there is no systematic way to harvest yaks, the authors took turns manually checking Yik Yak at least once a day. Within the observation period, only seven days were missed, and these fell during summer break. The intention was to check at least once daily during that time period, but because manual processing was required, faulty memory resulted in missing those mostly non-consecutive days. During summer break, Yik Yak was slow, so new yaks were not displacing older posts as quickly. The only yaks that may have been missed were those that received five downvotes; likely a very small number. When classes were in session, the check

was performed at least twice daily. All yaks determined to be library-related were entered into a cloud-based spreadsheet. In many instances, especially when school was not in session, there were no yaks to record. Attempts to collect yaks were recorded regardless of whether they yielded data.

This study was partially limited by the methodology for harvesting yaks. Because the authors personally checked Yik Yak and recorded their observations manually, it is possible that the study missed some relevant posts. A few days had zero observations. Also, during busy periods of the semester with high volume, some yaks were gone within a few hours and were never observed.

If the authors had any doubt regarding whether a yak was library-related, it was recorded. Following is an example of a questionably relevant yak that was posted during a time when the library's printers were down: "I know the sidewalks don't make sense and the printers never work...but I really love it here." In addition, any reference to the library building or services, regardless of the topic of the yak, was recorded. A good example of this is, "When the library gets too loud people go to [fraternity name] parties."

Within the spreadsheet, the following information was recorded:
- The day/time of the observation;
- Whether any library-related yaks were observed (yes or no);
- If yes, the text of the yak (if there were multiple yaks, each resulted in a separate form submission);

- The age of the yak (in hours);
- The yak's comments, separated by semicolons, with commenters identified by unique letters and the original poster identified by 'OP.'

Because the authors did not want to influence the results of the study, they did not post, comment, or upvote/downvote any library-related yaks for the duration of the study. Given librarians' proclivity to assist users in need, this policy was challenging at the beginning of the study, but other Yik Yak users generally answered library services questions, which eased the pressure to respond.

At the end of the data collection period, the authors began the content analysis by reviewing all the yaks and developing potential codes. Some of this process was modeled after the content analysis procedure developed by Black et al. (2016), and some of their categories were adopted. Because Black and colleagues' Yik Yak study was more general to campus life, the authors of this study added a series of library-related categories, for example: *group room use*, *library programming*, and *noise*. Once the list was narrowed down and definitions and appropriate use were discussed, both authors separately coded all 249 yaks. Yaks were not limited to a specific number of tags; some were only coded in one category, while others were coded in several. For example, the yak "If you whisper on the third or fourth floor of the library people can still hear you! #QUIETfloor" was coded as both *noise* and *complaint*. The *noise* and *complaint* categories were frequently used together.

In order to determine interrater reliability, all the yaks and the two researchers' coding for each category were imported into SPSS (IBM) and a kappa analysis was performed. Each category had two columns, for example: *R* [Ruth] *Non-Affiliated Users* and *M* [Mark] *Non-Affiliated Users*. The kappa coefficient statistic requires mutual exclusivity, meaning that an analysis could not be run across all categories simultaneously (since yaks could be coded in more than one category). However, kappa could be run on each category individually (since something was either coded in a category or it was not), and therefore intercoder reliability was determined for each category. Table 1 lists all the categories ranked from highest agreement to lowest agreement, as well as their kappa values (1 is complete agreement, -1 is complete disagreement), and the corresponding coder agreement description as provided by Banerjee et al. (1999).

[PLACE TABLE 1 HERE]

There is no commonly accepted kappa value among researchers; there is variability among what is considered reliable (Neuendorf 2002, 143). The authors chose to adopt the highly cited kappa interpretations authored by Banerjee et al. because they provided a scale of reliability: excellent agreement beyond chance ($>.75$), fair to good agreement beyond chance ($.40 \leq .75$), and poor agreement beyond chance ($<.40$). Because two of the variables, *compliment* and *facilities*, had kappa values below .40, they were eliminated from analysis. Sixteen categories remained.

Once it was determined which variables had a sufficient level of agreement, the authors met to discuss instances of disagreement and came to a consensus where differences existed, resulting in a unified list.

Results

Once coding consensus was reached, there were 391 total tags for the 249 yaks, for an average of 1.57 categories assigned to each yak. The number of categories per yak ranged from zero to three; three yaks had zero tags, 120 had one, 104 had two, and 21 had three. The three yaks that had zero tags were those that were originally coded either *compliment* or *facilities*, categories that were removed from analysis. For the frequency of yaks by category, see Table 2.

