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#LibraryLife: A quantitative analysis of social media usage, content, and engagement at the Vancouver Public Library (Paper)

Abstract or Résumé:

This paper explores the contents of the Vancouver Public Library's Facebook, Instagram, Twitter, and YouTube feeds between September 1st and November 30th, 2020 to better understand how each social media platform is being used to communicate with stakeholders. This quantitative content analysis of each platform's usage, content, and engagement highlights some important trends libraries should be aware of concerning both the use of multiple social media platforms and the evaluation of their current social media strategies.

1. Introduction

Due to social distancing practices during the COVID-19 pandemic, many public libraries are changing the way they offer services and programming to their patrons with the majority (over 80%) using social media to keep patrons informed of these changes (PLA 2020; MLA 2020; OLA 2020). These novel circumstances provide an excellent opportunity to investigate how public libraries are promoting their changing services across different social media platforms. Thus, this quantitative content analysis, which is part of a larger pilot study examining COVID-19 driven changes in social media usage, provides a snapshot in time of how the Vancouver Public Library (VPL) is using social media to inform and engage with its patrons regarding the library's evolving services and programming.

2. Social Media Usage in Libraries

Social media is a practical, low-cost method by which libraries can disseminate information as well as foster community engagement. Previous studies surrounding the use of social media in libraries have explored various aspects such as content (Shiri & Rathi 2013; Anderson 2015; Mon & Lee 2015; Joo et al. 2018; Xie & Stevenson 2019; Joo et al. 2020), stakeholder perceptions (Abidin et al. 2013; Anwyll et al. Winter 2013; Winn et al. 2015; Cavanagh 2016; Shafawi & Hassan 2018; AlAwadhi & Al-Daihani 2019; Jones & Harvey 2019; Budu et al. 2020; Pashootanizadeh & Rafie 2020; Williams et al. 2021), and effective use strategies (Anwyll et al. Fall 2013; Harmon & Messina 2013; Ramsey & Vecchione 2014; Smeaton & Davis 2014; Stone 2014; Valenza et al. 2014; Mon 2015; Zou et al. 2015; Peacemaker et al. 2016; Rossmann & Young 2016; Bickford 2017; Gow 2017; Guevara 2018; Woodworth 2018; Fonseca 2019; Trucks 2019; Chaputula et al. 2020). However, the majority of this literature has limited its focus to social media in the general sense or to individual platforms; thus, very little has been done to

investigate and compare libraries' use of multiple platforms, particularly in-depth. For instance, while Yu (2016), Kingsley (2018), and Sulkow et al. (2019) all compare libraries' social media platform preferences, they do not examine how these platforms are being used in terms of their content or engagement patterns. Two studies that do delve more deeply into multi-platform use within libraries are Collins and Quan-Haase (2014) and Faba-Pérez and Infante-Fernández (2019). The first longitudinally explores the adoption rates and usage patterns of four social media platforms – Facebook, Twitter, YouTube, Flickr – in academic libraries in the United States, whereas the second analyzes the types of content being disseminated on six social media platforms – Facebook, Twitter, YouTube, Pinterest, Google+, Instagram – by school libraries in the Extremadura region of Spain. This study, therefore, is intended to advance the understanding of multi-platform social media use within the context of public libraries.

3. Research Question

How does usage, content, and engagement vary between VPL's Twitter, Facebook, Instagram, and YouTube feeds?

4. Methodology

4.1 Sample

VPL was chosen for this study for several reasons. First, it has been studied before and found to have a robust social media presence (Cahill 2009, 2011, & 2013). Second, it is the third largest library system in Canada and serves a culturally diverse population across 21 locations (CBC News, 2008; World Population Review, n.d.). Third, during the first wave of the pandemic, the province of British Columbia had to contend with not only the first large outbreak of COVID-19 in Canada, but also the fourth largest provincial case count (sixth per capita) and fourth largest death count (fifth per capita) in Canada (New York Times, 2020). All of this makes VPL a prime location for potential innovation.