[PLACE TABLE 2 HERE]

Complaint was the mostly frequently used tag, and often used in conjunction with other tags. Examples included, "But why did they even make group study rooms in the library if people use them for themselves?" (also tagged as *group room use*), "Everyone in the library: I'm gonna need you to be quiet" (also tagged as *noise*), and "Hate seeing people that don't come here at the library. Fuck outta here." (also tagged as *non-affiliated users*). The second most popular library related topic on Yik Yak was *noise*. Most of these yaks were negative, but there were a few positive or neutral noise yaks, including, "The library is so nice and quiet during the summer" and "Fourth floor of Library is so peaceful and quiet. There's a dude passed out up here."

While 37 yaks were tagged as *question*, not all of those were library services-related questions. For example, "Can someone please come to the library and help me with microeconomics?" mentioned the library, but tutoring is administratively separate from library services and therefore of less interest for this study. When questions were related to library services, it was of

interest to track whether they were answered correctly, in order to determine if users were getting correct information. The *resolved correctly* tag was only used with questions, and specifically with library services-related questions. Of the 37 questions, 22 (59.5 percent) were related to library services. Eighteen of the 22 (81.8 percent) library service questions were answered correctly by other yakkers. For example, a user asked, "What time does the Christopher Center close?" and two users responded. The first user said, "2am, iirc [if I recall correctly]. But there is a schedule online and on the door." A second user added, "The community room is open 24 hours until the end of finals actually."

For the four library-related questions that were not tagged as being answered correctly, it is possible that a correct answer was provided after the yak and its comments were recorded by the researchers. During finals week in May, one user asked whether the library would be open the next day. That yak was recorded four hours after it was posted, and at that time it had only one response, "No, they usually close Tuesdays to go to the bar." It is possible that someone provided a serious response later, but because no correct answer was posted at the time of data collection, it was not coded as having been resolved correctly.

The yaks recorded in the *dating/sex/sexuality/flirting* category ranged from innocuous, "Wanna go to the library and blackboard and chill? ;-)", to more explicit, "Jerking it in the library is so peaceful." Many of this category's yaks were shout-outs to specific people, for example, "To the cute guy I see everywhere (especially the library) you always make eye contact, wish you would say hi because I'm too shy :/." This was true for the *noise* and *group room use* categories as well. People would post yaks to express attraction or annoyance with certain individuals rather than

approaching them directly, hoping to get their point across to the intended person without having to have an in-person interaction.

The category *academic life* was used to tag yaks related to studying, finals, or anything specifically academic. Examples included: "Those moments in the library when you're studying and trying so hard not to cry and have a mental breakdown" and "Everyone in the library looks depressed... #fuckfinals."

The *library as place* tag was a catchall category for yaks that talked about the library but did not fit into any other category. Examples of posts within this category included, "#librarylife", "Ate my breakfast in the library and all I want to do is brush my teeth now", and "When you fall down the outside stairs by the library and it's the ONE time that people are actually standing by those little tables... yeah... that happened…" This category included items that were not of much interest for research purposes but needed to be captured because of a library mention. Likewise, *humor* was a category that was tracked, but that was not necessarily of interest for providing insight into possible future action items. Examples within this category included, "I'm so broke it's not 'Netflix and chill, it's 'DVDs from the library and chill'" and "PSA: Killer ladybug in the library elevator."

When yaks were made about non-library services housed within the library, they were tagged as *other CCLIR services* (e.g., "Grinders can officially make pumpkin spice lattes now!!!! This is not a drill!!!!" and "Does anybody know if it costs anything to take my computer to IT at the library and have it cleaned for a virus?").

During the period of study, there were 17 library yaks classified as *announcement*. The group study rooms are in high demand, and the following yak was tagged as both *announcement* and *group study use*: "Two rooms open in the 4th floor of the library!" During the week before finals, library services offered free earplugs to students on the quiet floors, and there were actually two yaks about those earplugs being mistaken for candy. The yak "The candy on the third floor of the library is actually earplugs that are just really colorful... you'll probably figure it out if you choose to read the sign saying earplugs" was tagged as both *announcement* and *library programming*.

Of the 17 yaks categorized as *group room use*, 10 (58.8 percent) were about the prioritization of groups over individuals in those spaces. Most were negative towards individuals (e.g., "To all the solo people in the collaboration rooms...you suck" and "Stop taking a whole collaboration/study room in the library to yourself. There is a reason for 4+ chairs in each room. Use one of the many single booths if you are alone."), although there was one yakker arguing the opposing viewpoint: "I don't understand why study rooms are meant for groups. I use that room because it's one of the only quiet places on campus. Why do groups need a separate quiet area if they are talking?" One person poked fun at the issue: "Assert your dominance by being the single person who kicks a group out of the study rooms."

During the week before December finals, Library Services organized a series of events/activities called December De-Stress. Events included the following: multiple visits from a team of therapy dogs, blanket fort making, gaming nights, yoga in the library, and a primal scream

(which involved going outside, screaming en masse for about a minute, then coming back inside for cookies and hot chocolate). As mentioned before, free earplugs were also given away. All of these events garnered at least one yak, although the therapy dogs were the most popular. They were all categorized as *library programming*. Examples included, "Excited for therapy dogs, but even they can't save my grades", "What the fuck is a primal yell", and "Yoga in the library tho, I'll just de-stress by watching."

Yaks tagged as *environmental* concerned temperature, bugs, and smells. The air handler was not working correctly for about a month during October and November, and seven of the 11 *environmental* yaks concerned the oppressive heat in the building (e.g., "Assert your dominance to the sweltering heat in the library by turning on the fireplace and sitting next to it"). Around the same time, the library had a ladybug infestation, which garnered several posts. Yik Yak allows picture posts, and one yakker posted, "Guys i designed a postcard for the Christopher Center" along with an image from the library with three ladybugs (see Figure 2).

[PLACE FIGURE 2 HERE]

Library hours were the next most frequent topic of conversation. Eight of the nine *hours* posts were questions regarding what the library's hours of operation were. The remaining post was a request, "Dear Valpo, don't close the damn library over fall break." During fall break, the library had shortened hours for three days, and closed completely on a fourth. Although the authors did not generally track upvotes and downvotes as part of this study, this request had a notably high 28 upvotes.

Six yaks either authored by, or about, *non-affiliated users* were recorded. Examples included, "Thank you for somewhere closer to home than PNC [Purdue North Central] to sit and study. VU you're the real MVP." and "There is a group of highschoolers next to me in the library and they won't shut up about prom and bitchy girls at their school... oh how I haven't missed high school."

Only three library yaks were tagged as *drugs/alcohol*, and actually all of these were about alcohol, not drugs. Here are two examples: "The people next to me in the library are taking shots of vodka…" and "I always go to the library and end up with a rum and coke in my hands but my homework still get dones [sic]."

In order to visually identify commonly used words and themes, the text of the yaks was combined to create a Wordle. Initially, the word *library* so overpowered the Wordle that the authors decided to remove all instances of that word to create a more useful image (see Figure 3).

 [PLACE FIGURE 3 HERE]

The prominence of the words *floor* and *quiet* align with the most frequent tags used in this study, *complaint* and *noise*. Often when people were complaining about noise, they referred to the quiet, or third and fourth, floors.

Discussion

The aim of this study was to explore the potential uses of Yik Yak by academic libraries, with particular focus on collecting patrons' anonymous feedback about library services and spaces. If students are using Yik Yak to communicate to or about the library, how might librarians turn these yaks into constructive action? The results confirm that students on the observed campus did indeed discuss the library on Yik Yak, offering a range of questions, complaints, compliments, and observations relating to the library's spaces and services. In categorizing the 249 library-related yaks, the prominence of certain types of codes led the researchers to demarcate six distinct communication purposes that these yaks serve, from the perspective of the patron, that would be of interest to the library: asking questions about library services; reporting problems with library spaces; reprimanding violations of and encouraging adherence to library policies; sharing compliments about library services; demonstrating need for improved library services; and discussing and offering feedback about library programs. The yaks also served several other purposes beyond these six — such as flirting, comedy, and commiserating about academic life — that would be of little interest or utility to the library.

Asking Questions about Library Services

Libraries were quick to begin offering reference services in a virtual environment as soon as internet access and personal computers became widespread. The use of Yik Yak as a platform for virtual reference might be surprising to some readers, not because the application's users remain anonymous but rather because yaks are posed to a general community of users rather than to the library. Here we see the crowdsourcing of virtual reference questions, whereby users direct their questions to their peers rather than to library employees. Encouragingly, of the 22 yaks that

asked library-related questions, the vast majority (n = 18) were answered correctly by fellow Yik

Yak users. These questions were almost exclusively related to library operations and policies or

to the use and availability of equipment (e.g., "Can I print in color at the library?"; "How can I

still return a book to the library so I don't get fines over break?"). The questions that were not

successfully resolved were of a similar nature (e.g., "Why do the lamps on third floor library not

work?"; "Anybody know if the library is open tomorrow?").