The social media platforms included in this study – Facebook, Instagram, Twitter, and YouTube¹ – were chosen because they are the four platforms VPL promotes on their website's home page, with links appearing at both the top and bottom of the page. The timeframe – September 1st to November 30th, 2020 – was then chosen because (as part of the larger study, which explores changes between February 1st and June 30th, 2020 as compared to the same timeframe in 2019) it was believed that this would be enough time to see what changes, if any, persisted past VPL's initial response to pandemic closures and service changes. It was also a convenient timeframe as data for the larger study was collected in late November 2020.

4.2 Data Analysis

The quantitative data for this paper was gathered from screenshots taken of all posts made to each of the four platforms between the dates specified above. Any posts originating from non-VPL accounts (i.e.: other organizations or personal accounts) were excluded from the data set. Similar to Collins and Quan-Haase (2014), the collected data was then analyzed in Excel using descriptive statistics, with relevant qualitative data also being noted.

The content of each post was initially categorized into overlapping content and original content. Overlapping content (Figure 1) was defined as any posts that appeared on more than one platform and met at least two of the following three criteria: 1) the posts were published on the same day, 2) the posts contained the same picture, and 3) the posts had one or more sentences in common. Whereas original content was defined as any posts that did not meet the criteria for content overlap. However, upon further review, a subcategory emerged from the overlapping content: identical content (Figure 2). This content, which comprised 27 posts published to Facebook, Instagram, and Twitter, was defined as overlapping content that met all three of the necessary criteria.

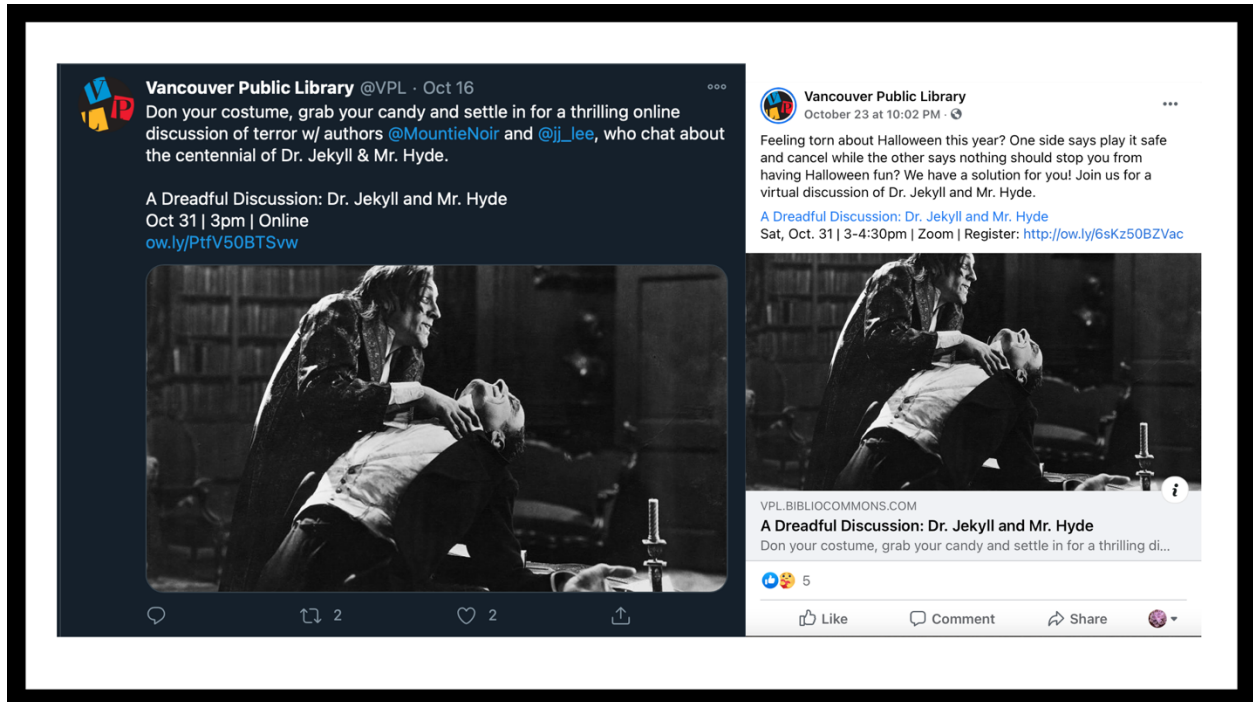


Figure 1: Sample overlapping Twitter and Facebook content

Engagement was measured by examining the number of reactions (likes, dislikes, etc.), comments, views, and shares each post received. According to Perreault and Mosconi's (2018) literature review on social media engagement these are the most common metrics used to evaluate engagement. Additionally, until very recently², VPL itself measured engagement through "public shares, likes, and comments" (VPL 2019, 14).