All the yakked questions dealt with basic library use, such as service hours, directions, machine

assistance, or general library policy. None of the questions would have required consultation of

an outside source beyond basic policies. Librarians interested in seizing opportunities to use Yik

Yak as a virtual reference platform should not overestimate its potential. Unlike email, chat and

even other social media environments, Yik Yak does not seem to be a natural environment for

students to seek in-depth (or even cursory) research assistance. However, this study shows that

fellow students and yakkers do not always catch and respond to every last library-related

question. It could be worth a library's effort to monitor their campus's Yik Yak feed and respond

to such questions.

Reporting Problems with Library Spaces

A number of yaks constituted complaints about temporary problems related to the library's

building, particularly aspects related to temperature, smells, and insects. These were given the

tag *environmental*, as they concerned the user's experience of the library as an occupied space,

rather than of its services or collections. As noted above, the CCLIR experienced problems with

excessive heat during the observation period. Many of the *environmental* yaks were about this

problem, as students spoke out to complain. The second most popular *environmental* topic was

the building's ladybug infestation. In these particular instances, students' complaints were

redundant, as library personnel were already aware of the widespread temperature and insect

issues.

However, some *environmental* yaks brought attention to problems that were not universal to the

building. Two yaks reported unpleasant smells in the building, one about a bathroom on the

upper level of the library and another posted late at night when library staffing is normally

minimal. These findings suggest that students are willing and quick to complain about problems

that interfere with their use of the library building. Libraries paying attention to Yik Yak could

benefit from the active monitoring of the building's spaces that students voluntarily provide using

the app. Additionally, even in instances where a problem is already known to library workers,

having additional evidence to document the problem (i.e., in the form of students' yaks) could

give the library the data necessary to elevate the urgency of the problem in the eyes of university

administration or stakeholders.

Reprimanding Violations of and Encouraging Adherence to Policy
A major selling point of the academic library has historically been, and still remains, its offering

of quiet study spaces. A large number of the recorded yaks were complaints about violations of

noise policies, most of them phrased as passive aggressive attacks of the nearby violators. As

mentioned previously, students closely guard the quietude provided by the CCLIR's third and

fourth floors. Long before this study was conceived, the library had fielded complaints from

patrons about noisy groups and distracting cellphone users on these upper floors. Thus, it is not surprising that, out of the 67 complaint yaks recorded, 31 of them were about noise.

A smaller number of complaints were in response to violations of group study room policy. Ten such yaks were recorded, such as, "If you take a study room in the library to yourself, everybody hates you." Several other yaks were tagged as *group room use* but were not necessarily complaints. These were typically humorous or informative in nature, such as, "Just a friendly reminder, the group study rooms in the library are not sound proof. Please be considerate to the people sitting by them."

At a surface level, many of these complaint yaks might seem like nothing more than passive aggressive grumbling. However, upon reexamination, it is notable that most of these yaks are addressed in second-person to the violator (e.g., "If you are coughing constantly, the quiet floor is not the place for you"). These cases suggest that students use Yik Yak to call out others' disruptive or offensive actions, in order to instruct them on the rules and to produce compliance with desired behaviors. In complaining, students are not only expressing their agitations, but are also reinforcing the norms expected in certain library spaces.

None of the *noise* and *group room use* yaks were expressly addressed to library personnel. Through their yaks, students were not attempting to officially report the violations so much as self-police them. However, monitoring Yik Yak could allow library personnel to identify patterns in problem behavior, in order to develop proactive enforcement solutions.

Sharing Compliments about Library Services

Librarians know how rare it can be to receive a compliment or positive feedback, beyond a standard "thank you." The science supports this observation. Because of a so-called negativity bias, people are more likely to offer complaints than praise when given an opportunity to provide open feedback (Poncheri et al. 2008). Because of this bias, when people think about specific places, people, and objects that are familiar to them in real life, negative experiences will stand out more than positive ones. In a library, negativity bias might be manifested most evidently in the suggestion box, which as Farnum, Baird and Ball noted, is more likely to generate "comments that focus on what the library could be doing better or differently, rather than on what it is doing well" (2011, 3). Patrons come to expect a certain quality of library service and speak up only when something goes wrong.