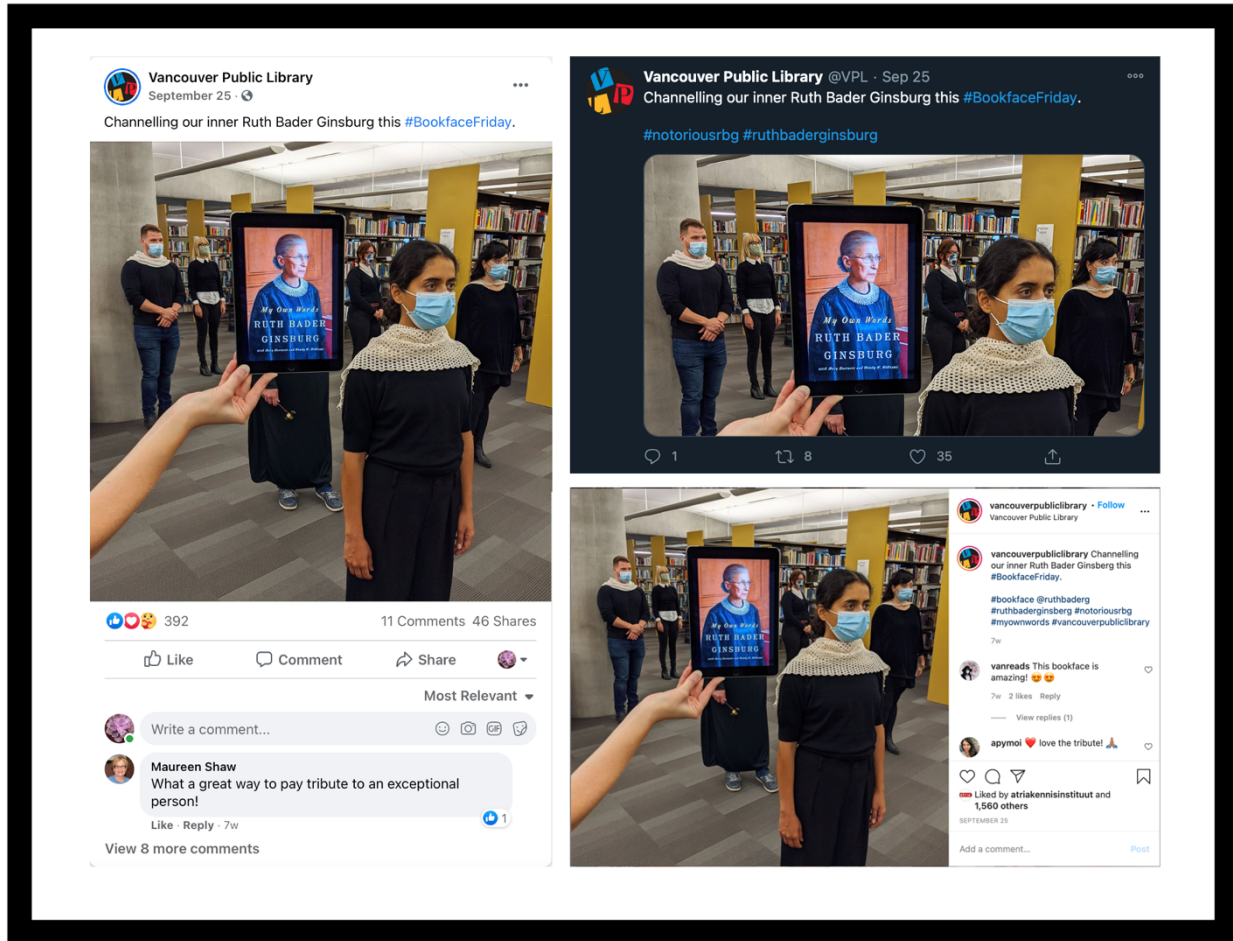


Figure 2: Sample identical content

5. Findings

5.1 Usage

VPL posts most frequently on Twitter and Facebook (Table 1), likely because these accounts have the most followers (Twitter = 26.9K, Facebook = 21.9K, Instagram = 10.7K, YouTube = 1.3K) and therefore the most theoretical exposure.

	Facebook	Instagram	Twitter	YouTube
September	68	18	109	9
October	60	18	95	6
November	63	17	92	4
TOTAL	191	53	296	19

5.2 Content

In terms of content, Twitter provides the most original content out of all four platforms (Figure 3). However, that original content only makes up 66% of Twitter's overall content, whereas YouTube – which posts the least of all the platforms – provides 100% original content. Facebook and Instagram both provide more overlapping content than original content. Additionally, while both YouTube and Facebook's original content consists almost entirely of virtual Storytime programming, Twitter's appears to primarily consist of marketing VPL's virtual programming, and Instagram's appears to primarily relate to readers' advisory. Overall, 42% of the content VPL posts to its social media platforms consists of overlapping content (Figure 4).

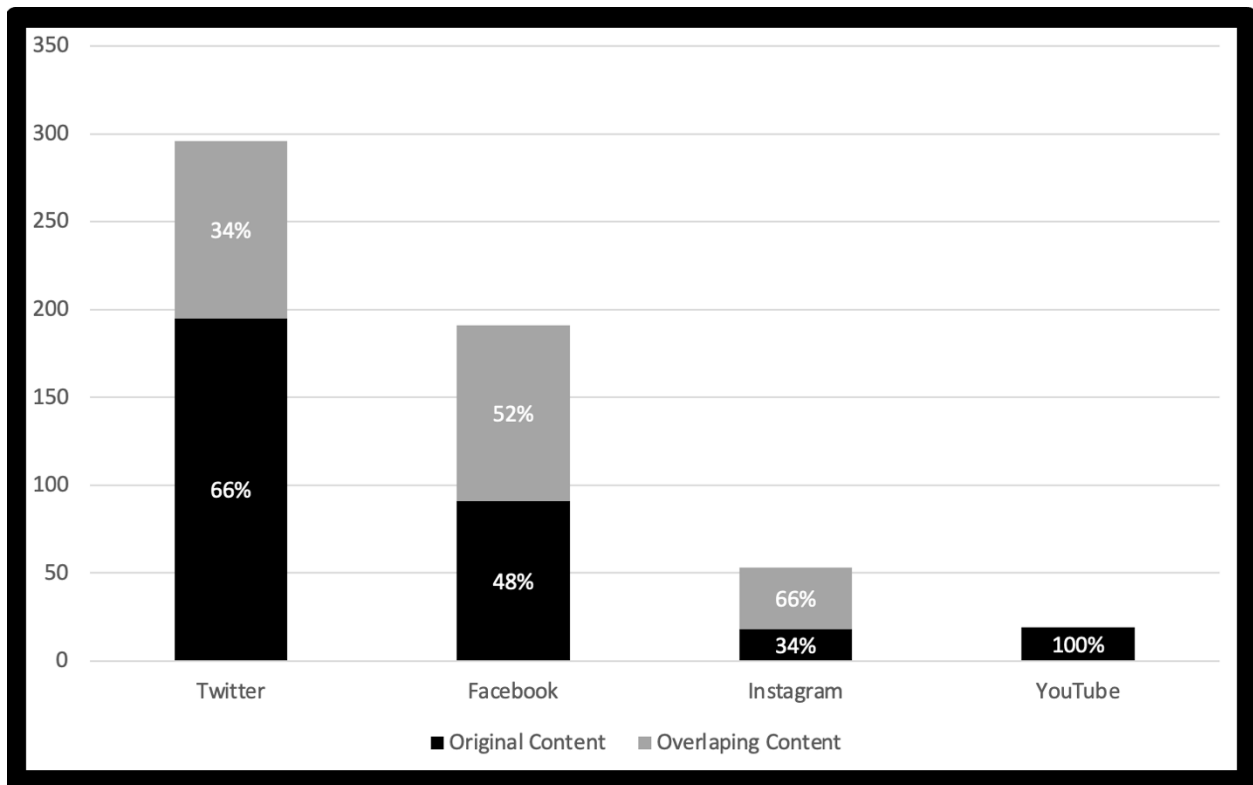


Figure 3: Content distribution by platform

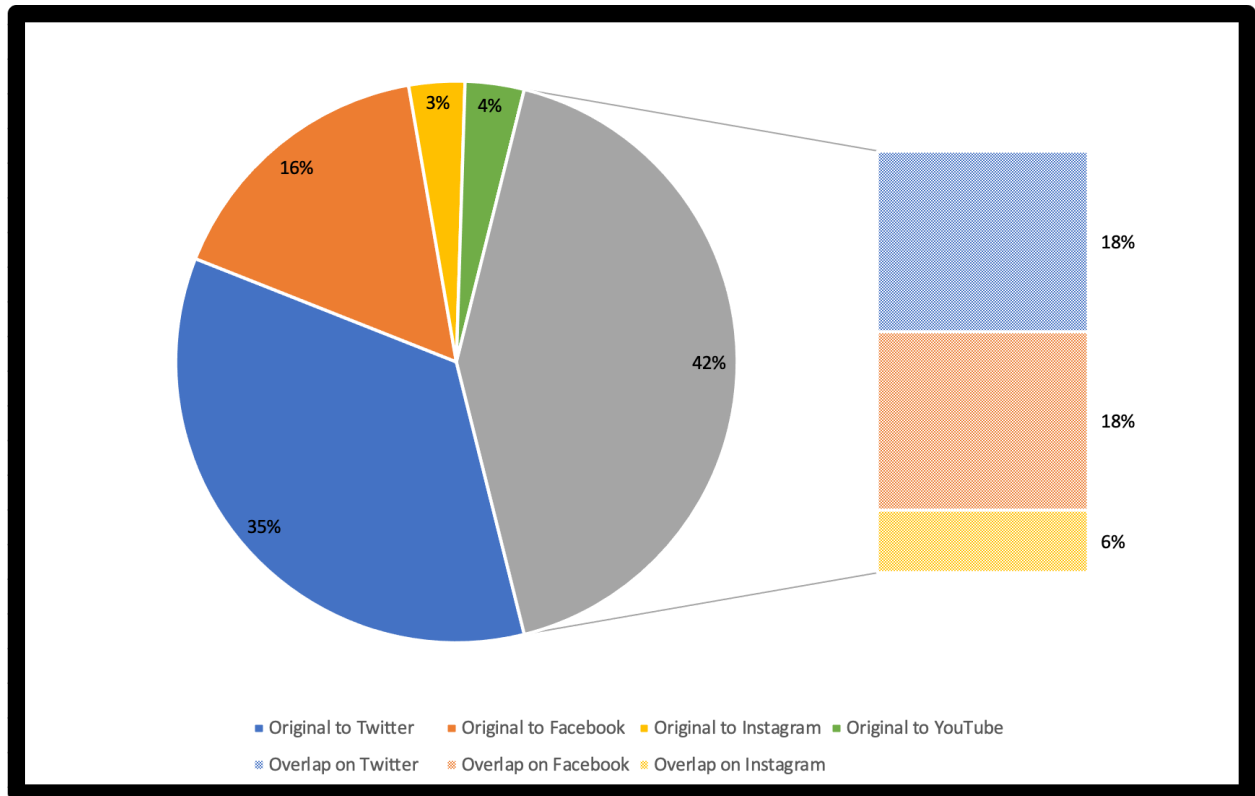


Figure 4: Overall original and overlapping content percentages by platform

5.3 Engagement

Comparative analysis of each platform’s reactions, comments³, views, and shares reveals that Instagram consistently generates the greatest number of reactions – although Twitter can easily outperform it if a post goes viral⁴ – regardless of whether viral outliers are included (averages) or excluded (via median). In terms of comments and shares, Facebook generates the most comments and Twitter the most shares when viral outliers are included; however, Instagram generates the most comments and Facebook and Twitter generate the same number of shares when they are excluded (Table 2). An examination of engagement with the identical content shows that despite Instagram having the smallest number of followers, it reliably out-performs Facebook and Twitter in terms of reactions and comments (Table 3). Finally, a comparison between each platform’s original content and its overlapping content demonstrates that, on average, original content gathers significantly more reactions on Instagram and Twitter, significantly more comments on Facebook, and significantly more shares on Twitter (Table 4).

		Facebook	Instagram	Twitter	YouTube
Minimum	Reacts	0.00	29.00	0.00	0.00
	Comments	0.00	0.00	0.00	n/a
	Shares	0.00	n/a	0.00	n/a
	Views	n/a	n/a	n/a	38.00
Maximum	Reacts	392.00	1561.00	5800.00	22.00