Thus it is somewhat surprising, and quite refreshing, to see the number of yaks that discussed the library in a positive manner. It should be reemphasized that the researchers removed the tag *compliment* from this analysis due to low interrater reliability. However, many of the yaks dealing with quiet spaces were not assigned the *complaint* tag and were undoubtedly positive in tone (e.g., "I love how quiet the library is today"). Yik Yak has potential to capture patrons' positive feelings about what the library is doing well. Although many libraries conduct qualitative assessments to gather this information, such as the LibQUAL+® survey, such efforts are time-consuming and can only be undertaken periodically. In addition to being free and easy to use, Yik Yak might also be conducive to more genuine positive feedback. Precisely because it is not part of a formalized assessment effort such as a focus group or survey, Yik Yak might be less prone to negativity bias and better able to capture students' true emotions.

Demonstrating Need for Improved Library Services

Conversely, many yaks revealed shortcomings of library services. From the library's perspective, some of these yaks could be seen as opportunities for growth and improvement of services, not unlike the suggestion boxes so prevalent in many libraries. The yaks demonstrating a need for improved services came in two forms: outright criticisms and demonstrated needs. The criticisms were typically tagged as *complaint*, whereas the demonstrated needs were typically phrased as requests and were given the tag *question*.

By and large, most of the yaks labeled *complaint* could not be considered constructive critiques. Many of them convey students' anger about some bothersome behavior in the library, but are not necessarily actionable from the standpoint of improving services. Here the authors also make a distinction between the types of yaks mentioned earlier, concerning temporary environmental problems with the library building, and the kinds of critiques that would prompt permanent, more substantial changes. Some examples included criticisms of the hours of operations, the number of study rooms (e.g., "The library needs to double the amount of study rooms."), and the building's architecture (e.g., "the main stairs in the library are so inconveniently spaced apart"). While these concerns could not be solved by any short-term fix, they could be considered as part of the library's long-term planning.

More so than the complaints, the authors actually see greater opportunities for improving services in the demonstrated needs expressed over Yik Yak. For example, multiple yaks expressed students' need for chargers for their electronic devices (e.g., "Who in the library has a

samsung charger mine is not working, need to charge very quick"; "Anyone in the library have

an iPhone charger I can borrow"). These yaks reveal a need occurring within the library building

that perhaps the library itself could satisfy. Many academic libraries have begun providing

charging stations that accommodate multiple types of mobile devices (Mlady 2014; UC San

Diego Libraries 2014). These yaks demonstrated a demand for this service in the Christopher

Center, and in August 2016, Library Services acquired one of these charging stations as a result

of this study.

Another example is a demonstrated need for a designated space where library patrons could use

video chat services, such as FaceTime and Skype: "I wish people would use the study rooms for

legit reasons, not fucking FaceTiming with your friends"; "So why is it suddenly alright to Skype

loudly on a quiet floor? Please just relocate yourself and be decent." Although the library's lower

floors are generally tolerant of noise, nearby students might still find one-sided conversations

distracting, especially during midterms and final exams. Offering a designated space for video

chat and phone conversations, through the installation of phone booths, might improve

conditions for all involved by preserving an environment conducive to study and offering more

privacy for electronic conversations. By revealing students' unmediated complaints and needs,

Yik Yak holds potential for helping libraries improve their services continuously.

Discussing and Offering Feedback about Library Programs
Libraries hold outreach programs primarily in order to engage with their patrons, to promote

their collections and services, and to fulfill their educational missions (Farrell and Mastel 2016).

Because these programs require extra funding, effort and time, assessing their impact should be a

high priority. However, in reviewing the literature, Farrell and Mastel found a surprising lack of discussion about how to assess programs, beyond doing a basic headcount. They offered a number of strategies, combining both qualitative and quantitative measures, for assessing whether a program is meeting its desired objectives. Such strategies included capturing participants' comments, documenting the program through photographs and anecdotes, conducting surveys and focus groups, and interviewing attendees.

Despite the insight it can offer, the reliance on patron feedback for assessing programs has its disadvantages. The same challenges that are present in capturing open-ended comments are relevant when assessing library programs. Participants who had a negative or disappointing experience with a program are more likely to offer feedback than those with a positive experience, and their comments are likely to be longer and more emotionally charged.

A number of yaks (n = 12) observed in this study were tagged as *library programming*, all of them dealing with the December De-Stress Week activities mentioned earlier. These yaks served a range of purposes, from advertising the programs (e.g., "Happy Tuesday! I hope you can see the therapy dogs today!") to asking questions about the events (e.g., "I here [sic] there are therapy dogs. when and where is this?"). Other *library programming* yaks offered positive feedback, such as, "Pretty sure someone built a fort in the library and it's beautiful [happy crying emoticon]".