	Comments	435.00	42.00	117.00	n/a
	Shares	101.00	n/a	2200.00	n/a
	Views	n/a	n/a	n/a	933.00
Average	Reacts	31.46	272.91	38.90	4.53
	Comments	15.26	7.38	1.00	n/a
	Shares	4.57	n/a	12.71	n/a
Median	Views	n/a	n/a	n/a	352.42
	Reacts	22.00	201.00	4.00	2.00
	Comments	2.00	7.00	0.00	n/a
	Shares	2.00	n/a	2.00	n/a
	Views	n/a	n/a	n/a	260.00

Table 3: Engagement Across the 27 Identical Posts				
		Facebook	Instagram	Twitter
Minimum	Reacts	5.00	29.00	0.00
	Comments	0.00	0.00	0.00
	Shares	0.00	n/a	0.00
Maximum	Reacts	392.00	1561.00	125.00
	Comments	11.00	42.00	3.00
	Shares	46.00	n/a	31.00
Average	Reacts	52.96	261.15	17.11
	Comments	1.93	7.44	0.67
	Shares	6.11	n/a	5.63
Median	Reacts	37.00	183.00	9.00
	Comments	1.00	4.00	0.00
	Shares	3.00	n/a	3.00

Table 4: Engagement Differences Between Original and Overlapping Content				
		Facebook	Instagram	Twitter
Original Content	Reacts	30.90	327.50	61.72
	Comments	30.99	8.40	0.93
	Shares	4.82	n/a	19.37
Cross-Platform Content	Reacts	31.55	254.00	9.53
	Comments	1.91	6.97	1.09
	Shares	4.36	n/a	3.84

6. Discussion

This study examined how usage, content, and engagement varied between VPL's Twitter, Facebook, Instagram, and YouTube feeds. In terms of usage, Facebook and Twitter received the most posts by far. This finding is consistent with other multi-platform comparisons in libraries, which all found Facebook and Twitter to be the most widely used social media platforms (Collins and Quan-Haase 2014; Yu 2016; Kingsley 2018; Faba-Pérez and Infante-Fernández

2019). The fact that YouTube received the least number of posts out of the four platforms is also consistent with the literature, even though a recent survey conducted by the Pew Research Center shows that 81% of Americans say they use YouTube, while only 69% use Facebook and 23% use Twitter (Auxier & Anderson 2021). Collins and Quan-Haase (2014), Kingsley (2018), and Jones and Harvey (2019) theorize that this is likely because YouTube content requires a relatively high level of effort and training to create as opposed to other platforms' content. If libraries choose to invest in creating YouTube content, though, the payoffs can be well worth the effort as YouTube content is known to have a longer "shelf life" as compared to other social media content, it can engage users without requiring them to add or follow the library's channel, it is easily searchable, and, unlike other platforms, there is less pressure to post frequently on YouTube (Collins and Quan-Haase 2014; Kingsley 2018).

In terms of content, this study found that 42% of VPL's overall content overlapped between platforms (with 34% of that overlapping content consisting of identical content). Given that this phenomenon does not appear to have been remarked upon in previous literature, it is unknown whether this is a low, normal, or high amount of overlap. However, Gow (2017) recommends that "[d]espite aiming for consistency in branding, it is best to avoid automatically duplicating posts from one platform to another" (18). Instead, Gow advocates for adapting content to specific platforms by paring it down to different essentials. "For example, to promote an exhibit at the UofL's law library, I used Facebook to share a short summary with a slideshow of photos, Twitter for an engaging headline and single photo, and Pinterest as a venue for images of the books on display" (Gow 2017, 10). To know what types of content will work best on what platforms, best practices suggest regular content audits and/or tracking engagement metrics to identify trends in audience interest (Anwyll et al. Winter 2013; Ramsey & Vecchione 2014; Gow 2017; Sulkow et al. 2019; Trucks 2019).

In terms of engagement, Instagram consistently received high levels of engagement and was able to out-perform both Facebook and Twitter when each platform posted identical content. This finding is supported by Valenza et al. (2014), who note, "the level of engagement happening on Instagram blows away any of the other platforms" (20) and Fonseca (2019), who notes Instagram is "enjoying a popularity second only to Facebook" (219). In fact, according to the recent Pew survey, Instagram is the third most popular platform after YouTube and Facebook and the second most popular amongst 18-29-year-olds after YouTube (Auxier & Anderson 2021). Despite this popularity, however, VPL posts relatively infrequently on Instagram and when it does post on the platform, the majority of its content is overlapping content (77% of which is identical content). According to Fonseca (2019), Instagram – particularly its "Insta-Story" feature – can be used for so much more than simply "promotion and advertising;" it can be a reference tool, an educational tool, and even a participatory tool. When it comes to Instagram, Fonseca encourages libraries to "think less about posting and more about programming" (221).

7. Limitations

The results of this study are limited in that they represent only a small snapshot of a single public library's social media usage. It is possible that an expanded study which takes place over a larger span of time and/or includes multiple public libraries from a variety of diverse demographics will produce different results. Thus, no generalizations can be made based on this paper's findings.

8. Conclusion

Overall, the trends revealed in this study regarding social media usage, content, and engagement across VPL's four platforms suggest a need for VPL to re-evaluate its current social media practices and strategies, particularly with regards to its use of YouTube, Instagram, and overlapping content. Additionally, despite not being generalizable, these findings also highlight the importance of on-going, metric-driven evaluation of social media strategies within libraries.

9. Links to Conference Theme

This paper fits the conference's theme by exploring the often-overlooked need to assess social media usage, content, and engagement in comparison across platforms.

Endnotes:

1. These four platforms – as well as Pinterest and Flickr (which VPL no longer actively uses) – are consistently used the most by libraries, particularly public libraries (Yu 2016; Bacon, 2017; Kingsley 2018; Sulkow et al. 2019).
2. According to the patron usage statistics for 2020 VPL now measures social media engagement as “any action taken such as likes, comments, shares, website clicks, etc.” (VPL 2021, 2).
3. It is worth noting that YouTube does not have any statistics for comments because VPL has decided to disable this feature.
4. This occurred with a set of Tweets in September 2020 where each member of the K-pop band BTS was compared to a different book in VPL's collection.

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