These yaks contributed to word-of-mouth buzz surrounding the programs. Many elicited comments and questions from other yakkers, such as expressing excitement or questioning when

an event was taking place. One user responded to the yak "Someone please come and play a game with me at the Library Playspace" by asking where the makerspace was located and receiving the correct answer.

The results suggest that Yik Yak offers a platform for patrons to discuss outreach programming. From the library's perspective, it could be beneficial to monitor Yik Yak before, during, and after library programming takes place. Patrons might pose "what, when, and where" questions about an event, which the library could intercept and answer. The library could also incorporate Yik Yak into its marketing strategy for programs. However, libraries should consider the platform as one tactic in a larger marketing approach, not relying on Yik Yak as its sole promotional outlet. Lastly, Yik Yak offers a glimpse into patrons' genuine feelings about programs, both positive and negative. This feedback can be used to demonstrate which aspects of a library program are working and where improvements could be made. As with other open-ended comments, Yik Yak provides a less formally mediated space, where patrons will offer this feedback voluntarily, reducing the risks of negativity bias.

Conclusion

Implications for Practice

This study reveals several opportunities for academic libraries to engage with Yik Yak in order to serve their patrons better. The uses identified above encompass many diverse aspects of the academic library, from its mission in providing information services, to its physical spaces, to how it enforces its policies. Librarians interested in incorporating Yik Yak into their tools for

answering basic questions and gathering anonymous feedback should find the application worthwhile. However, Yik Yak has many limitations. The findings suggest that students use the application only to ask basic questions, rather than in-depth ones. Librarians should have realistic expectations about the kinds of questions it can be used to answer. Additionally, yaks are time-sensitive; during busy times of the year, older yaks are likely to be pushed out by newer posts within a matter of 24 hours or less. This concern will be more relevant at larger universities than on smaller campuses, as the rate at which posts disappear is determined solely by the volume of new posts. Librarians hoping to use the application to provide information should be aware of the probable lifespan of their posts.

Finally, not everyone is using Yik Yak. Despite its current popularity among college students, the application has not reached the saturation that Facebook or Twitter have. Anecdotal evidence also suggests that some students are already abandoning Yik Yak in favor of other apps. During this time of explosive digital innovation, librarians should keep an eye on emerging social media applications and be prepared to move to wherever their users are.

Future Research

As mentioned above, this study was limited primarily by its methodology for harvesting yaks. A program that could automatically check Yik Yak and record library-related posts would offer new insight into its usefulness for librarians. Future research could also focus on the utility of Yik Yak for other services and units on campus, beyond the library. It might also reveal a shift in how students are using Yik Yak to talk about the library, as the number of users grows or declines and as the application develops new features.

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Table 1. Interrater Reliability by Category		
Category	**Kappa**	**Coder Agreement***
Drugs/Alcohol	1.000	Excellent agreement beyond chance
Group Room Use	1.000	
Library Programming	.954	
Noise	.916	
Non-Affiliated Users	.907	
Dating/Sex/Sexuality/Flirting	.900	
Hours	.853	
Announcement	.800	
Question	.776	
Other CCLIR Services	.736	Fair to good agreement beyond chance
Environmental	.681	
Question Resolved Correctly	.638	
Academic Life	.555	
Library as Place	.477	

Complaint	.457	
Humor	.422	
Compliment	.267	Poor agreement beyond chance
Facilities	.131	
p<.001 for all variables except *Facilities*. *Facilities*: p<.05		
*Banerjee et al. 1999		

Table 2. Frequency of tag use	
Category	**Frequency** **N (%)**
Complaint	67 (26.9%)
Noise	44 (17.7%)
Question	37 (14.9%)
Dating/Sex/Sexuality/Flirting	37 (14.9%)
Academic Life	32 (12.9%)
Library as Place	30 (12.0%)
Humor	27 (10.8%)
Other CCLIR Services	25 (10.0%)
Resolved Correctly (Questions)	18 (7.2%)
Announcement	17 (6.8%)
Group Room Use	17 (6.8%)
Library Programming	12 (4.8%)
Environmental	11 (4.4%)
Hours	8 (3.2%)
Non-Affiliated Users	6 (2.4%)
Drugs/Alcohol	3 (1.2%)

Figure 1. Yak with Reply Icons

FIGURE 2.

FIGURE 3.